IMPACTS OF MACRO ECONOMIC FACTORS ON STOCK MARKET RETURNS: EVIDENCE FROM NEPAL

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

By

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CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled **"Impact of Macroeconomics Factors on Stock Market Returns: Evidence From Nepal**". The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirement for any other academics' purposes.

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

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REPORT OF RESEARCH COMMITTEE

Ms. Juna Thapa has defended research proposal entitled "**Impact of Macroeconomic Factors on Stock Market Returns: Evidence From 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 Kamal Prakash Adhikari and submit the thesis for evaluation and viva voce examination.

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APPROVAL SHEET

We have examined the dissertation entitled **"Impact of Macroeconomic Factors on Stock Market Returns: Evidence From Nepal"** presented by Ms. Juna Thapa the degree of Master of Business Studies (MBS Semester) and conducted the Viva voce examination of the candidate. We hereby certify that the dissertation is worthy of acceptance.

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Juna Thapa

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LISTS OF ABBREVIATIONS

CEO:	Chief Executive Officer
CSR:	Corporate Social Responsibility
CTO:	Chief Technology Officer
EXR:	Exchange Rate
GF:	Gadget Frame
INFR:	Inflatation Rate
IOT:	Internet of Things
IR:	Interest Rate
IT:	Information Technology
LnEXR:	Natural Logarithm of Exchange Rate
LnMS2:	Natural Logarithm of Money Supply 2
LnSMR:	Natural Logarithm of stock Market Returns
MBS:	Master Of Business Studies
MS2:	Money Supply 2
NPR:	Nepalese Rupees
PPC:	Pay Per Click
RGPD:	Real Gross Domestic Product
SEM:	Search Engine Marketing
SEO:	Search Engine Optimization
SERP:	Search Engine Result Pages
SMO:	Social Media Optimization
SMR:	Stock Market Returns
SS:	Six Sigma
TU:	Tribhuvan University
URL:	Uniform resource locator

ABSTRACT

This study analyzes Impact of macro economic factors on stock market returns :Evidence from Nepal. It Collect the data from 1994/95 to 2022/2023.This study has taken descriptive and causal relationship research design to analyze the correlation and impact of macro economic variables in Stock market returns and has employed SPSS with descriptive analysis, correlation analysis and multiple regression analysis. The correlation analysis examined that Real gross domestic product shows a strong positive correlation with stock market return. Money supply 2 exhibits very strong positive correlations with stock market return suggesting that higher MS2indicate higher exchange rate. Interest rate, Inflatation rate and Exchange rate shows a weak insignificant correlation with stock market returns the analysis indicates that GDP, money supply, and exchange rates are strongly correlated with stock market returns, while interest rates and inflation have less impact on these returns. The multiple regression analysis reveals a positive and significant impact on money supply 2 means that increase in MS2 leads to higher in stock market return .Real Gross Domestic Product had negative but marginally significant effect on stock market return.it leads to negative relationship with stock market return. Interest rate, Inflatation rate, and Exchange rate had insignificant minimal and statistically insignificant relationship with Stock market returns.

Keywords: *Real Gross Domestic Product, Money Supply2, Interest Rate, Inflatation Rate, and Exchange rate*

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CHAPTER I

INTRODUCTION

1.1 Background of the study

It has long been acknowledged that the stock market plays a significant influence in a nation's economic development and serves as a gauge of that development. Capital markets provide long-term funding to industries, and the stock market serves as a financing platform. Additionally, investors can readily invest their money in the stock market. In many developing nations, such as Nepal, where the stock market has not had a lengthy history of development that is also linked to political shifts like multiparty democracy the stock market does not necessarily move fundamentally. Both investment opportunities and stock market valuation have greatly increased since the founding of the Nepal Stock Exchange (khil & lee, 2000).

Additionally, there is now a stronger correlation between economic growth and the stock market. As a result, the stock market's success can serve as a gauge for the health of the economy overall. Numerous academic works have reported that the precipitous decline in stock prices coincided with subpar stock market performance prior to recessions in numerous nations.

Furthermore, the effectiveness and profitability of the stock market have not been what was anticipated given the ten-year internal armed conflict in Nepal. Investors can mitigate the risk of inflation by expanding their investments in the stock market, which helps to maintain the financial disruption caused by rising prices (khil &lee, 2000).

Publicly traded company shares are traded on the stock market overall. There are two trading venues: the secondary market, which exchanges shares of publicly traded companies listed on the Nepal Stock Exchange (NEPSE), and the over-the-counter market, which exchanges shares of unlisted public corporations. This kind of market is comparable to another one known as the primary or initial public offering (IPO) market, which is where equities are sold for the first time (Joshi and Giri, 2015). In contrast, the value of a stock is the present value of future cash flows or profits;

nonetheless, market forces determine prices, which are arbitrary. However, in order to trade a stock, a price or transaction value is required (Carter et al.,2022).
Currently, the global economy is gradually feeling the consequences of the epidemic, Russia's invasion of Ukraine, and the challenges brought on by increased living expenses (IMF, 2023). Despite massive efforts to tighten global monetary policy in response to record-high inflation, the global economy has stalled. Nevertheless, development is uneven and sluggish, emphasizing the widening disparities in the world. The global economy is growing steadily instead of picking up speed.

The IMF calculated that global growth dropped from 3.5 percent in 2022 to 3.0 percent in 2023 and will be a 2.9 percent in 2024. The fund projected that global growth will remain at 3.2 percent in 2025. Due to this circumstance, the financial sector in general and the stock market in particular will face new challenges in 2024 as the global economy decreases and the status of the economy varies widely.

The history of the security market formally began in 1937 with the flotation of shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. However, the company act was introduced in the country only in 1964. The Government Bond was also issued for the first time in Nepal in the same year. In 1973, with the initiation of Nepal Government and Nepal Rastra Bank, Securities Exchange Center (SEC) was established to facilitate and promote growth of capital markets in the country. The responsibilities of the center were limited to undertake brokering, underwriting, managing public issues, creating markets for Securities and government Bonds.

Nepal government converted SEC into Nepal Stock Exchange (NEPSE) in 1993 under Securities Exchange Act 1983. NEPSE's primary goal is to give corporate and government assets unfettered marketability and liquidity by enabling trades on its trading floor via members who operate as market intermediaries, including brokers and market makers. As of March 2024, 249 companies and 95 registered brokers are listed on the exchange, from different industry sectors including bank and financial institutions, Hydro-Power, Life and Non-Life Insurance, Hotels and Tourism.

The stock market is an essential player in the financial sector that gives suppliers and users of financial resources a place to invest in company stocks. Alam and Rashid (2014) assert that by boosting liquidity and supplying capital for industrialization and economic development, stock markets promote economic growth. They serve as fascinating hubs for investments as well. Any economy's ability to expand and grow depends on its stock markets. This efficient market's ability to reflect information in the share prices that are currently prevalent in the economy is one of its characteristics. National economies are globalizing in tandem with the accelerating pace of globalization.

In light of this, collecting time series data of 30 years (from 1993/94 to 2023/24, the present study looks into impacts of macroeconomics factors on stock market returns. In this context, an examination of the nature of the relationship between macroeconomic variables and share market returns in the Nepalese Stock Market can be valuable to all parties involved in order to help them make informed decisions about operations, management, and sustainable growth. It is expected that investors, portfolio managers, and politicians would find valuable information from this study.

1.2 Problem Statement

The highly digitalized society of today facilitates open global knowledge exchange. These days, predicting stock returns and volatility and figuring out how this information affects stock markets is much harder, if not impossible. Every country in the world aspires to rapid economic development, to differing degrees depending on the resources available and the condition of events at the time, regardless of how developed or developing the country is. Over the past 70 years, the Asian continent has made significant progress toward both economic expansion and the eradication of poverty. Rapid growth initially took place in Japan, and was followed by the four less developed East Asian countries known as "Asian Tigers" which include Hong Kong, Korea, Singapore, and Taiwan (World Bank-WB, 2019). China and many other countries in Southeast Asia, including India, then went through similar kind of growth. However, in Nepal the process In 2022, Nepal's GDP per capita reached USD 1,337, or 40.83 billion USD for the entire country. Nepal is now rated 100th among the

major economies. Being a poor developing country, the development process is not feasible in a short period of time. Slow credit growth and import restrictions contributed to a reduction in private investment on the demand side. Lower capital expenditure and revenue under-performance drove lower public investment. As a result, total investment decreased by more than 10 percent, a sharper reduction than in 2020.

Private consumption remained robust, owing to strong remittance inflows. Inflation increased for the third successive year in 2023, and the increase was broad-based. Food prices rose due to supply side shocks and domestic policy changes. Non-food prices were pushed by higher housing and utility prices. The persistence of high inflation impedes an effective policy mix to stimulate growth while containing external imbalances.

A nation's ability to accumulate capital is essential to its economic growth, yet Nepal lacks sufficient capital formation. Capital can be accumulated from two sources: internal and external. Grants and loans are the primary sources of external assistance. The most common internal sources in the nation are public enterprises, taxation, capital accumulation, and public debt. Nevertheless, those local resources are unable to produce the necessary money for the nation's development because of underdevelopment, poverty, and low stock market returns. Thus, it can be concluded that low stock market returns are a stable and long-term source of capital accumulation in Nepal at the moment. However, we are facing an acute problem of resource mobilization.

It is common knowledge that shifts in the macroeconomic landscape have an impact on asset values. Thus, the stock market index's movement as a leading macro-economic indicator influences the dynamics of economic fundamentals in a big way. There is a dearth of published empirical research on the relationship between macroeconomic conditions and stock market volatility, and only a limited number of studies have been conducted on the Nepalese stock market to ascertain the macroeconomic impact on stock return.

Furthermore, as no recent empirical study based on the Nepalese stock market has been done the literature that is now available is quite antiquated and out of date given the state of the financial system today. Thus, research on macroeconomic factors and stock market returns is desperately needed. Consequently, the purpose of this study is to close the gap in the body of current knowledge.

In most of the developing nations, stock market and its proper mobilization and deployment pose the biggest challenges. In these nations, stock market bear greater responsibility for the nation's economic growth. Nepal is currently going through a historic transition to become a secular, federal country. This represents a window of opportunity for the country to further reduce poverty, increase the income of the bottom 40 percent, and pursue its ambitious agenda of inclusive growth and accountable service delivery. A renewed sense of hope has been expressed for improved political stability, inclusiveness, sound governance, and sustainable growth. Nepal has never-before-seen chances to rewrite its growth story thanks to the new federal framework.

At the same time, given the increased popular hopes and expectations, the transition to federalism presents additional problems and sources of instability. Key challenges include clarifying the functions and accountability of the federal, state, and local governments; providing basic services and maintaining infrastructure development; creating a favorable environment for the private sector; and addressing governance flaws that may worsen in the early years of the new federal system.

This study's main goal is to investigate how macroeconomic issues affect activity in the stock market. As mentioned before in this chapter, Nepal's share market has a very young history when compared to other developed nations. Nonetheless, since its establishment, the Nepalese stock market has experienced a good deal of ups and downs. Investors are finding the current status of the market difficult; they are depressed and feeling pessimistic. This kind of research is desperately needed to address the many issues facing the industry and to combat the present pessimistic mindset.

It is anticipated that this study will provide insightful information to lawmakers, portfolio managers, and investors. The study will support investors, academics and researchers in the fields of economics and finance in understanding how macroeconomic variables affect stock market performance. It also provides insight into society and researchers since it integrates several macroeconomic variables and their interaction with the stock market.

of development started only after 1956 when the first five-year plan came into practice.

This study aims to determine how macroeconomic factors affect the stock market index in the context of the Nepalese stock market. Furthermore, Nepal's economy differs from that of the countries previously researched, making study in a context very distinct from that of other countries. Therefore, the following topics are covered in this study:

i. What is the current situation of stock market returns in Nepal ?
ii. Is there any relationships exist between independent variables such as RGDP, MS2, IR, INF Rate and EXR with dependent variable SMR?
iii. Does independent variables such as RGDP, MS2, IR, INF Rate and EXR impact on SRM?

1.3 Objectives of the study

The general objective of the study is to examine the impact of macroeconomic variables on stock market index in Nepal. The study focuses the correlation as well as the impact of selected macroeconomics variables to the stock market index in Nepal. More specifically the major objectives of the study are:

i. To asses the existing situation of stock market returns in Nepal.
ii. To analyze the relationship between independent variables such as RGDP, MS2, IR, INF Rate and EXR with dependent variable SMR.
iii. To examine the impact of independent variables such as RGDP, MS2, IR, INF Rate and EXR on SRM.

1.4 Rationale of the study

This thesis will look at how macroeconomic issues affect the Nepali stock market's performance. Before Nepal's democratic restoration on February 18, 1990, the country had a less developed financial market than it did later. Furthermore, market flexibility surfaced after the Maoist movement was put a stop to and Nepal's macroeconomic recovery was restored by the peace accord signed on September 21, 2006. Investors, academics, and politicians started to take an interest in the Nepalese stock market, especially after the Maoist movement ended. This was not the case prior to the Maoist revolution. Its effects consequently made it possible to observe and analyses changes in the stock market. This study provides a critical analysis of macroeconomics factors and stock market return. This research has the potential to be significant and beneficial to a wide range of stakeholders. Investors can evaluate and predict stock market movements with the help of this research by using macroeconomic facts as a base. As a result, they will be able to construct better portfolios and make more informed judgments. Policymakers may use this research as a basis for future decisions and adjustments to their policies. Lawmakers will pass the necessary legislation and rules to improve investor welfare. Scholars and other readers can use this to comprehend how macroeconomic factors affect Nepal's stock market. They may use this as a reference when conducting study on connected subjects. This study intends to contribute to the understanding of the relationship between the Nepalese stock market index and the actual gross domestic product, money supply, interest rate, inflation rate, and exchange rate, as there have been relatively few studies conducted on this topic in Nepal. This research will add to the body of knowledge already available about the relationship between macroeconomic factors and the Nepali stock market.

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 considered for a trustworthy interpretation of the data. The following are the study's main limitations:

i. The study only included five of the various macroeconomic variables. Therefore, the results may not provide a full picture of the stock market.
ii. It spans a thirty-year period beginning in 1994 and ending in 2023. This is due to the fact that the Nepalese stock market was founded in 1993 and that recorded data became accessible in 1994.
iii. Due to time and financial constraints, no attempt is made to validate the data that is currently accessible.
iv. This study limited to variables such as RGDP,MS2,IR, INFR ,EXR and SMR.
v. This study has employed descriptive and causal comparative research design.

CHAPTER II

LITERATURE REVIEW

Research papers and other significant statements in the relevant field of study are analyzed in a literature review to compile information on all previous studies, their results, and any deficiencies so that more research can be conducted. It is a necessary and fundamental step in the research project process. It is a crucial part of each dissertation. Put another way, the results are focused on the investigation of relationships through experiential learning, resonance, and empirical research and are supported by a strong theoretical foundation. It is useful to know what has previously been discovered. Putting fresh lenses on old eyes to see the world in a different light by addressing the problem using updated facts and information and witnessing the results is what it means to review pertinent literature. Literature is a major source of information that helps researchers identify what has been researched and what still needs to be done in their area of interest.

2.1 Theoretical review

The paper includes a discussion of theories regarding the relationship between macroeconomic conditions and stock market outcomes. Macroeconomic factors are explored in depth to understand how they affect stock market results.

The paper includes a discussion of theories regarding the relationship between macroeconomic conditions and stock market outcomes. Macroeconomic factors are explored in depth to understand how they affect stock market results.

Effective Market Theory

Fama was the one who initially established the Efficient Market Hypothesis (EMH) (1970). This theory of investing states that share prices in the stock market accurately represent all available information. Furthermore, it's crucial that investors get higher yields by purchasing high-risk securities, and beating the Wayamba Journal of Management should be difficult.

Dow Theory

When it comes to stock price technical analysis, Dow Theory is regarded as a pioneering work. The original concepts were developed and improved by Robert (1932) into three fundamental principles that formed the basis of the Dow Theory. (a) The Dow Theory is not perfect; (b) The averages discount everything; and (c) The Primary Trend is Inviolate

Random walk theory

According to Malkiel (1973), one cannot forecast the future movement of a stock's price or the direction of the market as a whole based on its historical behavior. It is the occurrence of an event that is determined by a sequence of arbitrary motions; happenings that are unpredictable. For instance, because they are inebriated and their gait is unpredictable, one may regard the walking of a drunken person as random walking. When the random walk theory is applied to stocks, it is suggested that there is no way to predict stock prices because they fluctuate at random.

Arbitrage Pricing Theory

Ross introduced the Arbitrage Pricing Theory (APT) in 1976. By utilizing the relationship between macroeconomic variables and projected return, it makes return predictions. This theory is a development of the CAPM and is predicated on the idea that there is only one independent variable—the market's risk premium. The assumptions of homogeneous expectations, completely competitive marketplaces, and frictionless capital markets are shared by both CAPM and APT. Nonetheless, Ross (1976) proposes a multifactor approach to clarify asset pricing using the APT. Numerous research have examined the connection between macroeconomic variables and the stock market using arbitrage pricing theory (APT). A functional form is used in an early theory of arbitrage pricing to examine the relationship between macroeconomic variables and stock index. Common variables effect all individual equities. Macroeconomic factors like changes in the money supply, interest rates, inflation, and economic growth can all have an impact on the market index.

The Classical Theory of Interest

The Classical theory of interest rate enumerated by Alfred Marshall and Pigou as enumerated in Jhingan (2003) argues that the demand for capital consists of the demand for production and consumption purposes. But it should be noted that the productivity of capital is subject to the law of variable proportion. That is, upon addition of units of capital to a fixed factor, a stage comes when the employment of an additional unit will not add more productivity. Because of this, the rate of interest and the demand for capital are negatively correlated, and the capital investment schedule slopes downhill from left to right. An increase in interest rates will make loans less appealing, which will reduce company output and investment.

The Negativists theory

According to Hager's (1977) articulation of the negativist theory, inflation opposes savings and, as a result, negatively affects enterprises' profitability positions, leading to limited investment. One recurring criticism of this generally recognized theory of the money supply, according to Cameron (1972), is that inflation lowers the purchase value of money and raises risk, discouraging investment (Oleka, et al, 2014). According to this school of thinking, capital valuation and business performance are distorted by inflation, which then affects management and investment choices. Inflation affects capital valuation and business performance, which in turn affects management and investment choices. The argument in the contribution is that the level of risk connected with financial investments is scary and disheartening when unanticipated inflation occurs frequently because the growing degree of uncertainty discourages investors from making significant purchases or long-term commitments. This theory holds that inflation has a detrimental effect on investment decisions as well as other measures of economic performance, most notably the GDP of the whole economy.

The Neutralist theory

Hyek (1931) was the main proponent of this theory which contends that there is no discernible effect of inflation on investment, this theory attempts to reconcile the neutralist analysis of investment decision and inflationary effects. The theory was in agreement that inflation is a legitimately bad phenomenon, but economists have not conclusively demonstrated that inflation is detrimental to any economy. For instance, it has frequently been argued that a price level that changes at a constant proportional rate, is fully anticipated by all economic actors, and is acted upon by them, serves as a good signal to investors for decision-making (Oleka, et al, 2014). Based on this notion, this school issued a warning, stating that it is naïve to presume that inflation benefits or hurts any economy unless econometric calculations are performed. Until then, nobody is in a position to declare with certainty whether inflation helps or hurts the performance of a particular company. Theorists of the neutralists concluded that a firm's investment decision is unaffected by the inflationary effect because of this (Selody, 1982).

2.2 Empirical Review

Depending on the country's economic situation and political policies, macroeconomic issues can have varying effects on stock markets, which can have a substantial influence on investment decisions. In order to achieve a high growth trajectory, a developing country must have a prosperous stock market. The performance of the stock market in Nepal is seen as a crucial sign of the country's business and economic health. This section of Chapter II reviews earlier research on the impact of macroeconomic factors on stock market return that has been done by different scholars which are pertinent to this study.

Mukherjee and Naka (1995) examined the relationship between the exchange rate, inflation, money supply, industrial output index, bond rate, call money rate, and stock market index return. The researchers came to the conclusion that there is a long-term equilibrium relationship between the selected macroeconomic factors and stock market returns using the vector error correction model.

Gunsel and Cukur (2007) investigate the effects of macroeconomic factors on the London Stock Exchange's stock returns between 1980 and 1993. Variables such as interest rates, money supply, exchange rates, risk duration, and dividend yield are used to compare stock returns. The analysis showed that macroeconomic factors significantly and favorably affect the rise of the stock index.

Using quarterly time series data, Acikalin et al. (2008) investigated the link between macroeconomic variables and stock returns on the Istanbul Stock Exchange. The Istanbul stock index was utilized as an endogenous variable, while the GDP, interest rate, currency rate, and current account balance are examples of exogenous variables. The authors discovered a long-term, stable link between the Istanbul Stock Exchange index and macroeconomic variables using the Vector Error Correction model and Johnson Cointegration

Samadi, Bayani, and Ghalandari (2012) investigated how the stock returns index in the Tehran stock exchange was affected by macroeconomic factors such as exchange rates, global gold prices, inflation, liquidity, and oil prices. The findings indicated that the variables affecting stock returns were the price of gold, inflation, and exchange rates, while the price of oil and liquidity had little effect on stock returns.

Kisaka and Mwasaru (2012) investigated the causal relationship between foreign exchange rates and Kenyan stock prices. The study's goal was to determine the causal relationships between the Nairobi Securities Exchange and top foreign exchange market prices. The relationship was tested using the Vector Error Correction model and the Co-integration model. The findings demonstrated that stock prices and foreign currency rates were non-stationary in both level forms and initial differences, and that they are integrated of order one in Kenya. The two variables were co-integrated, as demonstrated by the co-integration tests.

The Indian stock market index was compared to five macroeconomic indicators (money supply, treasury bill rates, exchange rates, wholesale pricing index, and industrial production index) by Naik and Padhi (2012). A vector error correction

model and Johansen's co-integration were used to investigate the long-run equilibrium relationship between the stock market index and macroeconomic variables. The analysis showed that there is a long-run equilibrium link between macroeconomic variables and the stock market index, and that they are co-integrated. It was discovered that the money supply, industrial production, and stock prices all positively correlate with each other, but adversely with inflation.

Quadir (2012) examined the effects of macroeconomic variables on stock returns on Dhaka Stock Exchange for the period between January 2000 and February 2007 on the basis of monthly time series data using Autoregressive Integrated Moving Average model. Though the ARIMA model finds a positive relationship between Treasury bill interest rate and industrial production with market stock returns, but the coefficients have turned out to be statistically insignificant.

Using monthly data for the period from 2003 to 2010 Ahmet (2012) investigated the relationship between the macroeconomic variables and Istanbul Stock Exchange (ISE) industry index. The selected macroeconomic variables for the study included interest rates, consumer price index, money supply, exchange rate, gold prices, oil prices, current account deficit and export volume. The Johansen’s cointegration test was utilized to determine the impact of selected macroeconomic variables on ISE industry index. The result of the Johansen’s cointegration shows that macroeconomic variables exhibit a long run equilibrium relationship with the ISE industry index.

Hassan and Sangmi (2013) investigated how macroeconomic factors affected the movement of Indian stock prices. Three Indian stock market indices—SENSEX, NIFTY, and BSE-100—were the dependent variable, and the independent variables were six macroeconomic indicators: inflation, foreign exchange rate, industrial production, money supply, gold price, and interest rate. For data analysis, a multiple regression model was employed. The study discovered that while macroeconomic factors have an impact on the Indian stock market, some of these effects are beneficial and others are negative.

Haruna, Yazidu, and Paul (2013) used the Granger causality test, the unit root test, and the vector-error correction model to examine the possibility of a casual relationship between FDI, inflation, and money supply and stock market return in the Ghanaian stock market. The research revealed a noteworthy correlation between money supply, inflation, and stock returns, with the exception of a long-term association with foreign direct investment.

Using annual data spanning 23 years, Kibria et al. (2014) examined the effects of five macroeconomic factors on Pakistan's economy: inflation, savings growth, GDP per capita, money supply, and exchange rate. Regression analysis, correlation analysis, the Granger causality test, and descriptive analysis were all used in the study. The results of the Granger causality test demonstrated that the money supply is unidirectionally granger caused by the exchange rate and gross domestic product savings. Furthermore, the results of the regression analysis demonstrated that the stock index is positively and significantly impacted by the money supply, GDP per capita, exchange rate, inflation, and savings from the GDP.

Zaheer and Rashid (2014) examined the connections between the Karachi stock market index and a number of macroeconomic factors, such as industrial production, inflation, money supply, interest rates, and currency rates. The Johnson Cointegration test, the Augmented Dicky Fuller (ADF) test, and the Phillip Perron test were used by the authors to determine the long-term link between macroeconomics variables and stock market returns. Given the heteroskedastic trend in the data, the Generalized Autoregressive Conditional Heteroskedasticity model was employed to determine the correlation between stock returns and the variance of the squared error terms. While the industrial production index was found to be positively associated with stock market returns, the consumer price index, money supply, exchange rates, and interest rates demonstrated to be negatively associated with index returns.

Singh (2014) investigated the causal relationship between the average monthly closing prices of the BSE 100 and CNX 100 and industrial production, the wholesale price index, money supply, interest rates, trade deficit, foreign institutional investment,

exchange rate, crude oil price, and gold price. The Granger causality test, multivariate stepwise regression, and Pearson correlation were employed in the study. The results of the correlation analysis showed that the CNX 100 index had a negative relationship with the money supply, interest rate, and gold price, whereas the BSE 100 index had a positive association with all three variables.

Rafay et al., (2014) investigated the causal relationship between Pakistan's Karachi stock exchange index and macroeconomic variables. The consumer price index, interest rate, exchange rate, imports, and exports were the macroeconomic variables that were chosen. The association between dependent and independent variables was ascertained by regression analysis. To further verify the causality of the link between the variables, the Granger causality test was used. The analysis discovered a strong correlation between import and the stock market. Nevertheless, the Karachi stock exchange index is unrelated to the consumer price index, interest rate, exports, and currency rate.

Gurloveleen and Bhatia (2015) used monthly data on ten macroeconomic variables to examine how macroeconomic factors affected the operation of the Indian stock market. To determine the outcomes, the researcher performed Granger causality tests, multiple regression, and the Augmented Dickey Fuller test. The exchange rate and foreign institutional investors were judged by the researcher to be relevant, while other factors were not. Since there was no correlation between the factors, the study concluded that the Indian stock market was a poor type of efficient.

Phuyal (2016) examined whether there was a long-term correlation between a few chosen macroeconomic indicators and stock prices in the developing Nepali stock market using Johansen's cointegration method. Monthly data from January 2003 to December 2012, along with a set of six macroeconomic factors and the return on the stock market, were used to achieve this goal. According to the findings, the Nepali stock market and a number of macroeconomic indicators, such as the interest rate, remittance flow, and inflation rate, had a long-term equilibrium relationship. The short-term disequilibrium was adjusted on a monthly basis by 1.79%. It also demonstrated the Granger causality that existed between them. Remittance income

and the lag values of the NEPSE index up to six levels had an impact on the stock market index in the short term, as demonstrated by Wald test.

Gay (2016) conducted research on the impact of macroeconomic factors on stock market returns in four growing economies: China, India, Russia, and Brazil. Using the Box-Jenkins ARIMA model, the author examined the time-series association between stock market index prices and the macroeconomic variables of oil price and exchange rate for Brazil, Russia, India, and China. The research indicates that there is no significant correlation between the oil price and exchange rate and the stock market index prices of these countries. Additionally, there is no significant correlation between the stock market returns of the past and the present. These findings imply that the markets in Brazil, Russia, India, and China demonstrate a weak form of market efficiency.

The relationship between the stock market and macroeconomic variables in two rising economies (Tunisia and Egypt) for the period from January 1998 to January 2014 was clarified by Barakat, Elgazzar, and Hanafy (2016). The findings showed a causal association between the market index and the money supply, interest rate, exchange rate, and consumer price index in Egypt. With the exception of the consumer price index, which has no causal connection to the market index, Tunisia is comparable. The stock market in both nations is co-integrated with the four macroeconomic variables, according to the resultsand positively to inflation and the increase of broad money. The reduction of borrowing costs encourages stock market investment. The study also discovered that the stock market reacts strongly to shifts in the political landscape and the NRB's policy.

Pooja, M. (2018) looked into the relationship between macroeconomic factors and the Bombay Stock Exchange. The goal of this study is to determine whether there is any relationship, between the Bombay Stock Exchange and macroeconomic indicators for the April 1999–March 2017 period, including the index of industrial production, inflation, interest rates, gold prices, exchange rates, money supply and Bombay Stock Exchange. The study also aims to ascertain the degree of correlation, both short- and

long-term, between the independent factors and the dependent parameter, or Bombay Stock Exchange. The test makes use of Granger Causality, Johansen Cointegration, and the Vector Error Correction technique. The long-run causal relationship between the macroeconomic variables of the Bombay Stock Exchange, foreign institutional investment, inflation, interest rates, gold prices, exchange rate, and Index of Industrial Production is confirmed by the analysis conducted using the Vector Error Correction Model (VECM). It proves that there is a short-term causal relationship between the money supply and the Bombay Stock Exchange as well as between inflation and the index. The findings indicate that fluctuations in the money supply, exchange rate, gold prices, foreign institutional investment, and Index of Industrial Production are all influenced by the Bombay Stock Exchange.

Khan and Khan (2018) investigated the impact of key macroeconomic variables on Pakistani stock prices by evaluating monthly data from May 2000 to August 2016. The ideal ARDL approach of bound testing is used to verify the short- and long-term cointegration 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 cointegration with stock prices, all the factors are negligible in the short run. When altering the money supply in the market, the central bank must exercise caution since an excessive rise could have an impact on both the stock market and investments. 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.

Using monthly data from January 2005 to December 2015, Jamaludin, Ismail, and Manaf (2017) investigated the impact of macroeconomic variables, specifically inflation, money supply and exchange rate, on returns from the conventional and Islamic stock markets in the three ASEAN countries including Singapore, Malaysia, and Indonesia). Using panel least square regression techniques. The findings demonstrate that the inflation rate and exchange rate have a considerable impact on

both stock market performance. Money supply is determined to be negligible. The findings also indicate that inflation has a bigger impact and is inversely correlated with stock market returns. Since the outcomes could have an impact on boosting the capital market in the chosen ASEAN countries, monetary policy in this scenario needs to be changed to ensure that the inflation rate is set at a low level.

Badullahewage (2018) examined the crucial influence of macroeconomic factors on the performance of the Sri Lankan stock market. Every element that directly affects how the emerging stock market operates has been researched. With the aid of the indexes, the relationship between the variables such as GDP, inflation, interest rates, and exchange rates has been appropriately studied. The findings showed that each of these elements has a direct bearing on stock market performance, and that as a result, there have been numerous ups and downs in Sri Lankan stock market performance. It has been discovered that, of all the variables that have been covered, exchange rates and inflation have comparatively greater impacts on the performance of the stock market. Because these factors are unpredictable, it displays variation. Over time, the Colombo Stock Exchange has experienced a significant shift in performance, and these elements have been essential to its operation.

Megaravalli & Sampagnaro (2018) investigated the macroeconomic factors and their effects on the stock markets of three Asian nations using monthly time series data. Examining the long- and short-term relationships between the stock markets in Japan, China, and India was the aim of the article.The long-run and short-run statistical dynamics were determined using the unit root test, the cointegration test, the Granger causality test, and the pooled mean group estimator methodology. The results demonstrated that whereas inflation has a negative and negligible long-term impact on stock markets, exchange rates have a positive and considerable long-term impact.

Shrestha (2019) looked at how the NEPSE index was affected by macroeconomic factors between January 2002 and December 2016. Correlation and causal comparative research designs were used in the study to assess how macroeconomic variables affected the NEPSE index. With the exception of the variable interest rate, which became stationary at their first difference, the stationarity test revealed that

none of the variables were stationary at their level. For additional analysis, all variables—aside from interest rate—are employed at their initial difference. The association was observed using Pearson's correlation model, and the impact of macroeconomic variables on the NEPSE index was examined using regression modeling. The results of the regression analysis indicated that, while the coefficient of interest rate is statistically significant at the five percent level of significance, the coefficients of exchange rate and gold price are statistically insignificant at the one percent level. In a similar vein, at the one percent significance level, the wholesale pricing index coefficient is statistically significant. According to the study's findings, the interest rate and wholesale price index have a stronger ability to explain variations in the stock market index than the gold price and exchange rate, and they also have a bigger impact on the stock market index in the Nepalese stock market. Shrestha and Subedi (2014) used monthly data from mid-August 2000 to mid-July 2014 to investigate the factors influencing the stock index in Nepal. 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. The stock market index reacts adversely to the rate of treasury bills.

Thapa (2019) investigated the factors that affected Nepalese stock prices from 2008 to 2018, specifically focusing on Nepalese commercial banks that were listed on the Nepal Stock Exchange Ltd. A basic linear regression model was used to examine the data, which were gathered from the financial statements and questionnaires of the relevant organizations. The work's conclusions showed that while interest rate and price to earnings ratio demonstrated a significant inverse association with share price, earning per share, dividend per share, effective rules and regulations, market whims and rumors, company profiles, and success depends on luck had a significant positive association with share price. In addition, the availability of liquidity and the application of technical and fundamental analysis boost the Nepalese stock market's performance. More importantly, it has been discovered that changes in interest rates and dividends have a big impact on the stock market.

Devkota and Dhungana (2019) investigate the correlation between the broad money supply, gold price, interest rate on 91-day Treasury bills, and real exchange rate with the stock market index for the years 1994–2017. The link between the variables under examination has been examined through the use of time series data. The outcome of the Bound test verified the existence of a long-term link between the variables. The interest rate is the primary determinant of the Nepalese stock market index, according to the ARDL conclusion, which aligns with empirical findings. The gold price has little effect on the Nepalese stock market, which is extremely sensitive to interest. Even though the Nepalese economy is known as a remittance-based economy, the stock market is seldom affected by the real exchange rate. In summary, macroeconomic factors have a significant effect on the stock market. In light of this outcome, policymakers should consider macroeconomic factors while developing capital market development policies.

Leading indicators, sentiment, German government bond yields, and macroeconomic factors were all studied by Celebi and Hönig (2019) in relation to the main German stock index. Using datasets covering 24 factors over approximately 27 years, we found evidence that the Composite Leading Indicator, the Institute for Economic Research Export Expectations index, the Export Climate index, exports, the Consumer Price Index, and the yields on German government bonds exhibit delayed impacts on stock returns across most sub-samples. The study also discovered that there was a shift in the direction of the delayed impact of the monetary aggregate M2's components on stock returns between the crisis and post-crisis eras. Overall, the findings show that, in comparison to the pre- and post-crisis periods, a greater number of economic indicators and determinants had a substantial impact on stock returns during the crisis period. This suggests that a macro-driven market is dominant in the post-crisis era.

Huy, Loan, and Anh (2020) examined the positive and negative effects on the stock price of Vietnam's joint stock commercial bank, Vietcombank, throughout the course of the 2014–2019 period, based on seven macroeconomic parameters. 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.

Kalam (2020) investigated how macroeconomic factors affected stock market return. The Gross Domestic Product, Interest Rate, Inflation, Exchange Rate, and Foreign Direct Investment are macroeconomic factors. The study used multiple regression analysis to analyze secondary variables over twenty years, from 2000 to 2019, and it tests the ARDL test for long- and short-term coefficients. The information for the expanding issues for the empirical literature on policy makers, regulators, and the investing community will serve as the study's guidance. The analysis shows a notable influence on the return on the Malaysian stock market, which may also have an effect on the long- and short-term coefficients. This will also clarify Malaysia's stock market performance. The analysis clarified that the regulator should refrain from taking arbitrary actions, maintain interest rates at a reasonable level, and enhance the external economic environment by implementing a rule-based exchange rate policy. The exchange rate, long and short run, multiple regression, ARDL test, macroeconomic variables, and the Malaysian stock market.

The long-term correlation between macroeconomic variables and the stock exchange prices of the United States, Japan, and China was examined by Bellalah et al. (2013). Trade, oil prices, interest rates, money supply, and the index of industrial production were the macroeconomic variables. For data analysis, the autoregressive distributive lag model was employed. The findings demonstrated that money supply, industrial output index, and long- and short-term interest rates were positively correlated with stock exchange prices in both China and the United States. In Japan, the money supply was positive in the long run but negative in the short run when it came to stock market prices. Long-term interest was also positive and highly significant, while short-term interest was less significant.

In their study from 2021, Francis, Ravinthirakumaran, and Ganeshamoorthy (2021) explored the causal relationship between stock prices and macroeconomic factors as well as how macroeconomic factors affected the dynamics of price fluctuations in stocks on the Sri Lankan stock market. In order to investigate the relationships and short-term dynamic interactions between the variables of interest, the autoregressive distributed lag bound test method was utilized in this work. Statistics on industrial production, inflation, money supply, real exchange rate, trade openness, average weighted prime lending rate, all share price index, and conflict statistics were utilized in the study. The data was collected on a monthly basis between January 2007 and December 2019. With the exception of the entire share price index, the results show a considerable correlation between macroeconomic and political stability indicators and stock market returns.

Olokoyo, Ibhagui, and Babajide (2020) investigated how Nigeria's stock market performance (market capitalization) was affected over the long term by macroeconomic factors such interest rates, foreign capital flows, exchange rates, GDP growth, inflation, and trade. The study used the VECM analysis with data from the Central Bank of Nigeria and the World Development Indicators. The findings point to a long-term cointegration between macroeconomic variables and stock market performance. Exchange rates, GDP growth rates, and foreign capital flows are favorably correlated with stock market performance, while interest rates, inflation, and trade have a negative link. According to the findings, exchange rates, GDP growth, inflation, and trade are weakly exogenous, while the stock market, interest rates, and foreign capital flows are largely responsible for restoring the long-run link when there is a divergence from the long-run relationship between stock market performance and macroeconomic fundamentals. According to our estimates, any disequilibrium resulting from interest rates is more than entirely corrected in a year, in the sense of oscillatory convergence, whereas stock-related disequilibrium takes longer to correct by 29% and 5%.

With the exception of determining whether investment risk can function as an intervening variable in this study, Widagdo et al. (2020) examined and investigated

the impact of financial ratios and macroeconomics on the returns of Islamic stocks included in the Jakarta Islamic Index. This kind of research uses a quantitative descriptive methodology and is explanatory in character. The study's findings indicate that only financial ratios have an impact on investment risk and sharia stock returns; nevertheless, the mediation test revealed that financial ratios, macroeconomic conditions, and Islamic stock returns are not mediated by investment risk. These results suggest that the financial condition of the organization has a critical influence. The financial standing of the company might indicate the future degree of risk that investors are willing to take on, in addition to having an impact on the rate of return realized. A corporation will benefit from increased financial performance on the part of many interested stakeholders and reduce investor losses.

Pokharel and Pokhrel (2021) investigated the relationship between macroeconomic variables and stock prices in Nepal Stock Exchange Nepal. To find the impact of macroeconomic variables on stock price analytical research is conducted. Secondary data were used in the study and the study considered annual data of several macroeconomic variables from 2001 to 2018. Stock price is considered as dependent variable and gross domestic product, exports, consumer price index, money supply, exchange rate, foreign direct investment and oil prices are treated as independent variables. The stationary of data is checked through Augmented Dickey Fuller test. All variables are stationary at zero lag. For the statistical result, descriptive statistics, correlation and multiple regression analysis were used. The overall results revealed that oil price and money supply have significant positive impact on the stock price while other variables have adversely affected the stock price.

Using time series data spanning from 1987/88 to 2019/20, Shrestha and Lamichhane (2021) investigated the co-integrating link between macroeconomic determinants and stock market performance in Nepal. This study has determined the co-integrating link between macroeconomic variables and stock market performance using the Autoregressive Distributed Lag Bounds testing technique. Market capitalization, which measures the performance of the stock market, is regarded as a dependent variable. Selected macroeconomic variables, such as the interest rate measured by the

91-day Treasury bill rate, the gross domestic product, and the broad money supply measured by M2, are regarded as explanatory variables. The results of the ARDL bounds test show that macroeconomic variables and stock market performance are co-integrated. In a similar vein, this paper's results demonstrate the substantial benefits of economic expansion. Additionally, research indicates that the wide money supply and interest rate have a substantial detrimental long-term impact on the performance of the Nepalese stock market. This research ultimately shows that the short-term imbalance in stock market performance is eventually resolved by GDP, M2, and IR. This article has implications for capital market policy, monetary policy, financial policy, and economic policy development. When creating capital market policies, stock market regulators should take macroeconomic factors into account in order to improve the performance of the Nepali stock market.

Ghimire (2022) conducted research on the macroeconomic variables influencing Nepali stock prices. It determines the impact of the four macroeconomic variables—the inflation rate, the broad money supply, the gross domestic product, and per capita income—on the NEPSE index by taking into account the yearly statistics for each of these variables. It examines the relationship between stock prices and macroeconomic variables using the Pearson correlation matrix. The findings showed that, as anticipated, the market performance of stock prices responds negatively to the rate of inflation and favorably to the gross domestic product and the total money supply. Changes in the country's per capita income have no effect on the NEPSE index. The nation's financial and economic policies are strengthened by these discoveries, which also aid to stabilize Nepal's capital stock market.

Sukmayana, Dewi and Ikhsan (2022) investigated how interest rates, currency rates, and inflation affect stock returns. This research employs causal theory and quantitative methodology. Regression with normality, autocorrelation, multicollinearity, heteroscedasticity, and linearity tests were utilized in the data analysis. The results showed that while interest rates and exchange rates have a favorable impact on stock returns, inflation has a negative impact on stock returns.

The study's findings are consistent with the theory of arbitrage pricing, which holds that asset prices can be anticipated by looking at macroeconomic variables.

Using the Vector Error Correction Model approach, Pratiwi, Rusgianto, and Wardhana (2022) examined the causation and cointegration relationship between changes in the composite stock price index and macroeconomic variables, specifically interest rates, inflation, and exchange rates. Secondary time series data covering the years 1990–2021 were used in the investigation. The interest rate, inflation, and exchange rate are examples of exogenous variables that were evaluated; the Composite Stock Price Index is an example of an endogenous variable. The findings of the cointegration test with Johansen's Cointegration Test indicated that there was a long-term association between stability/balance and similarity in the movements of the stock price index, interest rate, inflation, and exchange rates. Granger's Causality Test results show that the interest rate variable and the stock price index variable have a unidirectional causal relationship, but the foreign exchange variable and the interest rate variable have a two-way causal relationship and vice versa, and the exchange rate variable and the inflation variable have a two-way causal relationship and vice versa.

Balagobei and Bandara (2022) investigated how macroeconomic factors affected Sri Lanka's stock market performance. The all-share price index is used as a stand-in for stock market performance, while macroeconomic indicators such as the money supply, GDP, inflation, interest rate, and exchange rate are examined. The study's population comprises all companies that are listed on the Colombo Stock Exchange. The annual time series data was used from 1995 to 2019, and the data was collected from secondary sources. For the purpose of data analysis and hypothesis testing, multiple regression analysis and Pearson's correlation were used. In addition, the Breusch-Pagan-Godfrey test, the Augmented Dicky-Fuller test, and the Variance inflation factor for multicollinearity were applied. The results show that money supply and GDP have a beneficial impact on stock market performance. While inflation has not shown to have a substantial impact on stock market performance, interest rates and exchange rates have a negative impact on stock market performance.

Abdullai et al. (2023) examined the effect of macroeconomic variables on Ghana's stock market performance. The macroeconomic factors examined in the study were exchange rates, inflation rates, interest rates, and the uncertainty surrounding global economic policy. Monthly data from 2010 to 2021 were used in the analysis. Because it was based on numerical secondary data, the study employed quantitative research methodology. A correlation test was used in the study to ascertain the link between the variables. The performance of Ghanaian stocks was impacted by just two of the four macroeconomic variables examined, namely interest rates and the uncertainty surrounding global economic policy. The analysis showed that neither inflation nor exchange rates had an impact on Ghana's stock market performance. The correlation between stock returns and global economic policy uncertainty, interest rates, and inflation was negative but not statistically significant. The Exchange Rate, however, showed a positive correlation with stock returns and was statistically significant. Since stock returns are impacted by changes in macroeconomic variables, the study suggested maintaining and implementing conservative macroeconomic policies to bolster support from stock actions.

Ali (2023) examined the causal relationship, long-term equilibrium, and short-term dynamical adjustment between the macroeconomic variables of GDP, import payment, consumer price index (CPI), and foreign remittances, and the Dhaka stock exchange index. The study determines the long run equilibrium relationship and the short run dynamical adjustment among variables using the cointegration test and the vector error correction model (VECM). According to the test result, the variables are cointegrated, and according to VECM, the system corrects the amount of disequilibrium from the previous period by 5.98 percent per month. In order to estimate the causal relationship, the Granger causality test has also been used. The outcome demonstrates that there is no causal relationship between GDP and stock price.

Lama and Bhattacharya (2023) studied macroeconomic factors including capital spending, economic growth rate, foreign reserve, and interest rate in relation to the Nepalese market index. The 27-year period from 1994 to 2021 is covered by the

utilization of the data. Regression analysis is used in E-views data analysis. The study used ARDL methodologies along with a descriptive and causal research design as its approach. The study discovered a positive association between capital expenditure and stock market index as well as foreign reserve. Additionally, there is a negative association between the rate of economic growth and the stock market and interest rates. All of the variables have a long-term association, as indicated by the bound test findings. Capital expenditure has a positive and considerable impact on the stock market, while other variables have a minor impact, according to the long-run coefficient estimation of the ARDL model. The study emphasizes the conclusion that, while interest rates, foreign reserves, and capital expenditures have no appreciable short-term effects on the stock market, economic growth rate has a positive and significant impact at lag (-1).

Erhijakpor (2024) examined the impact of macroeconomic factors on the volatility of Nigeria's stock market returns. All share index volatility was used to represent stock market return volatility, while money supply, interest rate, exchange rate, inflation rate, and real gross domestic product growth rate were used to represent macroeconomic dynamics. The Unit Root Test, Autoregressive Distributive Lag Analysis, and Descriptive Statistics were applied for the study. The research findings indicate that the money supply has a short-term positive insignificant influence on Index Volatility, but a long-term positive consequential one. The short- and long-term effects of interest rates on index volatility are negative. The short- and long-term effects of the exchange rate on the index are negative and negligible. The stock market is negatively impacted by inflation rates in the short and long terms. In the medium and long terms, the domestic product growth rate is favorable for the stock market. Thus, macroeconomic dynamics were shown to have no discernible effect on the volatility of Nigeria's stock market returns. This means that policymakers and regulators have a responsibility to maintain overall stability in the money supply and exchange rates. Additionally, in order to improve stock market performance and attain the intended levels of economic growth and national development, they should work to restrain inflationary trends and maintain stable interest rates in the economy.

The impact of inflation on Zambia's all-shares index was examined by Chola (2024). The stock market index was the dependent variable, whereas the interest rate, inflation rate, and exchange rate were the independent factors. 24 companies listed on the Lusaka Stock Exchange were the focus of the investigation. Secondary data from the Bank of Zambia was used in the study. The study's conclusions show that the performance of the stock market is influenced by the chosen macroeconomic variables. This is due to the study's findings, which showed a positive or negative association between the stock market index and the interest, inflation, and exchange rates. Based on the results of the study and the different tests and correlation models employed, the study draws the conclusion that key macroeconomic variables in the nation have undergone significant change during the study period. Interest rates, inflation rates, and currency rates all varied greatly. The study comes to the conclusion that currency rates, interest rates, and inflation rates can all be utilized to forecast stock market performance. The performance of the stock market was strongly and significantly correlated with all of the macroeconomic parameters. This suggests that business activities, including stock market performance, are significantly influenced by Zambia's macroeconomic climate. Therefore, in order to draw international investors to the stock market, the study suggests that the Bank of Zambia maintain a stable foreign exchange rate.

Several researches have been conducted around the world using a variety of methodologies, but only a few studies explore the relationship between stock market returns and macroeconomic variables with different findings. However, there are similarities in the use of explanatory variables. Table 1 shows a few selected empirical studies which includes author, topic, objective variables methodology and findings.

Summary of Some Selected Literature Review:

Table 1: Summary Table of Literature Review

S. NO.	Authors	Name of articles	Objectives	Variables		Methodology	Findings
				Dependent	Independent		
1	Erhijakpor and Honour (2024)	Effect of macro-economics dynamic on stock market return volatility in Nigeria	To know how macroeconomic factors influenced stock market return volatility in Nigeria.	Stock variables	Interest rate, Inflation rate, exchange rate, money supply.	Quasi experimental approach	MS and EXCHR positively affected ASIV. INTR and INFLR inversely correlated. ASIV, macroeconomic dynamics have no significant effect on SMKT volatility.
2	Chola (2024)	The effect of selected macroeconomics factors on a stock market performance	To explore the effect of inflation, interest rate, exchange rate and global economic policy on stock market performance.	Stock market	Interest rate, Inflation rate, Exchange rate, global economic policy, price index, GDP	Various tests and correlation models	The selected macroeconomics variables have an effect on stock market performance
3	Abdullia et. al. (2023)	The impact of macro-economics variables on stock market performance in Ghana	To investigate the long run equilibrium, short run dynamics and causal relationship between Dhaka stock Exchange	Stocks market	Capital expenditure, consumer price index, GDP, foreign remittances and import payment	Descriptive and statistical techniqu e	Interest rates and global economic policy had an impact on Ghanaian stock and that Ghana's stock market performance is unaffected by inflation or the exchange rate.

			and macro-economic variables				
4	Ali, M. B. (2023)	Co-integrating relation between macroeconomic variables and stock returns	To investigate the causal relationship between Dhaka stock Exchange and macro-economic variables	Stock price	CPI, GDP, foreign exchange rate, interest rate	Cointegration test and VECM	Unidirectional causality from CPI and foreign remittance to stock price and bi-directional causality between import payment and stock price.
5	Lama and Bhattacharaya (2023)	Quantitative Analysis on impact of selected macro-economics variables on Nepal stock exchange	To examine relationship between Dhaka stock Exchange and macro-economic variables.	Stock market index	Interest rate, Inflation, exchange rate, broad money supply, GDP and per capita income.	Causal research design and ARDL approach	Confirms that the market in long run and short run the selected macro-economic variables affect the Nepalese stock market.
6	Sukmayana et. al (2022)	Impact of macroeconomic movements on changes in stock returns	To examine the effects of inflation, exchange rate interest rate on stock market	Stock market	Inflation, exchange rate, interest rate	Descriptive and quantitative approach	Macroeconomic variables have an influence on stock market returns. Developed countries have consistent tendency while emerging market countries have a tendency of inconsistency
7	Pratiwi et al	Application of vector error variables	To analyze the causality and cointegration	Stock price index	Interest rates, inflation	Vector Error Correct	that the movement of the LnIHSG, BI Rate, Inflation and Exchange

	(2022)	towards changes in the composite stock price index.	relationship of macroeconomic variables,		and exchange rate	ion Model	Rates had a relationship of stability/balance and the similarity of movements in the long term.
8	Balagobei and bandara (2022)	Impact of macroeconomic variables on stock market performance	It examines the effect of both macroeconomics and political stability variables on the dynamics of stock movement.	Stock market	GDP, money supply, interest rate and exchange rate	ADF test and Breusch-Pagan-Godfrey test	GDP and money supply positively and interest rate and exchange rate negatively influence the stock market performance
9	Ghimire, T.P. (2022)	Macroeconomic variables and effect on stock prices: correlation evidence from Nepal.	To investigate the relationship between macroeconomic variables on stock price in NEPSE	Stock market	Descriptive and casual comparative Research design,	Correlation and regression analysis	Broad money supply and GDP have a positive relationship with stock market.
10	Francis et al. (2021)	The impact of macroeconomic variables on stock prices in Sri Laka	To examine the causal relationship between stock prices and macroeconomic variables	Stock market	inflation, money supply, exchange rate, trade openness, prime lending rate	Arbitage pricing theory	The finding of this study are consistency with previous studies as discussed in the empirical literature.

11	Pokhrel and Pokhrel (2021)	Impact of macro-economic variables on stock price on Nepal stock exchange.	To examine the effects of macroeconomic variables on stock market return	Stock prices	GDP, exports, CPI, money supply, exchange rate, FDI and oil prices	Correlation and, multiple regression analysis	The result of the study revealed that GDP, ER is positively affect the stock prices while consumer price index negatively affects stock prices
12	Shrestha and Lamichhane (2021)	Macroeconomic factors and stocks market performance in Nepal	To examine relationship between macroeconomic factors and stock market performance	Stock market	Money supply, GDP, interest rate	ARDL using ADF and the Phillips perron test	A significant negative effect of broad money supply and interest rate on stock market in long-run and disequilibrium of stock market is corrected by GDP, M2 and IR in the long-run.
13	Kalam (2020)	The effects of macroeconomic variables on stock market returns	Investigate the effects of macroeconomic variables on to the stock market return	Stock market return	Inflation, exchange rate, FDI, GDP, Interest rate	ARDL model, Regression Analysis	Significant impact on to the stock market return which may also portrait on to the long and short run coefficient
14	Olokoyo et. al (2020)	Macroeconomics indicators and capital market performance: are the links sustainable	To analyze and test the effect of financial ratios	Stock market performance	Broad money supply, gold price interest rate, treasury bills and real	Vector error correction model (VECM) techniqu	Interest rate, inflation and trade bear a negatively and exchange rate, GDP growth rate and foreign capital flows are positively related to stock market performance

					exchange rate		
15	Huy, Loan, and Anh (2020)	Impact of selected factors on stock price a case study of in Vietnams	To examine the impact of macro-economic variables on Nepalese stock market.	Stock prices	GDP growth rate, inflation, VNIndex, lending rate, risk free rate USD/VND rate	Econometric model	Investment risk has no effect on stock returns. Financial ratio has a positive and significant effect on Islamic stock returns.
16	Widagdo et al. (2020)	Financial ratio, macro-economy and investment risk on sharia stock return	to analyze and test the effect of financial ratios and macroeconomics on Islamic stock returns	Islamic stock returns	Financial ratios, investment risk, macroeconomy	Structural equation model analysis method	Financial ratios affect sharia stock returns and investment risk, does not act as a mediating variable between financial ratios and and Islamic stock return.
17	Celebi and Honig, (2019)	The impact of macroeconomic factors on the German stock market	To determine the link between independent and dependent parameters.	Stock prices	GDP, investments, Unemployment rate, Exports	Arbitrage pricing theory.	The macroeconomic environment is a key determinant of business activities including the stock market.
18	Devkota and Dungana (2019	Impact of macro-economic variables on stock market in Nepal: An	To analyze the vital impact of macroeconomic factors on the stock market performance in	NEPSE INDEX	Inflation, interest rate, exchange rate, GDP, money	Eviews, seconday time series data	Macroeconomic variables have a notable impact on stock market

	)	ARDL Approach.	Sri Lanka		supply		
26	Shrestha, (2019).	Effect of macroeconomic variables on stock market index:With reference to Nepal Stock Exchange	Examined the effect of macroeconomic variables on the NEPSE index	NEPSE index	Money Supply, interest rate, exchange rate, inflation, and Real GDP	Correlation and causal comparative research designs	he interest rate and wholesale price index have a stronger ability to explain variations in the stock market index than the gold price and exchange rate
27	Thapa (2019)	Influencing Factors of Stock Price in Nepal	investigated the factors that affected Nepalese stock prices	Stock Price	Interest rate, share price, EPS, dividend, rules and regulations, rumors, company profiles, luck	linear regression model	changes in interest rates and dividends have a big impact on the stock market
20	Badullahewage (2018)	The effect of macroeconomic factors on the performance of stock market in Sri Lanka.	To study is to shed light on the relationship between stock market and macroeconomics factors in two emerging economics.	Stock market	Exchange rates and oil prices.	General linear regression	The performance of the stock market in any country relies on various factors and aspects among which macroeconomic factors play a vital role.

21	Khan and khan (2018)	The impact of macroeconomic variables on stock prices	Determining the effect of various macroeconomic variables on stock prices of Pakistan	Stock exchange	Exchange rate, money supply, interest rate, consumer price index.	Co-integration & ARDL	Long term relationship of money supply exchange rate and interest rate with stock prices.
22	Jmaludin et al. (2017)	Macroeconomics variables and stock market returns of selected ASEAN countries.	Examine the effect of macro-economic variables on both conventional and Islamic stock market returns	Stock exchange	Inflation, money supply, and exchange rate	Panel data regression analysis.	Both conventional and Islamic indices are affected by the macroeconomic variables, inflation poses a greater effect to the stock market returns.
23	Devkota and panta (2018)	An inquiry into the effect of the interest rate, gold price and the exchange rate on stock exchange index	Examines the causal relationship between NEPSE & interest rate, gold price, and USD exchange rate	Stock market Index	Interest rate, gold price, exchange rate	Granger causality and VECM	Exists a relationship between the NEPSE Index and the interest rate, and a unidirectional causation from the gold price to both the exchange rate and the interest rate
24	Gay (2016)	Effect of macroeconomics variables on stock market returns	To investigate the relationship between stock market index prices and the macroeconomic variables	Stocks market	Exchange rate, oil prices	Box-Jenkins ARIMA model.	Exchange rate and oil prices for Brazil, China and India with the same both stock and oil prices for Russia.

25	Barakat et al. (2016)	Impact of macroeconomic variables on stocks market	To examine the relationship between the stock market and macroeconomic factors	Stock market	Interest rate, exchange rate, CPI and money supply	Quantitative research approach.	All the macroeconomic variables have a long run or a causal relationship with the stock market
28	Phuyal (2016)	Can Macro-economic Variables Explain Long Term Stock Market Movements?	Examine cor-relation between macro-economic indicators & stock prices	Return on the stock market	Interest rate, remittance, and inflation	Johansen's cointegration method	Remittance and the lag values of the NEPSE had an impact on the stock market index.
29	Shrestha and Subedi (2014)	Determinants of Stock Market Performance in Nepal.	To investigate the factors influencing the stock index in Nepal.	Stock market	Treasury bill rate, wide money, and consumer price index	Correlation, OLS Method	The stock market index reacts adversely to the rate of treasury bills and positively to inflation

2.3 Research Gap

The correlations between macroeconomic indicators and the stock exchange index have been examined in numerous research. The disparate outcomes derived from these investigations have spurred the writer to conduct additional study (Shrestha, 2019). For developed markets, the correlation between the stock exchange index and macroeconomic factors has been extensively studied in recent years. Studies on the connection between macroeconomic factors and the stock exchange index for developing markets are, nevertheless, scarce (Adhikari, 2019).

Numerous research works have examined the correlation between some selected macroeconomic factors such as the gross domestic product, inflation, money supply, interest rate, price of gold,exchange rate, and remittances on stock market index (Shrestha, 2019). This research aims to close the gap left by earlier studies by reexamining the effects of several macroeconomic variables on the stock marketindex. The research findings pertaining to certain macroeconomic factors are constrained by a brief temporal interval. The study, however, has expanded the time frame from 1994 to 2023. In a similar vein, earlier scholars employed the Vector Error Correction (VEC) model, Auto Regressive Moving Average model, and Regression Analysis. Nonetheless, the Auto Regressive Distributive Lag (ARDL) model is used in this work while this study has employed descriptive and infrential statistics to analyze study data .

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

Research design is the main part of research works which tends to collect accurate information to minimize the chance of drawing incorrect inferences from data. It is simply the framework or plan for a study that is used as a guide in collecting and analyzing the data. Indeed, it is the blue print for collection, measurement and analysis of data which is usually developed to guide the research. It is a well-organized and integrated approach that guides the researcher in formulating, implementing, and controlling the study so as to produce the answers to the proposed research questions.

According to Kerlinger (1973, p. 300) "Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance." Thus, a research design is the arrangement of condition for collection and analysis of data in a manner that aims to generalize the findings of the sample on the population. The sort of research being conducted has a major influence on the research design selected. Because the study's foundation is numerical time series secondary data, a quantitative research methodology is adopted and a descriptive and causal research design is used. Descriptive study design facilitates the organization, tabulation, display, and characterization of the data. The application of causal research designs facilitates the investigation of possible casual links between independent and dependent variables. Thus, causal research approach is used to find evidence of regression and correlation between a few selected macroeconomic variables and the Nepalese stock market. Those selected macro-economic variables are Real gross domestic product, Money supply, inflation rate, interest rate, and foreign exchange rate are independent variables and Stock market returns as the dependent variable.

3.2 Population, Sample and Sample Design

The primary focus of the study is the chosen macroeconomic variable and how it affected Nepal's stock market index. Consequently, it was imperative to gather comprehensive data regarding the correlation and influence of specific macroeconomic factors on the Nepalese stock market, namely the stock market index in Nepal. For the purpose of study, necessary data have been collected from the secondary sources.

The study's population consists of macroeconomic data and stock market returns from the Composite Stock Price Index from 1994 to 2023. Thirty years of time series data—from 1994 to 2023—were used in the study. In Nepal, the stock market index which is the dependent variable in this study was created in 1993 but data of stock market index is available only from 1994. That is the reasoning for selecting the beginning year 1994 for data collection purpose. The data comes from the quarterly bulletin published by Nepal Rastra Bank. This is the population of the data studied. However, the sample was taken in annual basis to make comfortable that another independent macroeconomic variable is also available in yearly basis.

Among various macroeconomic variables (population) which influence stock market index (dependent variable) five variables, i.e., real gross domestic product, inflation rate, money supply, foreign exchange rate, interest rate are selected purposively as independent variables depending on the previous research works and availability of macroeconomic data set.

Computer software SPSS and Excel were employed as per the need to make the data ready for analysis. For the estimation of time series regression equations and correlation computer software program, Eviews was used.

3.3 Nature and Source of Data and The Instrument of Data Collection

The data in this study were mainly collected from secondary sources. This study is mainly based on 30 years' time series secondary data. The data sources of the stock market index were from the quarterly economic bulletins, published by Nepal Rastra Bank, the central bank of Nepal. The other data of macroeconomics variables came

from different sources including the quarterly bulletin published by Nepal Rastra Bank, economic survey, published by Ministry of Finance and other various sources.

3.4 Methods of Data Analysis

The research problem of a study can be solved using a variety of analytical techniques. All secondary data in the current study will be first organized, scanned, and tabulated under different headings. Descriptive and cumulative statistical analysis is then performed to further illuminate the findings. The Stock market Index will be the dependent variable and real gross domestic product, money supply, inflation rate, interest rate, and exchange rate will be the independent variables. The study has focused on descriptive statistics, correlation analysis and multiple regression analysis using SPPS version 25 having five independent variables.

Using EViews, Augmented Dickey Fuller (ADF) Test will be utilized to examine the relationship between macroeconomic variables and stock market values. The stationarity of the data will be checked using the ADF Test. Multiple regression analysis will be used to identify the significant factors once the data has stabilized. Following multiple regression, the Granger causality test will be performed to examine the potential causal relationship between the dependent and independent variables. It has been considered that regression analysis is the best option to find the cause and effect among the variables. Thus, the causal association will be confirmed for those that the multiple regression analysis found to be significant.Arithmetic mean, standard deviation, and variance are used in descriptive statistics, whereas multiple regression and multiple correlation analyses are used in inferential statistics.

Descriptive Statistics

Descriptive statistics played a vital role in analyzing key independent variables such as Real Gross Domestic products (RGDP), Money Supply 2(Ms2), Interest Rate (IR), Inflatation Rate (INFR) and Exchange Rate (EXR) with the dependent variables Stock market Returns (SMR). It gives information on the average values, variability, and distribution of these variables. This study clarifies the distribution of the data.

Therefore, descriptive statistics are as follows:

Arithmetic mean

The arithmetic mean, often referred to as the average, represents the central tendency in a dataset and is computed by adding all values together and dividing by the total count of values. This metric is widely utilized as a descriptive statistic.

Arithmetic mean ($\bar{x}$) $= \frac{\Sigma X}{N}$

Where,

N = Total number of values in the dataset

ΣX= Sum of all values in the dataset 30

Standard deviation

Standard deviation in descriptive statistics quantifies the dispersion or variability within a dataset, indicating how widely the values deviate from the mean. The method for computing standard deviation varies depending on whether the analysis involves a population or a sample.

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

Where,

$\bar{x}$ Represents the mean (average) of the data set

N is the total number of data points in the data set

Inferential Statistics

Inferential statistics refer to the branch of statistics that makees the use of various analytical tools to draw inferences about the independent variables such as Real Gross Domestics Product (RGDP), Money Supply 2(ms2), Interest Rate (IR), Inflatation rate (INFR), Exchange rate (EXR) and the dependenty variables Stock market return (SMR) . These techniques have included correlation analysis and regression analysis which help to assess the strength and significance of the associations between the independent variables and the dependent variable, providing insights into the impact of macro economic factors on stock market returns.

Correlation analysis

The correlation coefficient is a statistical tools to measures the relatationship between two or more variables . The highest range of correlation is +1 and lowest range of the correlation is -1. Thus if the correlation result lies +1 then it is positive relationship between the variables and if the correlation result is close to -1, then there is strong negative correlation between the variables. Similarly, if the correlation is zero then there is no relation at all between the variables, which is also known as neutral correlation. In the correlation analysis the two variables shows the positive and negative correlation.The Study has applied Karl Pearson's correlation analysis method using SPSSversion 25.

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2}\,\sqrt{N\sum Y^2 - (\sum Y^2)}}$$

Where,

N = no. of observations,

ΣX = sum of observations in series X,

ΣY = sum of observations in series Y.

Multiple regression analysis

Multiple regression analysis is a statistical technique that analyzes the relationship between two or more variables and uses the information to estimate the value of the dependent variables. In multiple regression , the objectives is to develop a model that describes a depedent variables to more than one depedent variable.

Model specification

In this model the dependent variable is Stock Market Return, which is influenced by several independent variables. The model is represented as:

$LnSMR = \beta_0 + \beta 1 LnRGDP + \beta 2 LnMS2 + \beta 3 IR + \beta 4 INFR + \beta 5 LnEXR + \varepsilon it$

Where:

β_0= Intercept/ constant term

LnSMR= Natural logarithm of Stock Market Return

LnRGDP = Natural logarithm of Real gross domestic product

Ln MS2 = Natural logarithm of Money supply 2

IR = Interest rate

INFR =inflatation rate

LnEXR= Natural Logarithm of exchange rate.

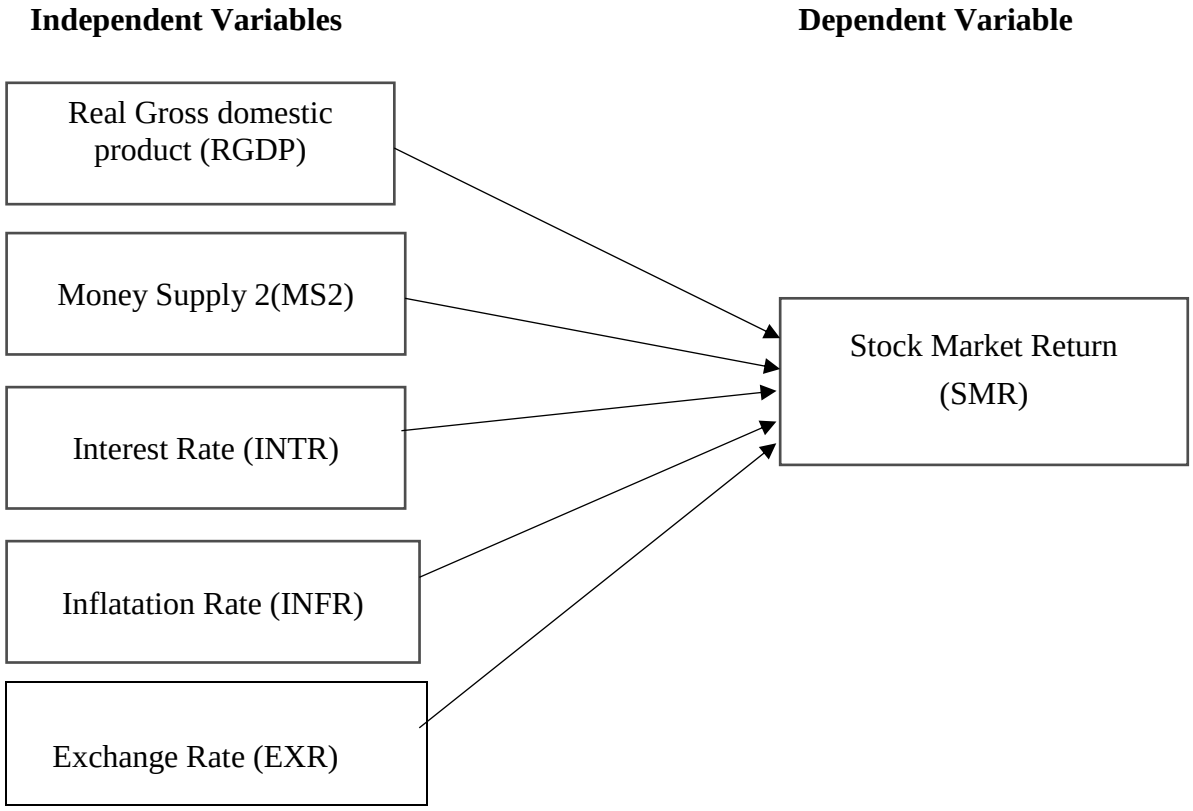
εit = Error term of the stochastic model

Betas (β) are the parameters of the model

3.5 Research Framework and Definition of Variables

Several things can have an impact on the stock market over a period of time. However, five macroeconomic variables are recognized as independent factors. An economy is said to be indicated by the stock market index. An increase in stock return is typically interpreted positively since it shows investors have faith in the economy's prospects. Understanding the relationship between the stock market return and its influencing elements is essential for this. A number of variables could impact the stock market index. The following is a potential systematic diagram based on the conceptual framework. This self-created model is predicated on the idea that all macroeconomic factors affect Nepal, albeit to varying degrees. Some factors may have a significant impact, while others may not. Therefore, certain independent variables disappear as a result of a model specification issue.

The Research framework is displayed in Figure 1. Analyzing the correlation between a few chosen macroeconomic factors and the stock market index is demonstrated.



(Source: Kibria et. al 2014)

Figure 1: Research Framework

Figure 1 shows the conceptual framework. It is shown to analyze the relationship between selected macroeconomic variables and the stock market index.

Following equation is used for the analysis. It implies that the dependent variable, stock market index is the function of independent variables i.e., real gross domestic production, money supply, interest rate, inflation rate, and exchange rate.

The basic econometric model employed in the study is as follows.

$$NI=\beta 0 +\beta 1RGDPt+\beta 2MS2t+\beta 3INTRt+\beta 4INTRt+ \beta 5INFRt+ \beta 6 ERt... (1)$$

Where,

NI =Stock Market Index

RGDP = Real Gross Domestic Product

MS 2= Money Supply 2

INTR = Interest Rate

INFR = Inflation rate

ER = Exchange Rate

Stock Market Index (NI):

An index used in finance to measure the performance of the stock market, or a subset thereof, is called a stock index or stock market index (Caplinger, 2020). An economy's perceived health is revealed by an indicator of the stock market. An index gathers information from numerous businesses in various industries. When combined, the data creates a picture that investors can use to determine market performance by comparing current and historical price level.

Gross Domestic Product (RGDP) in Real Terms

This is a representation of economic growth, which is defined as the increase in the market value of goods and services generated over time by an economy after accounting for inflation (Callen, 2019). It has also been used to measure the growth of real economic activity. Traditionally, it is measured as the percent rate of increase, which is one of the key factors determining stock market performance. Growth is typically calculated in real terms, or inflation-adjusted terms, to remove the impact of inflation on the price of goods produced.

Money Supply (MS):

Coins, balances, and cash in both checking and savings accounts make up the money supply (MS) Bapna, 2014). The entire amount of monitory assets at a given time is the money supply. To regulate interest rates and the flow of money throughout the economy, economists created rules to assess the money supply. An increase in the money supply typically results in reduced interest rates, which boosts investment returns. The total amount of monetary assets available in an economy at a given time is known as the money supply, or the amount of money in that economy. Although there are several definitions of "money," common metrics often involve demand deposits and currency in circulation. Any central bank can utilize the money supply as one tool in its monetary policy toolkit to influence actual activity to the appropriate

degree. It is thought that the stock market is significantly impacted by these regular adjustments to the monetary policy component. As a result, it's critical to examine how the money supply and the stock market, one of the key economic indicators, interact.

Inflation Rate (INFR)

A well-known concept of an increase in the general level of prices, that is inflation, is typically measured through Consumer Price Index (CPI) (Oxman, 2012). It is not, however, the sole indicator of inflation, as several factors may influence it. Investors should understand the meaning of "inflation." Because of the volatility of the stock market, long-term study has not yet shown a clear relationship between inflation and other economic indicators. Since inflation is a component of the valuation multiple, its applications vary depending on the viewpoint of the economy. The 91-day Treasury Bill rate is used as a stand-in for interest rates since it is a benchmark for calculating interest rates and represents the opportunity cost of owning shares.

Exchange Rate (ER):

One of the most important aspects of the economy is ER. A nation's currency can be explained by another currency through its exchange rate. It amply illustrates the substantial influence of the ER on stock market capitalization, price, and return, as explained by Mazuruse (2014) during his research. For example, if the India change rate for the Nepalese Rupee is $1.60, this shows that 1 Indian Rupee can be changed for 1.6 Nepalese Rupees.

CHAPTER IV

RESULT AND DISCUSSION

4.1 Results

This chapter covers the study's data analysis and interpretation. The data was gathered from the many quarterly bulletins that Nepal Rastra Bank (NRB) published in different issues. EViews, a sophisticated econometric, statistic, and forecasting program, was used for analysis and interpretation. The data used in this research includes annual time series of stock market index, real GDP, money supply, inflation rate, interest rate, and exchange rate. The time series data covers 30 years period from 1994 to 2023.

Descriptive statistics

Descriptive statistics have been used to better understand the influence of macroeconomic variables on stock market returns. The results in terms of mean and standard deviation are examined. The dependent variable is the natural logarithm of stock market return (LnSMR), while the independent variables are the natural logarithms of real GDP (LnRGDP), money supply 2 (LnMS2), interest rate (IR), inflation rate (INFR), and exchange rate (LnEXR). The mean represents the average value for each variable, whereas the standard deviation indicates the degree of variance or dispersion from the mean. The minimum and maximum values determine the data range. These descriptive statistics assist to comprehend the data's central tendency and spread of the data providing a foundation for further inferential statistical analysis.

Table 2: Descriptive Statistics of All Variables

Variables	Mean	S.D.	Min	Max
LnRGDP	11.3277	0.81475	10.34	12.46
LnMS2	13.2637	1.34090	11.15	15.52
IR	4.2613	2.85419	0.13	10.93
INFR	6.9477	2.64309	2.43	12.63
LnEXR	4.3877	0.26852	3.90	4.87
LnSMR	6.2907	0.8117	5.10	7.97
Valid N 30				

(Source: SPSS Version 25)

Table 2 provides a complete summary of descriptive statistics for the research variables, emphasizing core trends and variability. The Log of Stock Market Returns (LnSMR) has a mean of 6.2907, a range of 5.10 to 7.97, and a standard deviation of 0.88117, indicating moderate volatility and relative stability. In contrast, the Log of Money Supply M2 (LnMS2) has a higher mean of 13.2637, a range of 11.15 to 15.52, and a standard deviation of 1.34090, indicating more variability in money supply statistics.

Similarly, the Interest Rate (IR) shows significant variability with a mean of 4.2613, a broad range of 0.13 to 10.93, and a large standard deviation of 2.85419. The Inflation Rate (INF) likewise varies significantly, with a mean of 6.9477, a range of 2.43 to 12.63, and a standard deviation of 2.64309, but less so than interest rates. In contrast, the Log of Exchange Rate (LnEXR) is the most consistent, with a mean of 4.3877, a tight range of 3.90 to 4.87, and a standard deviation of 0.26852.

Overall, while LnSMR has modest variability, other variables, such as LnMS2 and IR, have larger ranges and standard deviations, indicating more significant variations in the money supply and interest rates than stock market returns. This comparison highlights the relative stability of stock market returns in compared to the more volatile economic indicators, as well as the dispersion and variability within each variable, which helps to comprehend the dataset's properties.

Inferential Statistics

Correlation and regression analysis are examples of inferential statistics that aid in understanding connections between variables. Correlation examines the degree and direction of relationships between independent variables and the dependent variable, demonstrating how changes in one variable affects changes in the other. Regression analysis is a collection of statistical procedures used to estimate the associations between a dependent variable and one or more independent variables. It may be used to determine the strength of a link between variables as well as to model the future relationship.

Correlation analysis

Correlation analysis is a method for determining the link between independent variables like LnRGDP, LnMS2, IR, INFR, and LnEXR and the dependent variable, Natural Logarithm of stock market returns (LnSMR). The study examined the intrinsic correlations between these factors. Karl Pearson's correlation analysis approach was utilized in this investigation. The findings are shown in the Table 3 below.

Table 3: Correlations Matrix

Variables		LnRGDP	LnMS2	IR	INF	LnEXR	LnSMR
LnRGDP	Pearson Correlation	1					
	Sig. (2-tailed)						
LnMS2	Pearson Correlation	.959**	1				
	Sig. (2-tailed)	0.000					
IR	Pearson Correlation	-0.329	-0.320	1			
	Sig. (2-tailed)	0.076	0.085				
INF	Pearson Correlation	-0.029	-0.103	0.125	1		
	Sig. (2-tailed)	0.879	0.590	0.511			
LnEXR	Pearson Correlation	0.904**	0.963**	-0.382*	-0.207	1	
	Sig. (2-tailed)	0.000	0.000	0.037	0.271		
LnSMR	Pearson Correlation	0.850**	0.918**	-0.291	-0.092	0.870**	1
	Sig. (2-tailed)	0.000	0.000	0.119	0.630	0.000	

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

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

(Source: SPSS Version 25)

Table 3 presents a comprehensive correlation study of many stock market-related factors. LnRGDP (Log of Real GDP) has strong positive correlations with LnMS2

(Log of Money Supply M2) (0.959, p = 0.000), LnEXR (Log of Exchange Rate) (0.904, p = 0.000), and LnSMR (Log of Stock Market Returns) (0.850, p = 0.000), indicating that higher GDP is closely related to increases in the money supply, exchange rates, and stock market returns. Similarly, LnMS2 has extremely significant positive correlations with LnEXR (0.963, p = 0.000) and LnSMR (0.918, p = 0.000), indicating that increased money supply leads to higher exchange rates and stock market returns.

In contrast, the Interest Rate (IR) has a moderate negative correlation with LnEXR (-0.382, p = 0.037), implying that higher interest rates are associated with lower exchange rates, but shows weak and non-significant relationships with other variables. INF (Inflation Rate) and IR both show weak, generally insignificant correlations with LnSMR, with INF having a very low and non-significant negative correlation of -0.092 (p = 0.630). Overall, the analysis indicates that GDP, money supply, and exchange rates are strongly correlated with stock market returns, while interest rates and inflation have less impact on these returns.

Multiple regression analysis

Regression analysis investigates the connections between variables. A regression analysis reveals more about the slope of the connection. It is used to define the nature of a connection and to forecast outcomes. This study investigated how LnRGDP, LnMS2, IR, INFR, and LnEXR affect LnSMR. The regression table shows the findings for the constant, coefficient of determination, and t-value. The coefficient, or slope of the regression line, indicates how much change in the dependent variable results from a one-unit change in the independent variable. The coefficient of determination (R^2) indicates how much of the variance in the dependent variable is explained by the independent variable.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.930[a]	0.864	0.836	0.35694

a. Predictors: (Constant), LnEXR, INFR, IR, LnRGDP, LnMS2

b. Dependent: LnSMR

(Source: SPSS Version 25)

Table 4 shows a summary of the regression model that evaluated the influence of numerous variables on the Log of Stock Market Returns (LnSMR). The model's performance metrics are as follows. The R value of 0.930 indicates a substantial positive correlation between the predicted and actual LnSMR values, implying that the model accounts for a considerable percentage of the variability in the dependent variable. The R Square value of 0.864 indicates that the model's independent variables (LnEXR, INF, IR, LnRGDP, and LnMS2) account for about 86.4% of LnSMR variation. This high amount of explained variance demonstrates the model's ability to capture the links between the variables and stock market results.

The Adjusted R Square value of 0.836 adjusts the R Square for the number of predictors in the model, providing a more accurate measure of goodness-of-fit, particularly when multiple predictors are included. This value suggests that, even after accounting for the number of predictors, the model still explains a substantial amount of variance in LnSMR. The Standard Error of the Estimate, which is 0.35694, indicates the average distance between the observed values and the values predicted by the model. This relatively small standard error reflects the precision of the model’s predictions. Collectively, these metrics confirm that the regression model offers a robust explanation of stock market returns based on the selected predictors.

Table 5: Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	19.460	5	3.892	30.548	0.000[b]
	Residual	3.058	24	.127		
	Total	22.517	29			

a. Dependent Variable: LnSMR

b. Predictors: (Constant), LnEXR, INF, IR, LnRGDP, LnMS2

(Source: SPSS Version 25

Table 5 shows an Analysis of Variance (ANOVA) for the regression model using LnSMR (Log of Stock Market Returns) as the dependent variable.The Regression model's Sum of Squares is 19.460, indicating the variance in LnSMR explained by the independent variables (LnEXR, INF, IR, LnRGDP, and LnMS2). The F-statistic, 30.548, is obtained using the regression's Mean Square, which is 19.460 / 5 = 3.892. This statistic determines if the regression model significantly explains the variation in LnSMR when compared to a model without predictors.

The p-value for the F-test is 0.000, which is less than the conventional significance level of 0.05, indicating that the model is statistically significant and the predictors as a group significantly improve the fit of the model. In contrast, the Residual sum of squares is 3.058, and the residual mean square is 0.127, which measures the variation in LnSMR that is not explained by the model. The Total sum of squares is 22.517, representing the total variation in LnSMR. The significant F-statistic and p-value indicate that the regression model effectively accounts for a substantial portion of the variability in LnSMR, demonstrating that the chosen predictors collectively have a meaningful impact on stock market returns.

Table 6 Regression Analysis for Dependent Variable LnSMR

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.651	2.721		0.974	0.340
	LnRGDP	-0.539	0.307	-0.498	-1.755	0.092
	LnMS2	1.148	0.299	1.746	3.833	0.001
	IR	-0.012	0.026	-0.040	-0.473	0.641
	INFR	-4.863E-5	0.028	0.000	-0.002	0.999
	LnEXR	-1.236	1.067	-0.377	-1.159	0.258

a. Dependent Variable: LnSMR

(Source: SPSS Version 25.

Dependent variable: LnSMR

(Source: SPSS Version 25)

LnSMR = 2.651-0.539LnRGDP+1.148LnMS2+IR-0.012+-4.863INFR+LnEXR-1.236+ εit

Table 6 shows Regression analysis with LnSMR as the dependent variable, which gives numerous insights into how LnSMR and the model's predictions interact with one another. With a p-value of 0.340, the constant term's coefficient of 2.651 indicates that it may not be consistently different from zero, but it is not statistically significant. Among the independent variables, LnRGDP has a coefficient of -0.539 and a p-value of 0.092. Although this negative association implies that as LnRGDP rises, LnSMR falls, the p-value is higher than the customary threshold of 0.05, indicating that this impact is not statistically significant at the 5% level. In comparison, LnMS2 shows a statistically significant coefficient of 1.148 with a p-value of 0.001. This implies that there is a positive relationship between LnMS2 and LnSMR, i.e., a significant increase in LnSMR is associated with an increase in LnMS2. The variable IR (interest rate) has a coefficient of -0.012 and a p-value of 0.641, indicating that interest rate has no statistically significant influence on LnSMR. Similarly, INFR (inflation rate) has a coefficient extremely near to zero (-4.863E-5) and a p-value of 0.999, showing no

significant effect on LnSMR. Finally, the LnEXR (exchange rate) coefficient is -1.236, with a p-value of 0.258.

This negative coefficient implies a potential negative link with LnSMR, however the p-value indicates that this relationship is not statistically significant. Overall, only LnMS2 has a statistically significant influence on LnSMR, indicating that changes in LnMS2 have an impact on LnSMR in this model.

Unit root method

Before doing regression analysis, each time series data set must be stationary. If not, the regression will produce incorrect results. Determining the order of integration of the variables under consideration is thus preferred. This is achieved at the level and first difference utilizing the unit root test. The unit root findings showed that all variables experience unit root at the same level. Level form series are clearly erroneous from the unit root, as test statistics demonstrate. As a result, unit root testing relies on initial difference data. According to the results, all series have order one integration, and the level forms of data at the first difference are completely free of unit roots. As a result, level representations of data at first difference are employed in empirical research.

Table 7: ADF Unit Root Method

Variables	Level		Variables	First difference	
	Intercept	Intercept & Trends		intercept	Intercept & trends
LnSMR	(0.611241)	O.6475	LOGNI	(4.4603)	(0.49722)
	0.8532	0.0050		0.0020	0.0031
LOGRGDP	-0.394162	-2.047922	LOGRGDP	-5.253523	-5.156191
	0.8976	0.5571		0.0002	0.0014
LOGMS	0.730622	-1.23458	LOGMS	-3.715146	-3.6681
	0.9908	0.2280		0.0094	0.0148
LOGER	0.61423	-1.8088	LOGER	-5.3142	-5.2137
	0.8525	0.6743		0.0002	0.0012
LOGINTR	-2.2476	-2.0573	LOGINTR	-5.8326	-3.9002
	0.1949	0.5468		0.000	0.0274
LOGINFR	-2.7836	-2.7125	LOGINFR	-6.5502	-4.53261
	0.0730	0.2391		0.0000	0.0065

Source: Researcher's Own Calculation using Eviews.

Table 7 shows the findings of the Augmented Dickey-Fuller (ADF) unit root test, which was used to assess the stationary nature of several economic variables. The initial test at the level shows that the majority of variables specifically LnSMR, LnRGDP, LnMS2, LnEXR, LnINTR, and LnINFR are non-stationary, with p-values over the 0.05 threshold, with the exception of LnINFR, which is near to this threshold. However, after differentiating the variables once, they all show stationarity, as demonstrated by highly negative ADF test statistics and p-values far below 0.05. This implies that, while the initial data for these variables is non-stationary, differencing successfully converts them into stationary series, meeting the requirements for accurate time series modeling and analysis.

4.2 Discussion

The initial purpose of this research is to assess the current state of macroeconomic factors' influence on stock market returns. Five independent variables were examined: Real Gross Domestic Product, Money Supply 2, Interest Rate, Inflation Rate, and Exchange Rate. The time series data used in the study ranges from 1994/95 to 2022/23 and is collected from Nepal Rastra Bank annual reports and economic surveys. Data analysis uses both descriptive (mean, standard deviation, variance) and inferential statistics (correlation, regression).

The descriptive statistics reveal high variety in the dataset. The distribution and spread of each variable can help us comprehend the linkages between various economic indicators and direct future research. The average log of real GDP (LnRGDP) is 11.3277. This means that, when logged in, the Real GDP is about this figure. Log transformation is commonly used to reduce variation and make data more regular. The standard deviation of 0.81475 indicates how much individual log values of Real GDP differ from the mean. A smaller standard deviation means that the log of Real GDP numbers is closer to the mean. The lowest and maximum numbers (10.34 and 12.46) show that the logged Real GDP values are within this range.

The modest range in relation to the standard deviation indicates that the data has moderate variability. The average log of Money Supply M2 (LnMS2) is 13.2637, providing a core measure of the money supply in log terms. This modification makes analyzing growth rates easier. The standard deviation of 1.34090 shows a moderate amount of variability in the log of the money supply, M2. This shows that real money supply values range somewhat around the mean. The log of money supply values varies greatly, ranging from 11.15 to 15.52. The comparatively greater standard deviation compared to the range indicates substantial variability in money supply levels, indicating the dispersion of money supply values. The average interest rate (IR) is 4.2613 percent. This depicts the dataset's central tendency in interest rates. The large standard deviation of 2.85419 implies that interest rates vary significantly. This wide range of outcomes might be attributed to various monetary policy settings or economic circumstances.

Interest rates (IR) vary from 0.13% to 10.93%. This vast range, together with the high standard deviation, implies that interest rates changed substantially over the time studied, indicating significant fluctuation in interest rates. The average inflation rate (INFR) is 6.9477 percent. This number is the primary measure of the inflation rate seen in the dataset. The standard deviation of 2.64309 is quite large, showing significant fluctuation in inflation rates. This might be due to economic shocks, policy changes, or other factors that influence inflation.

Inflation rates vary from 2.43% to 12.63%, indicating substantial variation in inflation throughout the investigated period. suggesting variation in inflation rates. The average logarithmic exchange rate (LnEXR) is 4.3877. This log transformation aids in dealing with a wide range of exchange rates and simplifies the comprehension of exchange rate fluctuations. The standard deviation of 0.26852 is quite minimal, indicating that the reported exchange rates are tightly packed around the mean. This shows that exchange rates were reasonably steady over the observation period.The log exchange rate range (from 3.90 to 4.87) is narrower than the standard deviation, showing that log exchange rates did not fluctuate significantly.

The average log of stock market returns (LnSMR) is 6.2907, indicating a central measure of the observed returns. The standard deviation of 0.88117 suggests moderate unpredictability in stock market performance. This shows that stock market returns have fluctuated yet remain reasonably constant. The log of stock market returns runs from 5.10 to 7.97, which is a moderate range in relation to the standard deviation, showing some fluctuation in stock market performance and dispersion in stock market returns.

The correlation analysis demonstrates a link between the dependent variables stock market return and independent factors such as real GDP, money supply2, interest rate, inflation rate, and exchange rate. The Pearson correlation between LnRGDP and LnMS2 is 0.959 ($p < 0.01$). There is a significant positive association between LnRGDP and LnMS2. This suggests that as the log of the money supply M2 rises, so does the log of real GDP. Pearson correlation: -0.329 ($p = 0.076$). There is a moderate

negative association between LnRGDP and interest rates, although it is not statistically significant at the 0.05 level.

It shows that higher interest rates are related with lower real GDP, although the association is not robust. Pearson correlation: -0.029 ($p = 0.879$). There is a modest and statistically negligible negative association between LnRGDP and the inflation rate. This shows that there is no significant association between Real GDP and inflation in this dataset. Pearson correlation: 0.904 ($p < 0.01$).LnRGDP has a very significant positive association with the Log of Exchange Rate. As the log of the exchange rate climbs, so does the log of real GDP. Pearson correlation = 0.850 ($p < 0.01$). There is a significant positive association between LnRGDP and LnSMR. Higher stock market returns are connected with higher real GDP, implying a positive association between economic growth and stock market success. LnMS2 Pearson correlation is -0.320 ($p = 0.085$). LnMS2 has a modest negative connection with interest rate, although it is not statistically significant at the 0.05 level. This shows that a larger money supply may be modestly related with lower interest rates. Pearson correlation: -0.103 ($p = 0.590$). There is a slight and statistically insignificant negative association between LnMS2 and the inflation rate. This means that there is no substantial link between the money supply and inflation in this dataset. Pearson correlation: 0.963 ($p < 0.01$). There is a significant positive association between LnMS2 and the Log of Exchange Rate. The exchange rate rises in tandem with the money supply. A Pearson correlation of 0.918 ($p < 0.01$) indicates a high positive association between LnMS2 and LnSMR. This suggests that increases in the money supply correlate with better stock market returns. Interest rate with an INF Pearson correlation of 0.125 ($p = 0.511$). There is a very weak and statistically negligible positive link between interest and inflation rates. This shows that there is no relevant association between the two variables in this dataset. LnEXR Pearson correlation is -0.382 ($p = 0.037$). There is a moderate negative association between interest rate and log of exchange rate, which is statistically significant at 0.05. This shows that higher interest rates might lead to a lower exchange rate.LnSMR Pearson correlation is -0.291 ($p = 0.119$). There is a modest negative association between interest rates and stock market returns, although it is not statistically significant at 0.05. It implies a

small correlation between higher interest rates and worse stock market performance. Inflation rate and LnEXR Pearson correlation of -0.207 ($p = 0.271$): There is a weak and statistically insignificant negative link between the inflation rate and the log of the exchange rate. This shows that inflation has no major impact on the exchange rate in this dataset. LnSMR Pearson correlation is -0.092 ($p = 0.630$). There is a very weak and statistically negligible negative connection between the inflation rate and stock market returns, implying that these variables have no meaningful link. LnEXR Pearson correlation of 0.870 ($p < 0.01$) There is a very strong positive correlation between the Log of Exchange Rate and Stock Market Returns. This suggests that as the exchange rate increases, stock market returns also tend to increase. Finally, there are very strong positive correlations between LnRGDP and LnMS2, LnEXR, and LnSMR, as well as between LnMS2 and LnEXR and LnSMR. This suggests that these variables tend to move together positively. Some correlations are moderate or weak, such as the relationship between IR and INF IR and LnSMR, with varying levels of statistical significance. LnEXR Pearson correlation is 0.870 ($p < 0.01$). There is a substantial positive link between the log of the exchange rate and stock market returns. This shows that when the exchange rate rises, so do stock market returns. Finally, LnRGDP and LnMS2, LnEXR, and LnSMR have extremely high positive associations, as do LnMS2 and LnEXR and LnSMR. This shows that these factors have a positive correlation. Some relationships are moderate or weak, such as the one between IR and INF IR and LnSMR, with varied degrees of statistical significance.

Correlations noted with ** (0.01 level) indicate extremely strong associations, whilst * (0.05 level) suggests modest but statistically significant relationships. These correlations shed light on how different economic indicators are connected and can inform additional study or policy decisions depending on the linkages discovered. Correlation analysis is an important method for determining the correlations between variables in a dataset. Interpreting these relationships allows you to obtain insights into economic situations, forecast probable events, and make educated decisions.
Understanding correlations allows politicians, entrepreneurs, and investors to make more informed decisions. For example, if high inflation (INF) is associated with

worse stock market returns, it may have an impact on investment strategies and economic policy.

The dependent variable in this regression study is the Log of Stock Market Returns (LnSMR). Among the independent variables, Log of Money Supply M2 (LnMS2) has a very strong positive connection with LnSMR (coefficient of 1.148, p = 0.001). This shows that a rise in the money supply is linked to better stock market returns, implying a strong and consistent relationship. In contrast, Log of Real GDP (LnRGDP) shows a negative but slightly significant effect (coefficient of -0.539, p = 0.092), implying a possible but not conclusive negative association with stock market gains. Other factors, such as Interest Rate (IR), Inflation Rate (INF), and Log of Exchange Rate (LnEXR), have statistically insignificant impacts on LnSMR, with p-values much beyond the 0.05 threshold. Other factors, such as the interest rate (IR), inflation rate (INF), and log of exchange rate (LnEXR), have no statistically significant influence on LnSMR. The coefficient for IR is -0.012, with a p-value of 0.641, indicating that interest rates have a small and statistically negligible influence on stock market returns. Similarly, the Inflation Rate (INF) has a coefficient of -4.863E-5 and a p-value of 0.999, indicating a minimal and statistically insignificant influence. The Log of Exchange Rate (LnEXR) has a coefficient of -1.236 and a p-value of 0.258, showing a negative but not statistically significant association with LnSMR. The findings indicate the importance of LnMS2 in determining stock market returns, while the influence of other factors appears to be minor in this setting. Specifically, IR and INF exhibit very weak and statistically negligible associations with LnSMR, implying that changes in interest rates and inflation rates have no substantial influence on stock market performance in this research. Similarly, the log of exchange rate has no meaningful effect on stock market results. These findings indicate that monetary supply is an important role in predicting stock market returns, although other economic variables may not be as powerful in this setting.

The correlation test shows that the stock market returns has an strongly positive relationship with real gross domestic product and money supply consistent with Ghimire (2022); pokhrel and pokhrel (2021) kalam (2020) oloyo et al.(2020) who

observed a positive association but contrasting with khan and khan (2020). Long term relationship of money supply exchange rate .Bracets et al. (2015) suggest that stock market return has long term relationship with Money supply,Exchange rate and interest rate .Khan and khan using time series data employed that there is a significant relationship between stock market returns and interest rate money supply exchange rate also has a high positive correlated.

CHAPTER V
SUMMARY AND CONCLUSION

5.1 Summary

This chapter analyzes the study reported in the preceding chapter. The study's summary conclusions and implications, which suggest areas for further research, are also included in this chapter. The main objective of this research is to analyze impact of macroeconomic factors on stock market returns evidence from Nepal emphasize on five independent macroeconomic variables such as RGDP,MS2,IR,INFR,EXCR and one dependent variable stock market returns (SMR).the study employed a descriptive research design and causal research design.

The data analysis was performed by using the statistical package for social sciences (SPSS) version 25. Descriptive research design is adopted for analyzing status of relationship whereas causal research design is followed to analyze the impact of macroeconomic factors on stock market returns. To conduct this study, secondary data are taken from annual reports and financial results related websites of banks and sebon. Collecting time series data of 30 years (from 1993/94 to 2023/24, the present study looks into impacts of macroeconomics factors on stock market returns. In this context, an examination of the nature of the relationship between macroeconomic variables and share market returns in the Nepalese Stock Market as of March 2024, 249 companies and 95 registered brokers are listed on the exchange, from different industry sectors including bank and financial institutions, Hydro-Power, Life and Non-Life Insurance, Hotels and Tourism.

Correlation analysis quantifies the strength and directions of relationships between variables, highlighting the key influencers and potential patterns. It is a powerful tool in data science, offering insights into relationships between variables. The natural logarithm of Stock Market Returns (LnSMR) is strongly positively correlated with both the natural logarithm of Money Supply (LnMS2) and the natural logarithm of Exchange Rate (LnEXR). These positive correlations are statistically significant, indicating that increases in the money supply and exchange rates are associated with

higher stock market returns. Conversely, the Stock Market Returns show a weaker negative correlation with the Inflation Rate (IR), though this correlation is not statistically significant. Similarly, Stock Market Returns exhibit a weak and non-significant correlation with Inflation (INF). Overall, the analysis highlights that Stock Market Returns have significant positive relationships with both GDP, money supply and exchange rates, while inflation and interest rates have weaker or negative associations with other variables.

Multiple regression analysis provided insights into the relationship between the variables and the logarithm so stock market return (SMR) LnSMR had a positive significant relationship to LnMS2 means that increase in MS2 leads to higher in LnSMR. LnRGDP had a negative but marginally significant effect on LnSMR.It leads to a negative relationship with stock market returns. Similarly, IR, INFR and LnEXR had a insignificant minimal and statistically insignificant relationship with stock market returns.it shows that changes in IR, INFR, and Ln EXR do not have a meaningful impact on stock market returns.

5.2 Conclusion

The first objectives of this study is to asses the existing situation of macro-economic factors stock market returns in Nepal. The study successfully examines the impact of macroeconomic factor on stock market returns considering the macro-economic factors like Real gross domestic's product, Money supply 2, interest rate, inflation rate, exchange rate and dependent factors stock market returns. RGDP stated from 2018onwards it is because of the nature of investment in an economy. MS2 is continuously from 2010 onwards expansionary monetary policy is the reason.MS2 is increasing every succeeding year. The interest rate is almost negative. The exchange rate is continuously increasing in the research period. The rate of inflations is fluctuated a lot. It was 1999 and 2008 where inflation is in very peak. Inflation fluctuates because of increasing money supply in an economy. In other words, the central bank of Nepal does not have effective control over the economy's price level. This analysis helps in making informed decisions, planning strategies, and predicting

future outcomes by highlighting significant trends and patterns in various fields like business, finance, and social sciences.

The second objectives of the study is to analyze the relationship between independent variables such as RGDP, MS2, IR, INF Rate and EXR with dependent variable SMR.LnSMR is strongly positively correlated with LnRGDP, LnMS2, and LnEXR. This indicates that as the stock market return increases, so do Real GDP, money supply, and exchange rates, suggesting a consistent upward trend across these economic indicators in relation to stock market performance.LnSMR does not show a significant negative relationship with any of the other variables, suggesting that changes in stock market returns are not strongly inversely related to the variables of interest.LnSMR has no significant correlation with IR (Interest Rate) and INF (Inflation). This implies that stock market returns are not notably influenced by changes in interest rates or inflation within this dataset.In summary, the stock market return (LnSMR) shows strong positive associations with Real GDP, money supply, and exchange rates, indicating that the stock market performance tends to move in means that the stock market return and the other economic indicators (such as Real GDP, money supply, and exchange rates) move together in the same direction. When one of these variables increases, the others also tends to increase, and vice versa. Essentially, they exhibit a similar pattern or trend. with these economic indicators. However, it does not exhibit significant relationships with interest rates or inflation.

The third objectives of the study is to examine the impact of independent variables such as RGDP, MS2, IR, INF Rate ,EXR and depedent variales SRM. The analysis of stock market returns (LnSMR) reveals strong positive correlations with economic growth, money supply, and exchange rates, indicating that increases in these variables are associated with higher stock market performance. Specifically, as the economy grows, the money supply expands, or the exchange rate changes favorably, stock market returns tend to rise significantly. Conversely, interest rates and inflation show little to no significant relationship with stock market returns in this context. This suggests that, within this dataset, economic indicators and monetary conditions are more influential in driving stock market performance than interest rates or inflation. This insight can help guide investment strategies and economic policy considerations.

The findings indicate that stock market returns are notably influenced by economic growth, the money supply, and exchange rates, with all three factors showing a strong positive correlation. This suggests that as economic conditions improve, the availability of money increases, or exchange rates become more favorable, stock market returns tend to rise correspondingly. In contrast, the analysis reveals that interest rates and inflation have minimal impact on stock market performance within this dataset. This implies that while economic and monetary variables play a crucial role in shaping stock market trends, interest rates and inflation may not be as pivotal in this specific scenario. Consequently, investors and policymakers should focus more on economic growth, monetary policy, and exchange rate movements to better understand and predict stock market dynamics.

5.3 Implications

Considering the study's findings,The analysis reveals significant relationships between stock market returns (LnSMR) and several economic indicators, with strong positive correlations observed with economic growth (LnRGDP), money supply (LnMS2), and exchange rates (LnEXR). This suggests that changes in these variables can have a substantial impact on stock market performance. Specifically, policymakers and investors should consider that enhancing economic growth and adjusting monetary policy to influence money supply can directly affect stock market returns. Additionally, fluctuations in exchange rates are likely to impact stock market performance, making it essential to monitor international trade and currency movements closely. Conversely, the lack of significant correlation with interest rates and inflation indicates that these factors may have a limited direct influence on stock market returns in this context. Therefore, stakeholders should prioritize economic and monetary variables over interest rates and inflation when making investment decisions or formulating economic policies. Understanding these dynamics can lead to more informed decision-making and strategic planning in financial and economic arenas.

The findings highlight significant correlations between stock market returns (SMR) and economic growth, money supply, and exchange rates, suggesting these factors play a crucial role in shaping market performance. Future research should delvelop deeper into how these relationships evolve over time and under varying economic

conditions to better understand their long-term impact on stock market returns. It would be beneficial to investigate how different economic cycles or monetary policies affect the strength of these correlations. Additionally, examining the interactions between SMR and other potentially influential factors, such as interest rates and inflation, despite their current weak correlation, could uncover nuanced insights that might be relevant under different economic scenarios or in other regions. Exploring these areas could provide a more comprehensive understanding of the dynamics influencing stock market returns and guide more effective investment strategies and policy decisions.

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APPENDIX-I

1993/94	10.34	11.15	6.5	8.95	3.90	5.42
1994/95	10.37	11.30	7.35	7.65	3.91	5.28
1995/96	10.42	11.44	10.93	8.13	4.01	5.22
1996/97	10.47	11.55	10.22	8.09	4.04	5.17
1997/98	10.51	11.75	3.52	8.32	4.13	5.10
1998/99	10.55	11.94	2.33	11.37	4.22	5.38
1999/00	10.61	12.13	4.66	3.39	4.24	5.89
2000/01	10.63	12.28	4.96	2.43	4.30	5.85
2001/02	10.63	12.32	4.71	2.89	4.34	5.43
2002/03	10.67	12.41	3.48	4.74	4.35	5.32
2003/04	10.71	12.53	2.93	3.96	4.30	5.40
2004/05	10.74	12.61	2.46	4.53	4.28	5.66
2005/06	10.78	12.76	2.84	7.96	4.28	5.96
2006/07	10.81	12.76	2.42	5.90	4.26	6.53
2007/08	10.86	12.89	4.22	6.70	4.17	6.87
2008/09	10.90	13.11	5.83	12.63	4.34	6.62
2009/10	10.94	13.35	6.50	9.60	4.31	6.17
2010/11	11.96	13.49	7.41	9.64	4.28	5.89
2011/12	12.00	13.73	1.31	8.30	4.39	5.97
2012/13	12.04	13.94	1.74	9.90	4.48	6.25
2013/14	12.10	14.09	0.13	9.10	4.59	6.94
2014/15	12.13	14.26	0.43	7.20	4.60	6.87
2015/16	12.14	14.45	0.78	9.93	4.67	7.45
2016/17	12.23	14.62	1.45	4.47	4.67	7.37
2017/18	12.30	14.77	4.48	4.20	4.65	7.10
2018/19	12.36	14.95	3.2	4.64	4.73	7.14
2019/20	12.34	15.09	2.69	6.15	4.76	7.22
2020/21	12.39	15.26	2.18	3.60	4.77	7.97
2021/22	12.44	15.46	6.67	6.32	4.79	7.61
2022/23	12.46	15.52	9.51	7.74	4.87	7.67

APPENDIX: II

Fiscal Year	NEPSE Index	RGDP (in ten million)	Money Supply (M2) (in million)	Interest (91 Days)	Exchange Rate	Inflation Rate
1993/94	226.03	69,777.10	69,777.10	6.50	49.25	8.95
1994/95	195.48	80,984.70	80,984.70	7.35	49.94	7.66
1995/96	185.61	92,652.20	92,652.20	10.93	55.21	8.13
1996/97	176.31	103,720.60	103,720.60	10.22	57.02	8.09
1997/98	163.35	126,462.60	126,462.60	3.52	61.95	8.33
1998/99	216.92	152,800.20	152,800.20	2.33	67.95	11.38
1999/00	360.70	186,120.80	186,120.80	4.66	69.07	3.39
2000/01	348.40	214,454.20	214,454.20	4.96	73.83	2.43
2001/02	227.54	223,988.30	223,988.30	4.71	76.88	2.89
2002/03	204.86	245,911.20	245,911.20	3.48	77.79	4.75
2003/04	222.04	277,310.10	277,310.10	2.93	73.79	3.96
2004/05	286.70	300,440.00	300,440.00	2.46	72.06	4.54
2005/06	386.83	347,421.80	347,421.80	2.84	72.32	7.96
2006/07	683.90	346,824.10	346,824.10	2.42	70.49	5.90
2007/08	963.40	395,518.22	395,518.22	4.22	65.02	6.70
2008/09	749.10	495,377.10	495,377.10	5.83	76.88	12.63
2009/10	477.73	630,521.17	630,521.17	6.50	74.54	9.60
2010/11	362.85	719,599.12	719,599.12	7.41	72.27	9.64
2011/12	389.74	921,320.14	921,320.14	1.31	81.02	8.30
2012/13	518.30	1,130,302.29	1,130,302.29	1.74	87.96	9.90
2013/14	1,036.10	1,315,376.28	1,315,376.28	0.13	98.21	9.10
2014/15	961.23	1,565,967.16	1,565,967.16	0.43	99.49	7.20
2015/16	1,718.20	1,877,801.53	1,877,801.53	0.79	106.35	9.93
2016/17	1,582.67	2,244,578.57	2,244,578.57	1.45	106.21	4.47
2017/18	1,212.36	2,591,701.99	2,591,701.99	4.48	104.37	4.20
2018/19	1,259.02	3,094,466.64	3,094,466.64	3.20	112.88	4.64
2019/20	1,362.35	3,582,137.65	3,582,137.65	2.69	116.31	6.15
2020/21	2,883.41	4,230,969.78	4,230,969.78	2.19	117.87	3.60
2021/22	2,009.47	5,154,853.16	5,154,853.16	6.67	120.84	6.32
2022/23	2,140.97	5,505,400.81	5,505,400.81	9.51	130.75	7.74

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