

IMPACT OF MACROECONOMIC VARIABLES ON THE STOCK PRICE OF NEPALESE COMMERCIAL BANKS

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

By

Kanchan Ghimire

Shanker Dev Campus

Campus Roll No.: 187/075

T.U. Regd. No.: 7-2-360-40-2013

Exam Roll No: 13448/19

Kathmandu Nepal,

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Certificate of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “Financial Literacy and Investment Decision in Nepalese Share Market”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

Kanchan Ghimire

Signature

Date of submission

REPORT OF RESEARCH COMMITTEE

Mr. Kanchan Ghimire has defended research proposal entitled "**Impact of Macroeconomic Variables on the Stock Price of Nepalese Commercial Banks**" successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestion and guidelines of supervisor Asso. Prof. Dr. Kapil Khanal. Submit the thesis for evaluation and viva-voce examination.

.....
Asso. Prof. Dr. Kapil Khanal
Dissertation Supervisor

Dissertation Proposal Defended Date:

.....

Dissertation Submitted Date:

.....

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

Dissertation Viva-voce Date:

.....

APPROVAL SHEET

We, the undersigned, have examined the thesis entitled "**Impact of Macroeconomic Variables on the Stock Price of Nepalese Commercial Banks**" Presented by Kanchan Ghimire Candidate for the degree of Master of Business Studies (MBS Semester) and conducted the Viva voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

.....
Asso. Prof. Dr. Kapil Khanal

Dissertation Supervisor

.....
Internal Examiner

.....
Internal Expert

.....
External Expert

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

.....
Asso. Prof. Dr. Krishna Prasad Acharya
Campus Chief

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LIST OF ABBREVIATION

MPPS	Market price per share
ROA	Return on assets
GDP	Gross domestic products
INF	Inflation
MS	Money Supply
NEPSE	Nepal Stock Exchange
NRB	Nepal Rastra Bank
SEBON	Security Exchange Board of Nepal
SPSS	Statistical Package for Social Science
IFS	International Financial Statistics
CBS	Central Bureau of Statistics
GRP	Graduate Research Project
IMF	International monetary fun

Abstract

Financial institutions contribute to the national economy by accumulating the capital funds to meet the financial needs of different productive and business sectors. Commercial banks play an important role in the financial service industry and they have become a principal financial intermediary in the fund transfer system. Stocks in the banking industry are one of the stocks that are highly sought after by investors. Banks that have good health will attract many investors. Stock markets are essential for economic growth as they insure the flow of resources to the most productive investment opportunities. Many studies have been undertaken to study on factors affecting the stock price in development countries but in Nepal there are few studies which have been conducted on this issue. This study investigates the relationship between stock price, bank specific and microeconomic variables of selected Nepalese commercial banks. The stock price in the market is not static rather it changes every day. The most obvious factor that influence are demand and supply factors. The price of any commodity is affected by both micro-economic and macro-economic factors.

This study basically aimed to examines the empirical relationship between the stock price, bank specific and micro-economic variables of selected Nepalese commercial banks. The study is based on secondary data of 3 commercial banks with 30 observations for the period of 2013/14 to 2022/23. This study is basically based on the analysis of secondary data. The data for bank specific variables including stock market data have been obtained from financial statement of sample firms recorded in the database of Nepal Stock Exchange (NEPSE) Limited and Securities Board of Nepal (SEBON) provided in their respective website. NEPSE and SEBON have maintained the record of specific financial data from the fiscal year 2013/14 to 2022/23 in their respective database in websites. The annual data series on macroeconomic variables such as GDP, inflation and money supply have been obtained from websites of World Bank. For data analyzing the relationship, market price per share is used as a dependent variable. ROA are used as firm specific independent variables whereas GDP, inflation and money supply are used as macroeconomic independent variables.

The results of the study showed that inflation is most significant and positive factors affecting market price per share of Nepalese commercial banks. Thus, higher inflation higher would be the

market price per share. However, gross domestic product and money supply has the negative impact on market price per share. Thus, higher the gross domestic product and money supply lower would be the market price per share.

The study also showed that inflation and money supply is the major determinants of stock return in Nepalese commercial banks. The result shows that inflation and money supply have positive impact on stock return indicating that higher the inflation and money supply higher would be the stock return. However, gross domestic product negatively affects stock return. Thus, higher the gross domestic product lower would be the stock return.

Finally, the study concluded that gross domestic product followed by money supply and inflation is the most influencing factor that explain the changes in the stock price in terms of stock returns of Nepalese commercial banks. The study also concluded that gross domestic product followed by money supply is the most influencing factor that explain the changes in the stock price in terms of market price per share in Nepalese commercial banks.

CHAPTER I

INTRODUCTION

1.1 Background of the study

Financial markets play a crucial role in the national economy by accumulating capital resources to meet the financial demands of different productive and business sectors (Gupta, 1982). Functionally, financial markets are categorized into money markets and capital markets. The money market deals with transactions involving short-term debt instruments or marketable securities, while the capital market is concerned with trading long-term securities, such as bonds and stocks (Kovács and Kajtor-Wieland, 2017).

Financial market for stocks are significant economic institution, essential for channeling investments to their most effective uses (Libermen & Fergusson, 1998). Morck et al. (1990) argued that debates over stock market efficiency are critical because inefficiencies in the market impact real economic activity; without such an effect, market inefficiencies would merely result in wealth redistribution between astute investors and uninformed traders. According to Baumol (1965), the stock market is expected to perform a seemingly magical role by enabling long-term investments to be financed by individuals who may only wish to commit their funds for short periods or withdraw them at their discretion.

Stock markets play a critical role in economic growth by ensuring the allocation of resources to the most productive investment opportunities. Investors make decisions about purchasing company shares based on their prices (Nisa and Nishat, 2011). It is essential for market participants to have continuous access to quantitative financial data, financial news from media, and socially exchanged opinions and recommendations (Francis and Soffer, 1997). According to Kheradyar et al. (2011), stock prices exhibit random fluctuations, meaning that prices may decrease one day after increasing on a previous day. This randomness has concerned some financial economists, prompting further research.

Stocks are among the most popular forms of investment despite not being the safest option. They are favored for their potential to yield profits that can be significantly higher than the initial investment (Soebagyo, 2020). Investing in equity shares is one of the most common and actively

traded means for investors to earn substantial returns. However, the returns on these investments are subject to variations due to share price fluctuations (Arkan, 2016).

The primary internal factors influencing share prices include company performance, governance, liquidity position, dividends, and earnings. External factors encompass governmental regulations, the business cycle, investor attitudes, market conditions, natural calamities, and political uncertainties such as strikes and blockades (Alam *et al.*, 2016).

The stock market's dynamic nature poses a continual challenge for investors and fund managers to accurately predict stock prices for (Tandon and Malhotra, 2013). Two approaches for predicting share prices: the fundamental approach, which considers EPS, NAV, P/E, and technical approach, which highlights macroeconomic indicators such as gross domestic product, consumer price index, and interest rate spread as global determinants of stock prices.

Commercial banks are pivotal in the financial services industry, serving as principal financial intermediaries in fund transfers (Bandaranayake and Jayasinghe, 2014). Bank stocks are highly sought after by investors, as banks in good financial health attract significant investor interest (Perdana and Adriana, 2018). Prospective investors should assess the health of a bank to minimize investment risk (Sholichah *et al.*, 2021).

Shleifer (2000) identified two broad types of investors: relatively unsophisticated investors (e.g., individual investors or noise traders) whose demand for risky assets does not rely on optimal forecasts of expected returns, and relatively sophisticated investors (e.g., institutional investors or arbitrageurs) who respond to optimal forecasts of expected returns.

In Nepal, the stock market history is relatively short. The Securities Exchange Centre (SEC) was established in 1976 to facilitate and promote the growth of the capital market (Gurung, 2004). The Nepalese stock market is still in its early stages, necessitating numerous practices, strategies, and policies (Panta, 2020). Although the market is emerging, it is not yet fully matured. Investors tend to prefer primary stocks and stock dividends over cash dividends (Thapa, 2019). Nepalese investors focus on dividend and price appreciation but largely employ a buy-and-hold strategy, indicating a lack of professionalism (Poudel, 2016).

The Nepalese capital market exhibits some unique characteristics compared to developed markets. It is limited in size by the amount and number of securities traded, has few market participants, lacks professionalism, and is in a preliminary growth stage (Shrestha, 2012). Pradhan and Upadhyaya (2004) noted that Nepalese investors are not indifferent to the public disclosure of information. Their study found that managers believe the primary motive for paying cash dividends is to signal to shareholders that the company is performing well and that shareholders value dividends and retained earnings.

Joshi (2018) concluded that the Nepalese capital market has an erratic trend. Key determinants of investment decisions in the Nepalese stock market include the firm's reputation in the industry and the opinions of firms. Pandey et al. (2020) found that self-image and firm image coincidence, accounting information, advocate recommendations, and private financial needs significantly influence investor psychology in stock market investment decisions. Enhancing transparency and communication by the relevant authorities is essential to dispel market gossip and rumors.

The discussion highlights the significance of studies examining the impact of macroeconomic variables on stock prices.

1.2 Statement of the problem

Arodoye (2012) investigated the impact of macroeconomic variables on the determination stock prices in Nigeria. The results indicated the long-term correlation between stock prices, INF rate, and GDP over the specified period. Stock market price fluctuations are primarily influenced by inflation rates, real GDP growth, and interest rates. Quy and Loi (2016) explored the relationship between selected economic factors and real estate stock prices, finding that the INF, GDP impact of market.

Kengatharan (2018) examined factors affecting share prices of listed domestic commercial banks in Sri Lanka, revealing that earnings per share, dividends per share, and bank size significantly positively influenced share prices, while external factors had no significant impact. Iqbal and Jabbar (2015) investigated the impact of inflation on stock market performance, concluding that

interest and inflation rates have a significant negative relationship with stock market performance.

Adaramola (2011) studied the impact of macroeconomic indicators on stock prices in Nigeria. The empirical findings indicated that interest rate, exchange rate, oil price, and GDP positively and significantly impact stock prices of individual firms, while inflation rate and money supply negatively impact stock prices. Similarly, Singh *et al.* (2011) emphasized the relationship among macroeconomic variables in Taiwan, concluding that exchange rate and GDP positively affect returns across all portfolios, whereas inflation rate, exchange rate, and money supply have a negative relationship with returns for portfolios of large and medium-sized companies.

Subing and Kusumah (2017) analyzed internal and external factors affecting stock pricing in Indonesia, finding that price-earnings ratio, ROA positively impact company stock prices, while inflation negatively impacts stock prices. Dissanayake and Biyiri (2017) explored factors influencing share prices on the Colombo Stock Exchange (CSE), finding that EPS, DPS, and ROE impact share prices, with EPS and DPS having a positive correlation with SP. Jadhav and Badade (2012) investigated determinants of equity share prices, concluding that EPS, DPS, P/E ratio, DY, play an important role in stock share prices.

In the context of Nepal, Poudel (2016) investigated the impact of macroeconomic variables on stock prices within the NEPSE, concentrating on private commercial banks. The research indicated that DPS, BVPS, and EPS have a positive effect on the market price per share. Similarly, Bajracharya and Sawagvudcharee (2019) analyzed the determinants of share prices for Nepalese commercial banks, discovering that internal factors such as EPS, DPS, and the P/E have a positive and significant association with MPS, while the external factor INF, has an inverse and significant relationship with MPS. Ghimire and Mishra (2018) identified that the market-to-book value ratio and price-earnings ratio are key factors influencing stock prices, with a direct impact. Furthermore, DPS and BV also exert a significant and positive effect on stock prices.

Despite the availability of these empirical studies both internationally and within Nepal, there is a lack of recent data in the Nepalese context. Hence, this study aims to provide further insights and support for one perspective or another.

Hence, this study focuses on the impact of macroeconomics variables on stock price of Nepalese commercial banks. Therefore, this study deals with the following issues in the context of Nepalese commercial banks.

- a. What are the current values of gross domestic product, inflation, and money supply, and how do they affect the market price per share and stock returns in Nepalese commercial banks?
- b. How do gross domestic product, inflation, and money supply relate to the stock prices of Nepalese commercial banks?
- c. Which macroeconomic variable has the greatest impact on the stock prices of Nepalese commercial banks?

This research question seeks to examine the current economic environment and its effects on the performance of Nepalese commercial banks. By analyzing the current values of GDP, inflation, money supply, market price per share, and stock returns, we can gain a comprehensive understanding of the economic landscape and its influence on Nepalese commercial banks. The findings of this research can provide valuable insights for policymakers, investors, and bank management regarding the health and potential risks or opportunities within the banking sector. Overall, these economic indicators interact in complex ways to impact the stock performance of Nepalese commercial banks, with GDP growth typically exerting a positive influence, while the effects of inflation and money supply vary depending on their specific levels and trends.

This research question seeks to explore and quantify the relationships between key macroeconomic indicators (GDP, inflation, and money supply) and the stock prices of Nepalese commercial banks. Gaining insight into these relationships will help understand how the broader economic environment affects the banking sector's stock market performance. The interaction between GDP, inflation, money supply, and the stock prices of Nepalese commercial banks is complex and dynamic. Typically, higher GDP growth boosts stock prices, while high inflation can negatively affect them. Changes in the money supply impact stock prices based on their influence on inflation and economic liquidity. Understanding these relationships necessitates continuous monitoring of economic indicators and central bank policies.

This research question aims to identify the most influential macroeconomic variable on the stock prices of Nepalese commercial banks, highlighting Gross Domestic Product (GDP) growth as the primary factor. GDP growth significantly impacts the stock prices of Nepalese commercial banks due to its direct effect on economic activity, bank profitability, investor confidence, and overall market sentiment. While inflation and money supply are also important, they typically function as secondary factors influenced by the prevailing GDP growth rate.

1.3 Objectives of the study

The major objective of this study is to examine the impact of macroeconomic variables on the stock price of Nepalese commercial banks. The specific objectives of this study are as follows:

- I. To examine the current value of GDP, INF, M2, on MPS and SR in Nepalese commercial banks.
- II. To determine the relationship between GDP, INF, M2, on MPS and SR in Nepalese commercial banks.
- III. To assess the most influencing factor of macroeconomics variables on stock price of Nepalese commercial banks.

1.4. Rationale of the study

A stable macroeconomic environment is crucial for a well-functioning stock market and economic development. The banking sector is pivotal in supporting the expansion of the stock market (Abdullahi, 2020). Understanding stimuli and stock indices is crucial for projecting future stock performance and forming appropriate economic policies (Khan, 2012). Stock investment carries inherent risks, and investors are often hesitant to invest in the stock market. However, if they understand the exact factors influencing stock prices, their confidence in stock investments will increase (Nisa and Nishat, 2011).

This research examines how macroeconomic factors influence the stock prices of Nepalese commercial banks, offering significant insights for investors, managers, bankers, stock analysts, brokers, government officials, scholars, students, and other parties interested in understanding the interplay between macroeconomic variables and the stock prices of commercial banks.

The research examines the relationship between market price per share and stock return of Nepalese commercial banks in relation to key financial indicators such as GDP, inflation, and money supply. The findings aim to reflect the status of Nepalese commercial banks concerning these stock price determinants, providing valuable insights for potential investors to make informed investment decisions. Additionally, the study sheds light on the position of share prices within the share market industry.

The industry averages for various financial indicators offer a benchmark for comparison with individual banks, which can be beneficial for bank managers. This study delivers comprehensive information about the share market of Nepalese commercial banks and holds significance for the broader non-financial corporate sector of Nepal. It benefits investors, decision-makers, and researchers alike.

Furthermore, the study equips investors with a deeper understanding of the specific variables that significantly affect their returns from stock market investments. The findings contribute to the existing literature on the impact of macroeconomic variables on the stock prices of Nepalese commercial banks and provide a foundation for future research in this field.

1.5 Limitation of the study

Impact of macroeconomics variables on share price of commercial banks is a one of the debatable topics to research on which is tried by this study in Nepalese context. Despite ongoing efforts to derive meaningful conclusions from the study, every research has inherent limitations due to various factors such as institutional differences, study duration, data reliability, methodologies, techniques, and variability. The major limitations of this study are as follows:

- i. This research uses, INF and MS as macroeconomic variables to determine the share price. But there are other firm specific variables such as real interest, earnings volatility, T-bill rate, ownership structure, investment opportunities, profitability of the firm etc. which the study does not included.
- ii. Although there are 27 commercial banks operating in the country, the study includes only 10 of these banks for its analysis.

- iii. For simplicity, the study utilized a linear regression model to analyze the impact of factors on the share prices of Nepalese commercial banks, without incorporating a simultaneous equation model with partial adjustment.
- iv. The study adopts a quantitative approach for data analysis and conclusions. However, it could have also benefited from a qualitative approach, which provides a more detailed description.
- v. The focus of the study is exclusively on commercial banks, excluding other financial institutions such as development banks, finance companies, insurance firms, and microfinance institutions.
- vi. The study presumes a degree of homogeneity among the banks, which may not hold true given their varying sizes. The impact of factors on share prices may differ depending on the size of the banks.
- vii. The study assumes a linear relationship between dependent and independent variables and does not address potential non-linearity biases. Thus, the scope of the study is limited.
- viii. The analysis relies entirely on secondary data and available information. Consequently, the validity of the findings and conclusions is contingent upon the reliability of the secondary data and information used.
- ix. The research assumes that every bank operates in the same market. Therefore, the analysis is not based on bank's market segmentation or group of banks (whether it is government, foreign or private banks).

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

This section aims to review the literature on how macroeconomic variables affect the stock prices of Nepalese commercial banks and to outline the study's conceptual framework. A literature review involves a thorough analysis of existing research, including summarizing, classifying, and comparing previous studies, as well as reviewing theoretical works. It is organized into three parts. The first part provides a theoretical framework, offering a detailed examination of related research in the banking sector across both developed and emerging markets. This section also includes various studies on the interactions among different variables and a brief overview of empirical research within Nepal. The second part presents the study's conceptual framework, detailing its organization and the selection of various variables. Finally, the third part provides concluding remarks and reflections on the empirical review.

2.2 Theoretical Review

Sharma (2011) investigated the factors influencing equity share prices in India and found that earnings per share, dividends per share, and book value per share significantly impact market share prices. The study highlighted that dividends per share and earnings per share are the most influential determinants of market prices.

Kheradyar et al. (2011) analyzed stock returns on the Malaysian stock exchange from January 2000 to December 2009 the study revealed ratios can identify SR, with BV with high power than earnings yield. Alam et al. (2016) studied the main factors affecting share prices in Bangladesh's capital market. They concluded that earnings per share, net asset value per share, the price-earnings ratio, and the consumer price index significantly influence the cement industry in Bangladesh, while GDP and interest rate spreads were not significantly impactful.

Arodoye (2012) examined the impact of macroeconomic variables on stock prices in Nigeria. The findings indicated a long-term relationship between stock prices, inflation rates, and real GDP. The study also found that stock market price variations are largely influenced by inflation rates, GDP growth, and interest rates. Quy and Loi (2016) investigated the relationship between

selected economic factors and real estate stock prices, concluding that INF GDP, impact real stock prices of the financial markets.

Ullah et al. (2017) noted that the stock market is one of the most closely monitored markets globally, with numerous daily transactions. Consequently, extensive research has been conducted to understand these markets and the factors influencing their movements and performance. Many studies suggest that macroeconomic variables significantly affect stock market performance, though some findings are inconclusive. Most research has focused on developed markets, with less attention given to developing markets. This study aims to examine the significance of macroeconomic variables on stock market performance in SAARC countries using the OLS multiple regression model, with annual data from 2005-2015. The study found that exchange rates, foreign currency reserves, and interest rates significantly affect stock market performance in SAARC countries, whereas inflation and money supply do not have a significant impact.

Jamaludin, Ismail, and Ab Manaf (2017) aimed to examine the effects of macroeconomic variables, such as inflation, money supply (MS), and exchange rate (ER), on both conventional and Islamic stock market returns in Singapore, Malaysia, and Indonesia. Using data of 2005-2015 and using regression method, the study informed stock market returns are affected by ER and INF, with MS being insignificant. The study concluded that inflation has a greater effect and is inversely related to stock market returns. This suggests a need for amendments in monetary policy to maintain a low inflation rate, thereby boosting the capital markets in the selected ASEAN countries.

2.3 Empirical Review

A literature review is a deliberate overview of existing research, discussions, and findings on a particular topic. It involves summarizing and analyzing current knowledge in the field of inquiry. The review critically identifies similarities and differences across previous related studies. In this study, the literature review is structured as follows:

2.2.1 Review of literature on gross domestic product

2.2.2. Review of literature on inflation

2.2.3. Review of literature on money supply

2.2.4. Review of literature on Nepalese Context

2.2.1 Review of literature on gross domestic product

Table 2.1 shows the review of literature on gross domestic product.

Table 2.1 Review of literature on gross domestic product

Study	Major findings
Ghimire and Mishra (2018)	Market to book value, P/E ratio are the significant determinants of stock price which directly affect the stock price. Likewise, DPS, BV also have a significant and positive influence on stock price.
Bhattarai (2018)	Market price per share is positively and significant correlated with earnings per shares, dividend per shares, and dividend payout ratio.
Karki (2018)	The performance of the stock market is observed to positively correlate with real GDP, inflation, and money supply.
Bajracharya and Sawagvudcharee (2019)	EPS, DPS, and the P/E exhibit a positive and substantial correlation with the MPS of Nepalese commercial banks.
Shrestha (2019)	The interest rate and wholesale price index have more explanatory power than exchange rate and gold price for explaining variation in stock market index.
Panta (2020)	Over the long term, the NEPSE Index is closely linked with M2, r, INF.
Wagle (2021)	The market-to-book ratio, P/E, and EPS ratio demonstrate a notable positive correlation with stock market prices.
Gyawali (2022)	Dividends per share (DPS), earnings per share (EPS), and the price-earnings (P/E) ratio have a positive and statistically significant influence on stock prices.
Dhodary (2023).	Book value per share (BVPS), price-earnings ratio (PE), return on equity (ROE), and dividends per share (DIV) exert a

	positive and significant influence on market price per share (MPS).
Lamsal (2024)	There is significant positive correlation between commercial banks' stock prices and their EPS, DPS, P/E ratios, and BVPS. The EPS, DPS, P/E ratio, and BVPS have a considerable positive correlation with the share price of commercial banks

Hassanzadeh and Kianvand (2012) investigated the impact of certain macroeconomic variables on the stock market index in Iran. Utilizing quarterly data, the study analyzed the relationships between the Tehran Stock Index (TSI) and five macroeconomic factors, including gross domestic product, nominal effective exchange rate, money supply, gold coin prices, and investment in the housing sector from 1996 to 2008. Various econometric techniques, such as co-integration and the vector error correction model (VECM), were applied to the time series data. The findings indicated that the growth rate of Iran's stock market index is positively affected by these variables of the gross domestic product and the money supply. The results also showed that the stock price is negatively affected by the gold prices, the private sector investment in housing sector and the nominal effective exchange rate.

Arodoye (2012) investigated how macroeconomic variables influence stock price determination in Nigeria and assessed the degree to which these variables contribute to stock price fluctuations. Utilizing quarterly time series data spanning 25 years (Q1 1985 to Q4 2009), the analysis included stock prices, GDP growth, and inflation rates. Data were sourced from the Central Bank of Nigeria (CBN), its statistical bulletin, and the Nigerian Stock Exchange. The study employed unit root tests, co-integration tests, and a Vector Auto Regression (VAR) model for econometric analysis, with estimations conducted using Microfit 4.0 Econometric software. The results revealed a long-term relationship between stock prices, inflation rates, and real GDP, indicating that variations in stock market prices are significantly influenced by inflation rates, GDP growth, and interest rates.

Hunjra *et al.* (2014) determined the impact of interest rate, exchange rate, inflation rate, and gross domestic product on stock prices in Pakistan. The monthly data of eleven years ranging

from 1st January, 2001 to December 31th 2011 was used for this research study. Stock prices were taken KSE 100 index points. Gross domestic product data were collected from the state bank of Pakistan. Inflation rate was taken from Pakistan Bureau of statistic granger causality and integration tests were applied on the data to estimate the possible impact of macroeconomic variables on stock prices. The findings of the study revealed that there is no relationship between stock price and interest rate, exchange rate, inflation rate, and gross domestic product in short run the study found that there is positive and significant relationship with interest rate, exchange rate, GDP, and INF with SP.

Sabau-Popa et al. (2014) examined the relationship between stock prices listed on the Bucharest Stock Exchange (BSE) and various macroeconomic factors. The macroeconomic variables analyzed included the exchange rate, unemployment rate, inflation rate, GDP variation, and the benchmark interest rate. Data were collected from the Bucharest Stock Exchange website, annual reports from the Romanian Central Bank, and the Eurostat database. The study applied grey system theory to assess the impact of these macroeconomic variables on stock prices from January 2010 to August 2014. Grey incidence analysis was conducted using Grey System Theory Modeling Software 6.0. The findings revealed that GDP had the most significant impact on the stock prices of the Bucharest Stock Exchange, while the unemployment rate, benchmark interest rate, and inflation rate had a relatively smaller effect the assets traded on BSE (Bucharest Stock Exchange).

Quy and Loi (2016) investigated the connection between various economic factors and real estate stock prices. The study analyzed the impact of inflation rate, 10-year government bond yields, GDP growth rate, exchange rate, and stock trading using data from 38 real estate firms listed on the Ho Chi Minh Stock Exchange (HOSE) over a seven-year period, from January 2009 to September 2015, with a total of 2,583 observations. After applying the Pooled OLS regression model, fixed effects model, random effects model, and Hausman test, the fixed effects model was identified as the most suitable for examining the relationship between real estate stock prices and the independent variables. The findings revealed that inflation rate, GDP growth rate, and exchange rate significantly affect real estate stock prices. However, no significant relationship was found between the 10-year government bond yield, trading volume, and real estate stock prices.

2.2.2 Review of literature on inflation

Table 2.2 shows the review of literature on inflation.

Table 2.2: Review of literature on inflation

Study	Major findings
Nijam <i>et al.</i> (2015)	The stock market index significantly positively relates to gross domestic product, exchange rate and interest rates. The study also concluded stock market index negatively relates to inflation.
Giri and Joshi (2017)	Economic growth, inflation, and exchange rate influence stock prices positively. Also, crude oil price influences the stock price negatively.
Ndlovu <i>et al.</i> (2018)	Over the long term, interest rates, MS, and INF exhibit a positive relationship with share prices. The findings also indicated that the exchange rate has a negative impact on stock prices.
Mawardi <i>et al.</i> (2019)	The Indonesia Sharia Stock Index is significantly and positively influenced by both the inflation rate and the industrial production index.
Abdullahi (2020)	Inflation rate positively influence the banking sector stock price both in the short and long runs in the Nigerian Stock market.

Nijam et al. (2015) investigated the relationships between the Colombo Stock Exchange share price index and various macroeconomic variables, including Gross Domestic Product (GDP), inflation (measured by the wholesale price index), interest rates, balance of payments, and exchange rates, spanning from 1980 to 2012. Data were obtained from Central Bank Annual Reports and Economic and Social Statistics in Sri Lanka. The study employed correlation and multiple regression analyses, utilizing Ordinary Least Squares (OLS) regression to estimate model parameters and exploring linear, linear-log, log-log, and log-linear transformations to identify the best-fitting model. Serial correlation was assessed using Durbin-Watson statistics, and data analysis was conducted using E-Views, Excel, and Minitab software. The study found a significant relationship between macroeconomic variables and the stock market index in Sri Lanka, with GDP, exchange rates, and interest rates having a positive impact on the stock market index. Conversely, inflation (as measured by the wholesale price index) was negatively related to

the stock market index, and the balance of payments was deemed insignificant in determining stock market performance.

Giri and Joshi (2017) examined both the long-term and short-term relationships between stock prices and a set of macroeconomic variables in the Indian economy, utilizing annual data from 1979 to 2014. The variables analyzed included GDP, international crude oil prices, inflation, real effective exchange rates, foreign direct investment, and real interest rates. The study focused on 30 well-established and financially stable companies listed on the Bombay Stock Exchange (BSE). The long-term relationship was assessed using the ARDL bounds testing approach for co-integration, while the short-term dynamics were analyzed with the Vector Error Correction Model (VECM). The findings revealed a long-term relationship among the variables, with economic growth, inflation, and exchange rates positively influencing stock prices, whereas crude oil prices had a negative impact.

Ndlovu et al. (2018) investigated the impact of macroeconomic variables on stock prices, using data from the first quarter of 1981 to the last quarter of 2016 for the Johannesburg Stock Exchange in South Africa. The macroeconomic variables examined included inflation, money supply growth, interest rates, and exchange rates, with data sourced from the Economic Co-operation and Development (OECD) website. The study applied co-integration tests, the Vector Error Correction Model (VECM), variance decomposition, and impulse response functions to understand the relationships. The results indicated a positive long-term relationship between interest rates, money supply, and inflation with stock prices, while the exchange rate had a negative effect on stock prices.

Mawardi et al. (2019) assessed the impact of macroeconomic variables on the Indonesia Sharia Stock Index (ISSI), which comprises 350 Islamic stocks listed on the Indonesia Stock Exchange. The study analyzed monthly data from May 2011 to November 2017 (79 observations) and focused on inflation rate, industrial production index, and interest rate as the key macroeconomic variables. Utilizing a quantitative approach with multiple linear regression and IBM SPSS 20 software, the study found that the ISSI was significantly influenced by inflation rate, industrial production index, and interest rate. Specifically, inflation rate and industrial production index

had a positive and significant impact on stock prices, whereas interest rates had a negative and significant effect.

Abdullahi (2020) investigated the impact of fluctuating macroeconomic indicators on stock price trends within the Nigerian banking sector. Utilizing an ex-post facto research design, the analysis was based on secondary data from the Central Bank of Nigeria (CBN) statistical bulletins and Nigerian Stock Exchange fact books, covering the period from 2008 to 2018. The Autoregressive Distributed Lag (ARDL) model was used to assess both short-term and long-term effects, with the ADF unit root test employed to verify data stationarity and the Bond test to examine long-term co-integration. The findings showed that interest rates and foreign reserves had a negative and significant effect on stock prices, while inflation rates positively influenced stock prices in the banking sector in both the short and long term. The study emphasized the substantial negative impact of interest rates and foreign reserves on stock price movements in the Nigerian banking sector concluding that stock prices are influenced by foreign reserves, interest rates, and inflation rates.

2.2.3 Review of literature on money supply

Table 2.3 shows the review of literature on money supply.

Table 2.3: Review of literature on money supply

Study	Major findings
Ray (2012)	Interest rates, foreign exchange reserves, gross domestic product, and money supply have a positive effect on stock prices in India.
Nkechukwu <i>et al.</i> (2013)	Money supply exerts a positive and significant impact on stock prices over the long term.
Ouma and Muriu (2014)	There is a significant and positive connection between money supply and stock returns. Additionally, the findings revealed that exchange rates have a detrimental effect on stock returns.
Khan and Khan (2018)	Money supply has a substantial positive effect on stock prices. The research also determined that the inflation rate negatively affects stock prices.

Epaphra (2018)	Money supply and exchange rate have a positive effect on stock prices. By contrast, the Treasury bill rate tends to have a negative effect on stock prices.
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Ray (2012) investigated the influence of various macroeconomic variables on stock prices in India using annual data from 1990-91 to 2010-11, encompassing 21 years of observations. The study employed a multiple regression model to assess the effects of macroeconomic variables on stock prices and conducted a Granger causality test to explore potential causal relationships. The findings indicated unidirectional causality between stock prices and inflation, foreign direct investment, GDP, exchange rate, and gross fixed capital formation. The regression analysis revealed that oil and gold prices exerted a significant negative impact on stock prices, while balance of trade, interest rates, foreign exchange reserves, GDP, industrial production index, and money supply had a positive influence. In contrast, inflation rate, foreign direct investment, exchange rate, and wholesale price index did not significantly affect stock prices.

Nkechukwu et al. (2013) Investigated the influence of macroeconomic variables on stock market prices in Nigeria, using annual time series data from 1980 to 2013. The study utilized Ordinary Least Squares (OLS) regression, Johansen co-integration techniques, and Vector Error Correction Model (VECM) based on Arbitrage Pricing Theory (APT). The study found that GDP had a significant long-run negative effect on stock prices, whereas money supply had a positive and significant long-run effect. In the short run, both GDP and money supply had a positive but insignificant impact on stock prices.

Ouma and Muriu (2014) explored the effects of macroeconomic variables on stock returns in Kenya. The study included money supply (M2), exchange rates, inflation (CPI), and interest rates, applying the Arbitrage Pricing Theory (APT) and Capital Asset Pricing Model (CAPM). Using monthly data from January 2003 to January 2013, the Ordinary Least Squares (OLS) technique was employed to test the model's validity and the significance of each variable. The results demonstrated that money supply, inflation, and exchange rates significantly affected stock market returns, with money supply showing a positive and significant relationship, while exchange rates had a negative impact. Interest rates were found to be insignificant in determining long-term stock returns on the Nairobi Stock Exchange (NSE).

Khan and Khan (2018) examined the impact of various factors affecting on share prices. Study utilized time series secondary data from May 2001 to August 2016, covering 184 monthly observations. Data were collected from the State Bank of Pakistan, including money supply, exchange rates, interest rates, inflation rates, industrial production indices, and exports. The findings indicated that money supply, exchange rates, and interest rates significantly influenced stock prices on the Karachi Stock Exchange in the long term. Specifically, money supply had a strong positive effect, while inflation had a negative impact. Exports and economic activity also positively affected the equity market.

Epaphra (2018) investigated the relationship between stock prices and macroeconomic variables in Tanzania, using inflation rate, Treasury bill rate, exchange rate, and money supply as key variables. The study analyzed monthly time series data from January 2012 to December 2016 across 10 companies listed on the Dar es Salaam Stock Exchange. Employing Johansen’s co-integration and vector error correction models. The finding showed that money supply and exchange rate positively influenced stock prices, while the Treasury bill rate had a negative effect. Inflation rate appeared to have no significant impact on overall stock prices, with money supply emerging as the principal determinant.

2.2.4 Review of literature on Nepalese context

Table 2.4 showed literature review on Nepalese context.

Table 2.4: Review of literature on Nepalese context

Study	Major findings
Ghimire and Mishra (2018)	Market to book value, P/E ratio are the significant determinants of stock price which directly affect the stock price. Likewise, DPS, BV also have a significant and positive influence on stock price.
Bhattarai (2018)	Market price per share is positively and significant correlated with earnings per shares, dividend per shares, and dividend payout ratio.
Karki (2018)	The performance of the stock market is observed to positively react to real GDP, inflation, and money supply.

Bajracharya and Sawagvudcharee (2019)	EPS, DPS, and the P/E ratio exhibit a positive and significant correlation with the MPS of Nepalese commercial banks.
Shrestha (2019)	The interest rate and wholesale price index have more explanatory power than exchange rate and gold price for explaining variation in stock market index.
Panta (2020)	Over the long term, the NEPSE Index is closely linked to broad money supply, interest rates, inflation, and exchange rates.
Wagle (2021)	The market-to-book ratio, price-to-earnings ratio, and earnings yield ratio have a notable positive correlation with stock market prices.

Ghimire and Mishra (2018) analyzed the relationship between stock prices and several explanatory variables, including dividends per share (DPS), earnings per share (EPS), price-to-earnings (P/E) ratio, book value per share (BV), and the market-to-book ratio. Utilizing a descriptive and pooled cross-sectional research design, the study drew data from secondary sources such as the official Nepal Stock Exchange website and annual reports of sample firms. The data covered the period from 2012 to 2017 and included financial and non-financial firms across various sectors. Employing simple and multiple regression analyses alongside descriptive statistics, the study found that the market-to-book ratio and P/E ratio were significant determinants of stock prices. Additionally, DPS and BV positively influenced stock prices, although EPS had a minimal impact.

Bhattarai (2018) investigated the impact of firm-specific and macroeconomic variables on the share prices of Nepalese commercial banks and insurance companies. This study used secondary data from seven banks and six insurance companies spanning the period from 2009/10 to 2014/15, sourced from annual reports of the respective firms. The research employed descriptive and causal-comparative designs, utilizing multiple regression analysis with SPSS version 16. Firm-specific variables included return on assets (ROA), earnings per share (EPS), dividends per share (DPS), dividend payout ratio, price-to-earnings (P/E) ratio, and firm size. The results indicated a positive and significant correlation between market price per share and EPS, DPS,

and the dividend payout ratio. Conversely, ROE, ROA, money supply, and interest rate showed negative and insignificant correlations. Regression analysis revealed that EPS, DPS, P/E ratio, firm size, GDP, and exchange rate positively and significantly impacted market price per share, whereas ROE, ROA, money supply, and interest rate had negative but significant effects.

Karki (2018) examined the influence of macroeconomic factors on stock market performance in Nepal, focusing on real GDP, inflation, interest rates, and broad money supply. Utilizing a descriptive and causal-comparative research design, the study analyzed annual data from fiscal year 1994 to 2016. Data were obtained from the Central Bureau of Statistics, Nepal Rastra Bank, and the Nepal Stock Exchange. The findings indicated that stock market performance positively responded to real GDP, inflation, and money supply, while showing a negative response to interest rates.

Bajracharya and Sawagvudcharee (2019) assessed the factors influencing share prices of Nepalese commercial banks from 2006/07 to 2015/16. The study used secondary data from the annual reports of twelve banks and economic bulletins from Nepal Rastra Bank. Employing a causal-comparative research design, correlation and panel data analysis were conducted. The results indicated that internal factors such as EPS, DPS, and P/E ratio had a positive and significant relationship with market price per share, whereas ROA did not show a significant relationship. The external factor, inflation rate, had a negative and significant impact on market price per share.

Shrestha (2019) examined the impact of macroeconomic factors on NEPSE using monthly data from January 2002 to December 2016. The study adopted a correlation and causal-comparative research design, with 180 observations. The analysis involved testing for stationarity, with all variables except interest rate becoming stationary at their first difference. Pearson's correlation and regression models were used to evaluate the effects of macroeconomic variables on the NEPSE index. Results indicated that the wholesale price index and interest rate had significant explanatory power for stock market index variations, whereas the exchange rate and gold price were statistically insignificant.

Panta (2020) explored the relationship between stock market prices, specifically the NEPSE index, and five macroeconomic variables: real GDP, broad money supply, interest rates, inflation, and exchange rates. Utilizing the autoregressive distributed lag (ARDL) model and the error correction model (ECM), the research analyzed 25 years of annual data from 1994 to 2019. The results revealed that long-term fluctuations in the NEPSE index were strongly linked to broad money supply, interest rates, inflation, and exchange rates. In the short term, GDP, money supply, and exchange rates were also found to have an impact showed a positive relationship, while only money supply maintained a positive relationship in the long run.

Wagle (2021) examined the empirical factors affecting stock market prices in commercial banks for the period from 2015/16 to 2019/20. The study analyzed 130 data points from 26 commercial banks, utilizing secondary data from annual reports and applying a descriptive and causal-comparative research approach. Statistical analysis conducted with SPSS version 25 revealed that the market-to-book ratio, price-to-earnings (P/E) ratio, and earnings yield had significant positive correlations with stock market prices. Conversely, the dividend yield was found to have a negative but statistically insignificant effect on stock market prices.

Gyawali (2022) explored the determinants influencing stock prices of Nepalese commercial banks by analyzing various independent variables, including dividends per share (DPS), earnings per share (EPS), price-to-earnings (P/E) ratio, return on assets (ROA), GDP, and the inflation rate. Secondary data from the annual reports of selected commercial banks for the period from 2017 to 2021 was used. Adopting a descriptive and causal-comparative research approach, the analysis was performed using SPSS version 23. The sample consisted of ten out of 27 banks, chosen through convenience sampling. Multiple linear regression analysis indicated that DPS, EPS, and the P/E ratio had a positive and statistically significant effect on stock prices. In contrast, ROA and GDP showed a positive but not significant effect, while the inflation rate had a negative and insignificant impact on stock prices.

Dhodary (2023) examined the determinants of stock prices for Nepalese commercial banks using a quantitative approach combined with descriptive research methods. The study analyzed pooled cross-sectional data from NEPSE-listed banks over the fiscal years 2011/12 to 2020/21, focusing

on ten banks as representatives of the 26-bank population. The research variables included book value per share (BVPS), P/E ratio, firm size, dividend payment, return on equity (ROE), and market price per share (MPS). Descriptive statistics indicated steady growth in BVPS and firm size, while profitability, dividends, and stock market performance were volatile. The P/E ratio was occasionally zero due to lack of earnings. Regression analysis confirmed that BVPS, P/E ratio, ROE, and dividends significantly and positively impacted MPS, whereas firm size had a significant and negative effect.

Lamsal (2024) explored the determinants of stock prices for Nepalese commercial banks using a descriptive and causal-comparative research design. The study employed secondary data from the annual reports of seven selected banks, NEPSE, and other relevant sources. The analysis revealed a positive correlation between market price per share (MPS) and earnings per share (EPS), price-to-earnings (P/E) ratio, and book value per share (BVPS), while dividends per share (DPS) showed a negative relationship with MPS. The research identified a strong positive correlation between all independent variables (EPS, DPS, BVPS, and P/E ratio) and MPS. The study concluded that MPS experienced significant fluctuations, with EPS, DPS, P/E ratios, and BVPS demonstrating a notable positive correlation with stock prices during the study period.

2.4 Research Gap

Regarding this research topic, various research papers, journals and articles have been published till now. Similarly, various issues and factors related to impact of macroeconomics variables on stock price have been studied by different authors as well. However, in Nepal, there might not have conducted any research on Investment Decision' including different factors like Inflation, Gross Domestic Product, Money Supply, and Investment Options specially focusing on impact of macroeconomics variables on Nepalese Share Market. Hence this report will attempt to prepare and present the report in order to fulfill requirement of such report.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research design

This study utilizes both descriptive and causal-comparative research designs to address the fundamental issues regarding the interrelationship between macroeconomic variables and stock prices of Nepalese commercial banks. The descriptive research design is employed to gather and analyze comprehensive information about how macroeconomic variables affect the stock prices of these banks. This design involves systematic data collection and presentation to provide a clear and detailed depiction of the situation. Descriptive statistics are applied to variables such as Gross Domestic Product (GDP), inflation, and money supply to characterize the nature of data related to the stock performance of commercial banks.

In addition, the study employs a causal-comparative research design to explore the relationship between macroeconomic variables and the stock prices of Nepalese commercial banks. This design is used to investigate the cause-and-effect relationships between various dependent and independent variables. It is specifically aimed at determining the direction, magnitude, and nature of the observed relationships between macroeconomic variables and stock prices within the context of Nepalese commercial banks.

3.2 Population and sample

Population refers to the entire group of people, events, or things of interest that the research wishes to investigate (Sekaran, 2003). The population of this research is GDP, INF, M2, MPS, SR taken from the website of Nepal Rastra Bank. A sample is a subset of the population. It comprises some members selected from it (Sekaran, 2003). In order to examine the interrelationship between the impact of macroeconomics variables on the stock price of This research includes a sample of ten commercial banks in Nepal, with data collected from the period of 2013/14 to 2022/23, resulting in a total of 30 observations.

3.3 Nature and sources of data and the instrument of data collection

The research relies on secondary data obtained from three commercial banks in Nepal over a ten-year period, spanning from 2013/14 to 2022/23. This sample size constitutes 30 percent of the population, making it a representative and noteworthy subset of Nepalese commercial banks. The study examines variables such as GDP and INF. The annual secondary data were sourced from the Banking and Financial Statistics, bank supervision reports published by Nepal Rastra Bank, and the annual reports of the selected commercial banks. Data on the dependent and independent variables of the sample banks were collected and coded with unique identifiers for each bank to facilitate easy identification and analysis. Overall, the period covered in study with respect to bank specific variables ranges from fiscal year.

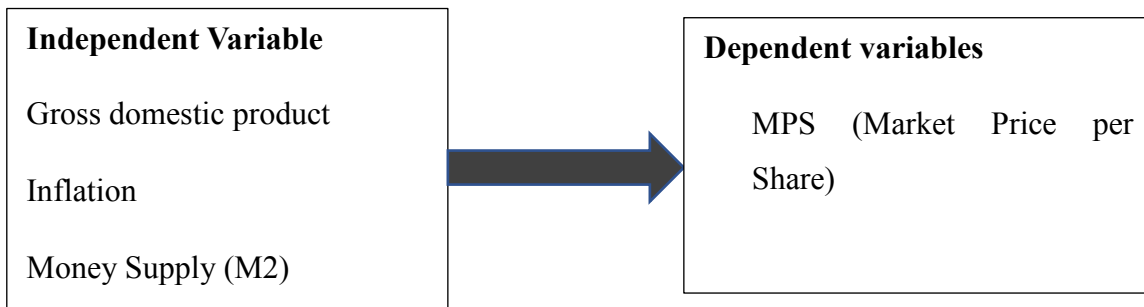
3.4 Method of analysis

The main purpose of data analysis in the study is to examine the impacts of macroeconomics variables on stock price on the selected commercial banks in context of Nepal. Therefore, this section deals with statistical and econometric models used for the purpose of analysis of secondary data. Descriptive, correlation and regression methods of analysis are used in the study.

Descriptive statistics are employed to present quantitative data in a more comprehensible format, helping to condense large datasets into meaningful summaries such as mean, standard deviations, and the minimum and maximum values of variables, which describe the characteristics of the sample firms over the period from 2012/13 to 2021/22. Correlation analysis is utilized to examine the strength of the relationships between variables using available statistical data, identifying both the direction and magnitude of these relationships. Additionally, regression analysis is a statistical method used to estimate the relationships among variables, aiming to determine the influence of independent variables on dependent variables both individually and in combination. This involves conducting various statistical significance tests, such as the t-test and F-test, as well as linear regression analysis, to validate the model. All models undergo individual effect testing using the t-test with the Statistical Package for Social Sciences (SPSS 23). A detailed analysis of the models and significance tests is provided in the subsequent sections.

3.5 Research framework and definition of variables

3.5.1 Conceptual Framework



Source: South Asian Academic Research Journals

Figure 3.1: Conceptual Framework

3.5.2 Definition of Variables

3.5.2.1 Dependent Variable

Market price per share

The stock price represents the cost of a single share of a company's tradable equity. It is determined by dividing the total value of the firm by the number of shares outstanding (Weston, 1989). The par value of a share, as stated in the corporate charter, holds minimal economic relevance. The term "stock price" specifically refers to the current market price at which a share of stock is being traded (Musyoki, 2012). Equity valuation remains a crucial issue that academics and researchers in capital markets continue to explore from various perspectives (Bhatt & Sumangala, 2012). The market price per share (MPPS) significantly affects the investment decisions of stock market participants. It serves as a vital indicator for investors when considering whether to invest in a particular stock (Gill et al., 2012). According to Guo (2002), the volatility of stock prices represents a systemic risk for investors holding common shares. Stock prices are influenced by supply and demand dynamics, which are affected by a range of factors, including economic conditions, industry-specific changes, political events, wars, and

environmental shifts. Both internal and external factors contribute to the fluctuations in stock prices.

Stock return

Stock return (SR) represents the financial gains that investors realize from the stock market, which may manifest either as profits from trading activities or as dividends distributed by companies to their shareholders (Jacobsen, 1988). It is composed of both capital gain yield and dividend yield, though it does not account for adjustments related to bonus or rights issues in the calculation of capital gains. Rutledge et al. (2008) defined stock return as the profit level attained by an investor from their investment. According to Martinez et al. (2005), stock returns are highly sensitive to systematic liquidity shocks. Dutta et al. (2012) observed that various financial ratios have a significant impact on stock returns. Equity investment returns fluctuate due to changes in share prices, which are influenced by a range of factors (Poudel, 2016).

3.5.2.2 Independent Variable

Gross domestic product

Gross Domestic Product (GDP) represents the monetary value of all finished goods and services produced within a nation's borders during a specified period. It quantifies the total market value of all final goods and services produced domestically each year (Isenmila & Erah, 2012). GDP encompasses the value of final goods, such as food and beverages, as well as services, such as business consulting, produced within a country over a given timeframe (Brezina, 2012). According to Dornbusch and Fischer (1994), the total demand for domestic output comprises four key components: consumption, business investment, government expenditure on goods and services, and foreign demand. Consequently, GDP is frequently regarded as a primary indicator of economic performance (Mankiw, 2006). Nonetheless, Osamwonyi and Evbayiro-Osagie (2012) found that, in the short term, GDP does not have a significant impact on share prices in Nigeria. Accordingly, this research formulates the following hypotheses:

H1: Gross domestic product (GDP) positively influences market price per share (MPS) and stock returns (SR).

Inflation

Inflation (INF) is a key metric for assessing the macroeconomic stability of an economy (Atmadja, 2005). Kniest (1998) defines inflation as a persistent and aggregate increase in the price level of goods and services within an economy. It occurs when there is a widespread and ongoing increase in the prices of goods and services throughout the economy (Gbadebo & Mohammed, 2015). Inflation signifies a decline in the purchasing power of money, resulting in a decrease in real value as a medium of exchange and unit of account within the economy (Gautam & Bista, 2019). Udegbumam and Eriki (2001) identified a significant negative correlation between the inflation rate and share prices. Similarly, Gallagher and Taylor (2002) found that stock returns are negatively affected by both expected and unexpected inflation. Based on this, the study proposes the following hypothesis:

H₂: There is negative impact of inflation on market price per share and stock return.

Money supply

Gupta (1974) highlighted that various macroeconomic factors, including changes in interest rates, money supply, inflation, political events, and legislative changes, play a significant role in determining share prices. Mookerjee (1987) suggested that investors aiming for success should primarily focus on macroeconomic factors that influence price movements. Posen (2011) emphasized that macroeconomic variables are crucial indicators that affect stock returns. Flannery and Protopapadakis (2002) identified several macroeconomic factors influencing stock price trends, such as interest rates, inflation, GDP, money supply, and political and economic shocks. Kraft and Kraft (1977) argued that, in the long term, the most critical factor affecting stock price development is the money supply within the economy. Based on it, this study develops the following hypothesis:

H₃: There is positive impact of M2 on MPS and SR.

Regression Model

The regression will be run by using least squares method of regression analysis. This study employs the following regression model to investigate the impact of macroeconomic variables on the stock prices of selected Nepalese commercial banks. Accordingly, the following model

equation is formulated to test the hypotheses. Based on the conceptual framework, the function of the dependent variables is expressed as follows:

$$MPPS = f(GDP, INF, MS)$$

$$SR = f(GDP, INF, MS)$$

More specifically, the given model has been segmented into following models:

In this model, the dependent variable is (MPS) indicated by market price per share (MPS) of the firm. GDP, inflation and M2 are independent variables that are tested against the variable of MPS. The model of the research is formulated as:

$$MPS_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 INF_{it} + \beta_3 MS_{it} e_{it}$$

Model II

In this model research, the dependent variable is SR which is denoted by stock return. Gross domestic product, inflation, and money supply are independent variables which are tested on SR. The model is presented as follows:

$$SR_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 INF_{it} + \beta_3 MS_{it} e_{it}$$

Where,

MPS = Market price per share is quantified as the bank's share price, which is established by market demand and supply forces, expressed in rupees.

SR = Stock return is measured by change in price plus dividend by previous year's price, in percentage.

GDP = Gross domestic product measured as the annual change in nominal per capita GDP, in billion dollars.

INF = Inflation measured as the change in consumer price index, in percentage.

MS = Money supply measured as the broad money (M2), in billion dollars.

e_{it} = Error term

β_0 is the constant term and $\beta_1, \beta_2, \beta_3$, are the beta coefficients of variables.

CHAPTER IV

RESULTS AND DISCUSSION

As detailed in the preceding chapters, the major aim of this study is to analyze the factors affecting the stock prices of commercial banks in Nepal. Consequently, this chapter's observations, analysis, and conclusions are divided into three sections. The first section describes the study's variables and examines their correlations. The second section verifies the assumptions of the regression model, and the third section presents the regression results. Utilizing data analysis methodologies suitable for ratio scale measurement, the ratios of the dependent and independent variables were calculated for further statistical analysis. The collected data were analyzed using SPSS version 26, a statistical software tool.

4.1 Results

4.1.1 Descriptive statistics of variables

Table 2 presents the descriptive statistics of dependent and independent variables utilized in the investigation. The outcomes demonstrate the lowest and highest performance measures for stock price of Nepalese commercial banks with regards to dependent variable MPS and SR and independent variables gross domestic product (GDP), inflation (INF), and money supply (M2) are included in this section.

Table 4.1 Descriptive statistics of variables of stock price

Variables	N	Minimum	Maximum	Mean	Std. Deviation
GDP	30	20	40.83	30.82	6.63
INF	30	3.6	9.93	6.1	2.18
M2	30	75.36	169.14	110.77	29.58
MPS	30	229	3600	1070.47	969.12
SR	30	65.58	268.2	13.9	62.65

Source: SPSS output

Table 2 shows the descriptive statistics of dependent and independent variables used in the study. The gross domestic product is the first independent variable. During the research period, the average was 30.82 US billion dollar, with a standard deviation of 6.63. The largest value was 40.83 US billion dollar, and the lowest was 20 US billion dollar. Similarly, the inflation, which is

the second independent variable, exhibits variation between lowest value of 3.60% and maximum value of 9.93% with an average of 6.10% as well as standard deviation 2.18. The last independent variable, money supply, reveals that this variable ranges from 75.36 US billion dollar at the lowest to 169.14 US billion dollar at the highest, with an average of 110.70 US billion dollar and a standard deviation of 29.58

The MPS summary indicates that throughout the research period, the average market per share was Rs 1070.47 with a standard deviation of 969.12, with the highest market price per share being Rs 3600 and the lowest being Rs 229 How successfully commercial bank use their information to produce profit is shown by the market price per share. The average stock return (ASR) is 13.90%, with a lowest value of 65.58% and highest value of 268.20%. This is adequate. Because of this the stock return standard deviation, which is 62.65.

4.1.2 Correlation analysis

A table displaying correlation coefficients between variables is called a correlation matrix. The correlation between two matching variables is displayed in each cell of the table. Data can be summarized using a correlation matrix. This gives us a quick overview of the variables that correlate at different strengths and levels of significance. A correlation value of 0 indicates no linear relationship between the two variables. The correlation coefficient ranges from +1, denoting a perfect positive correlation, to -1, indicating a perfect negative correlation. The correlation matrix is presented in Table 4.2 as follows.

Table 4.2 Pearson’s correlation coefficients of study variables

	GDP	INF	M2billion	MPS	SR
GDP	1				
INF	-.554**	1			
M2	.840**	-0.245	1		
MPS	-.662**	.575**	-.500**	1	
SR	-0.346	.578**	-0.13	0.215	1

Source: SPSS output

*Note: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent levels respectively.*

Table 3 reveals the correlation test between both dependent and independent variables using correlation coefficient matrix. The correlation test shows that gross domestic product (GDP) has

significantly inverse relationship with MPS in 1% significance level with correlation coefficients -0.662. At the same time, GDP has significantly positive relationship with the variable of SR. Nevertheless, a significant inverse relationship is observed between inflation and MPS. and significant positive relationship between inflation and SR. Moreover, money supply has significant negative relationship with MPS but it has significant positive relationship with SR of the commercial banks.

4.1.3 Regression analysis

It includes a range of modeling and analysis techniques for analyzing the relationship between dependent variable stock return, market price per share and independent one's money supply, gross domestic product, inflation of Nepalese commercial banks. Ordinary least square regression is a crucial analytical method in panel data analysis (OLS)

4.1.3.1 Analysis of Market Price Per Share Regression

MPS is the dependent variable and independent one's money supply, gross domestic product, inflation to analyze the effect of factors on stock price Nepalese commercial banks.

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.708a	0.501	0.444	722.705

a. Predictors: (Constant), M2, INF, GDP

The coefficient of determination (R²) in multiple regression is a summary statistic that shows how well the sample regression line fits the data. Put another way, the R² statistic shows what proportion of the variance of the dependent variable can be accounted for by the independent variables. In this case, the model fits, or accounts for, the variance of the dependent variable, MPS, at Rs 50.1. The strength of the variables' relationship is determined by calculating the R statistic, which has a value of 0.708 and shows that there is a significant degree of association between the research variables (multiple correlation coefficients). This suggests that the MPS was notably influenced by the independent variables. The standard error of estimate shows a strong association with regression analysis.

Table 4.4 Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13656498	3	4552166	8.716	.000b
	Residual	13579864	26	522302.5		
	Total	27236361	29			

a. Dependent Variable: MPS

b. Predictors: (Constant), M2, INF, GDP

An analysis using ANOVA (F-value) suggests that the influence of dependent variables may be explained by the greatest number of potential combinations of predictor variables. Findings indicate that the MPS indicator has a major influence. As a proxy for MPS the F-values of 8.716 ($p = 0.000 < 0.05$) for M2, INF, GDP indicate a strong correlation between the dependent variable (MPS) and the independent variables.

Table 4.5 Regression coefficient of Independent Variables with MPS

<i>Variables</i>	<i>Coefficient</i>	<i>T</i>	<i>Sig.</i>
(Constant)	2403.244	2.005	0.055
GDP	-65.637	-1.317	0.199
INF	140.236	1.657	0.11
M2	-1.488	-0.155	0.878

Source: SPSS output

Table 4.5 presents the regression coefficient of independent variables gross domestic product, inflation and money supply and the intercept value of dependent variable MPS. The gross domestic product regression result indicates a negative correlation with MPS, with a coefficient estimate of -65.637 US billion dollar. This suggests that an increase in the gross domestic product (GDP) will cause the market per share (MPS) of the commercial bank to decline by -65.637, holding all other independent variables equal. At the five percent significance level, the GDP is statistically significant, as indicated by its p value of 0.199. The findings therefore corroborate the working hypothesis that the GDP has a major effect on the market price per share (MPS) of commercial banks in Nepal.

The findings of the regression model indicated a positive correlation among the INF and MPS, with a coefficient estimation of 140.236 value in the research of the study. The market price per

share (MPS) of commercial bank improves by 140.236 for every one percent increase in the inflation (INF) while maintaining the same levels of other independent variables. The increment in INF is significant at the 5% level of significance, as denoted by the INF's p value of 0.11 in the research of the study.

According to the study of regression in the given research, there is inverse correlation among M2 and MPS, with estimate of the coefficient in the study of -1.488. The research of the study inform that increase in money supply leads to a -1.488 decline in MPS for commercial bank when other independent variables are maintained constant. At the five percent significance level, the M2 is statistically significant, as indicated by its p value of 0.878. The findings therefore corroborate the working hypothesis that the M2 has a major impact on the market price per share (MPS) of commercial bank.

4.1.3.2 Analysis of Stock Return Regression

SR is the dependent variable and independent one's money supply, gross domestic product, inflation to analyze the effect of factors on stock price Nepalese commercial banks.

Table 4.6 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.585a	0.342	0.266	53.6746

a. Predictors: (Constant), M2, INF, GDP

The coefficient of determination (R²) in multiple regression is a summary statistic that shows how well the sample regression line fits the data. In this case, the model fits 34.20 percent of the variation in the dependent variable, SR. The strength of the correlation (multiple correlation coefficients) between the variables is determined by the value of the R statistic. The R-score of 0.585 for the study indicates a high degree of correlation between the variables being studied. The study of the research explained that the SR was significantly affected by the independent factors of the research variable. The standard error of the study in the research has a perfect correlation among the regression analysis of given data.

Table 4.7 Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38919.31	3	12973.1	4.503	.011b
	Residual	74905.02	26	2880.962		
	Total	113824.3	29			

a. Dependent Variable: SR

b. Predictors: (Constant), M2, INF, GDP

An ANOVA (F-value) analysis suggests that the influence of the dependent variables can be accounted for by the widest range of potential predictor variable merger. The results show that the SR indicator has a significant impact. As a proxy for SR, the F-values of 4.503 ($p=0.011 < 0.05$) for M2, INF, and GDP identify effective correlation between the dependent variable SR and the independent variables of the given research of the study.

Table 4.8 Regression Coefficient of Independent Variables with SR

Variables	Coefficient	t-statistics	sig. value
(Constant)		-52.953	0.557
GDP	-1.976	-0.534	0.598
INF	14.471	2.302	0.03
M2	0.357	0.501	0.621

Source: SPSS output

Table 4.8 presents the regression coefficient of independent variables gross domestic product, inflation and money supply and the intercept value of dependent variable stock return. The gross domestic product (GDP) regression result indicates a negative correlation with SR, with a coefficient estimate of -1.976. This suggests that an increase in the gross domestic product will cause the stock return (SR) of commercial banks to decline by -1.976 holding all other independent variables equal. At the five percent significance level, the GDP is statistically insignificant, as indicated by its p value of 0.598. Consequently, the findings support the premise that the GDP has significant effect on SR of commercial banks in Nepal.

The result of the research using regression model suggested that the association between inflation (INF) has a positive relationship with SR with a coefficient estimate of 14.471. This indicates that when the inflation (INF) increases by 1 percent by leaving other independent

variables constant, the commercial bank SR increases by 14.471 percent as per the data of the research study. Fact that the INF'S p value is 0.030 indicates that the increase in INF is statistically significant at the five percent significance level.

Regression analysis reveals that, with a coefficient estimate of 0.357, the association between money supply (M2) and SR is positive. This evaluates that when some independent variables in the research study are kept constant, a 1 percent increases in M2 which results in a 0.357 increase in SR for commercial banks. The p value of money supply 0.621 implies that the increase in the study of research is insignificant at 5 percent level of significance. This implies a money supply has little bearing on the stock return (SR) of Nepalese commercial bank.

4.2 Discussion

The primary objective of this study is to investigate the factors influencing share prices in Nepalese commercial banks. The study examines bank-specific variables like GDP , INF, and M2, with MPS and SR serving as the dependent variables.

The correlation test reveals that GDP has a significant negative relationship with MPS at the 1 percent significance level, with a correlation coefficient of -0.662. This finding contradicts the results of Chen et al. (1986). Conversely, GDP has a significant positive relationship with SR, consistent with the findings of Chandra (2004). Additionally, there is a significant negative correlation between inflation and MPS, which is inconsistent with Mawardi et al. (2019). However, inflation has a significantly positive correlation with SR, which opposite of the result of the Malaolu *et al.* (2013). Furthermore, money supply exhibits a significant negative relationship with MPS, inconsistent with Sohail and Hussain (2009), and a significant positive relationship with SR, consistent with Maskay (2007).

The multiple regression analysis indicates that GDP has a significant negative effect on MPS, which is contrary to the findings of Chen et al. (1986). Inflation, on the other hand, has a significant positive impact on MPS, a finding that is inconsistent with Eriki (2001). Additionally, money supply has a significant negative impact on MPS, contrasting with Sohail and Hussain (2009). The regression results show that the beta coefficients for all variables—GDP, inflation, and money supply—are significant at the 1 percent significance level.

Regarding stock return (SR), the regression analysis reveals that GDP has a significant negative effect on SR, which is inconsistent with Chandra (2004). Inflation has a statistically significant positive impact on SR, aligning with Mawardi et al. (2019). The regression results also indicate that money supply has a significant positive impact on SR, consistent with Nkechukwu et al. (2013) in the study. The coefficients of beta for GDP and INF are statically significant at the 1 percent level of significance in the study.

CHAPTER V

SUMMARY AND CONCLUSION

5.1 Summary

Stock markets are crucial for economic growth as they ensure the efficient allocation of resources to the most productive investment opportunities. Microeconomics factors like GDP, interest rates, current account balances, M2, in the study of the research data influence daily stock prices (Kurihara, 2006). The trading of securities in these markets facilitates the pooling of funds, risk-sharing, and wealth transfer between savers and capital users. Investors make decisions based on share prices, considering them in their investment choices (Nisa & Nishat, 2011). To make informed investment decisions, market participants must stay updated with quantitative financial data, financial news, and social opinions (Francis & Soffer, 1997). Kheradyar et al. (2011) noted that stock prices exhibit random movements, with prices fluctuating unpredictably on different days. This randomness has raised concerns among financial economists, prompting further investigation. Share market in the financial sector are very good for the investors, as per the need of bank health tend to draw significant investor interest (Perdana & Adriana, 2018). Potential investors should evaluate the financial health of banks before investing to mitigate risk (Sholichah et al., 2021). Shrestha and Pokhrel (2019) argued that enhancing market transparency by making information about listed companies more accessible can help reduce rumors and speculation.

The major objective of this study is to examine the factors influencing stock price of Nepalese commercial banks. The specific objectives of this study are to analyze the structure and trends in market price per share and stock returns of Nepalese commercial banks, to assess the relationship between earnings per share, dividends per share, price-to-earnings ratio, returns on assets, gross domestic product, inflation, and money supply with the stock prices of Nepalese commercial banks, and to evaluate the impact of these factors on the stock prices of these banks. to assess the most significant factor influencing the stock price of Nepalese commercial banks.

The study is based on the secondary data which are gathered for 3 commercial banks in Nepal for the period of 10 years from 20013/14 to 2022/23. In this study 3 commercial banks taken as a sample of the study. This study has employed descriptive research design and causal comparative

research design as it deals with the impact of gross domestic product, inflation, and money supply on the stock price of commercial banks in Nepal. The relation among dependent and independent variables are examined using correlation, simple and multiple regression analysis under the research of the study using the data and the models. More specifically, MPS and stock return are considered as the dependent variables and gross domestic product, inflation and money supply are considered as independent variables.

This study reveals that factors influencing stock price of Nepalese commercial banks have great contribution to investors fund and strong price position. Moreover, in this study, Stocks in the banking industry are one of the stocks that are highly sought after by investors. Banks that have good health will attract many investors. Correlation test shows that gross domestic product (GDP) has significant negative relation with MPS. At the same time, GDP has significantly positive relationship with SR in the research study. Despite, there is significantly inverse relationship among INF and MPS and significant positive relationship between inflation and SR. Moreover, money supply has significant negative relationship with MPS but it has significant positive relationship with SR of the commercial banks.

The gross domestic product regression result indicates a negative correlation with MPS. The findings of the regression model indicated a positive correlation between the inflation (INF) and MPS. According to regression study, it is found that there is inverse relationship between M2 and MPS. GDP regression result indicates a negative correlation with SR. The findings of regression model suggested that the association between inflation (INF) has a positive relationship with SR and association between money supply (M2) and SR is positive.

5.2 Conclusion

Several conclusions have been drawn based on a comprehensive study. The primary conclusion of this study is that inflation is the most significant and positive factor affecting the market price per share (MPS) of Nepalese commercial banks. Thus, higher inflation correlates with a higher MPS. Conversely, GDP and M2 negatively affect the MPS, indicating that higher GDP and money supply result in a lower market price per share.

The study also concludes that inflation and money supply are major determinants of stock returns (SR) in Nepalese commercial banks. The findings demonstrate that inflation and money supply

positively affect stock returns, suggesting that higher inflation and money supply lead to higher stock returns. However, gross domestic product negatively impacts stock returns, implying that higher GDP corresponds to lower stock returns.

In summary, the research found that among the factors affecting stock returns for Nepalese commercial banks, gross domestic product (GDP) was the most significant, with M2 and INF also playing notable roles. Furthermore, when examining MPS, GDP was again the most influential factor, followed by M2.

The correlation test indicates that GDP has significant inverse relationship with MPS, while it has a significant positive relationship with stock returns (SR). There is a significant negative correlation between inflation and MPS and significantly positive relation among INF and stock returns. Furthermore, money supply has a significant negative relationship with market price per share but a significant positive relationship with stock returns of commercial banks.

The regression results of GDP indicate inverse correlation among both MPS and as well as stock returns. The regression model findings also indicate a positive correlation of inflation (INF) with market price per share and stock returns. According to the regression analysis, there is inverse relationship between M2 and MPS, while the association between money supply (M2) and stock returns is positive.

5.3 Implications

The inquiry has yielded the following implications regarding the factors affecting the share price of commercial banks in Nepal.

The results of this study demonstrate that gross domestic product (GDP) and money supply (M2) significantly impact the stock prices of commercial banks in Nepal. Consequently, the study's findings are expected to provide valuable insights into how these factors influence the stock prices of Nepalese commercial banks. This information is crucial for policymakers and commercial bank management in making informed financial decisions.

This research offers up-to-date information, statistics, and insights regarding stock prices, making it valuable for investors and shareholders. As such, the study holds significance for these stakeholders.

- Future scholars and investors can derive substantial benefits from the study's insights, as it serves as a valuable resource for future research.
- The study suggests that further research should be conducted over a period exceeding ten years, utilizing a larger sample size that includes more than three commercial banks and other financial institutions such as finance companies, development banks, and microfinance institutions. Such comprehensive research could yield more robust results for policy implementation. Moreover, this study focused solely on three independent variables: gross domestic product, inflation, and money supply. Therefore, additional research is needed to consider other variables such as the liquidity ratio, long-term debt to equity ratio, equity to total assets ratio, and tangible assets, among others.

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