MACROECONOMIC VARIABLES AND FINANCIAL PERFORMANCE OF COMMERCIAL BANK IN NEPAL

A Dissertation Submitted to the Office of the Dean, Faculty of Management in partial fulfillment of the requirements for the Master of Business Studies (MBS)

by

KiranDanuwar

Symbol No: 35625/21

Roll No: 3084/077

T.U. Regd. No: 7-2-39-235-2016

ShankerDev Campus

Kathmandu, Nepal

July, 2024

CERTIFICATION OF AUTHORSHIP

I hear by corroborate that I have researched and submitted the final draft of dissertation entitle **Macroeconomic Variables And Financial Performance Of Nepalese Commercial Banks** . The work of this dissertation has not been submitted previously for the propose of conferral of any degrees nor it has been proposed and presented as part of requirement for any other academic propose.

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

……

KiranDanuwar

July, 2024

REPORT OF RESEARCH COMMITTEE

Mr. KiranDanuwar has defended research proposal entitled **Macroeconomic Variables And Financial Performance 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 guidance of supervisor Indra Bahadur Bohara and submit the thesis for evaluation and viva voce examination.

……..

Indra Bahadur Bohara

Dissertation Supervisor

Dissertation proposal Defended Date

…….

Dissertation Viva Voce Date

……..

……

Asso. Prof. Dr. Sajeeb Kumar Shrestha

Head of Research Committee

Dissertation Submitted Date

:……

APPROVAL SHEET

We have examined the dissertation entitled **Macroeconomic Variables And Financial Performance Of Nepalese Commercial Banks** presented by Mr.KiranDanuwar for the degree of Master of Business Studies**.** We hereby certify that the dissertation is acceptable for the award of degree.

……..

Indra Bahadur Bohara

Dissertation: Supervisor

……..

Internal Examiner

…….

External Examiner

…….

Asso. Prof. Dr. Sajeeb Kumar Shrestha

Chairperson, Research Committee

…….

Asso.Prof. Dr. Krishna Prasad Acharya

Campus chief

ACKNOWLEDGEMENT

This research entitled **Macroeconomic Variables And Financial Performance Of Nepalese Commercial Banks** has been prepared for the partial fulfillment of the requirement of Master's Degree of Business Studies (M.B.S) under the Faculty of Management, Tribhuvan University. This study is based on prescribed research format involving the use of quantitative and qualitative model to analyze the "The Relation of Macroeconomic Variables and Financial Performance of Commercial Bank in Nepal"**.**

I would like to pay my sincere thanks to Mr. Indra Bahadur Bohara Supervisor and Mr. Asso.Prof. Dr. Krishna Prasad Acharya Campus Chief and Asso. Pro.Dr. Sajeeb Kumar Shrestha. PhD Chairperson, Research Committee of Shanker Dev Campus . Besides, I would also like to thank to other respected teachers of Shanker Dev Campus and all the staff of this campus for their help in providing me various kinds of suggestions, information and comments.

Last but not the least, I would like to thanks Shanker Dev Campus for providing the resource material, working environment, library facilities until the completion of this research work. Finally, I would like to thank my family members specially my friend who helped me during data collection and the final correction.

Kiran Danuwar

TABLE OF CONTENTS

List of tables

List of Figures

Abbreviations

A.D	:	Anno Domini
ANOVA	:	Analysis of Variance
ATM	:	Automated Teller Machine
BOP	:	Balance of Payments
BOT	:	Trade Balance
CEO	:	Chief Executive Officer
CPI	:	Consumer Price Index
DF	:	Degree of freedom
e.g.	:	Example Gratia", For Example
et al.	:	Et Alia
Ex	:	Exchange Rate
FY	:	Fiscal Year
Etc.	:	Et Cetera
GDP	:	Gross Domestic Product
i.e.	:	That is to Say
Int	:	Interest rates in the Market
IPO	:	Initial Public Offering
INF	:	Inflation
KBL	:	Kumari Bank Limited
Ltd	:	limited
MS	:	Microsoft
M2	:	Money Supply

N	:	Number
No.	:	Number
NRB	:	Nepal Rasta Bank
P/E	:	Public Expenditure
R	:	Regression
ROA	:	Return on Assets
ROE	:	Return on Equity
RP	:	Regulatory Policies
RR	:	Retention Ratio
Rs.	:	Rupees
SD	:	Standard Deviation
Sig	:	Significant
S.No.	:	Serial Number
SPSS	:	Statistical Programmed for Social Science
T.U.	:	Tribhuvan University

Abstracts

This study to examine **Macroeconomic Variables And Financial Performance Of Nepalese Commercial Banks.** Return on Assets and Return on Equity are the dependent variables. The independent variables are Gross domestic product, Public expenditure, Inflation rate, Balance of payment, Broad money supply, Consumer price index and Exchange rate with US$.Three commercial banks are selected as sample bank. Secondary data were collected from Nepal Rasta bank, annual report of commercial banks and published articles for Fiscal years from 2013/14 to 2022/23. Data were analyzed by using financial tools and statistical tools. The Descriptive and casual comparative research design was used. The correlation and multiple regression models are used to explain the relationship and test the significance between Macroeconomic and financial performance on Nepalese commercial banks.

The result shows that Return on Assets (ROA) and Return on Equity (ROE) are presented alongside macroeconomic indicators such as Gross Domestic Product (GDP), Inflation (Inf), Public Expenditure (PE), Balance of Payments (BOP), Money Supply (M2), Consumer Price Index (CPI), and Exchange Rate (exr). These statistics establish a foundation for subsequent analysis. Examining the correlation matrix reveals significant relationships between certain macroeconomic variables and both ROA and ROE. Particularly noteworthy is the strong positive correlation between ROA and ROE, indicating a parallel increase in returns on assets and returns on equity. Additionally, the negative correlation between GDP and ROA implies that fluctuations in GDP may impact commercial banks' financial performance in Nepal

Key words:*Gross domestic product, Public expenditure, Inflation rate, Balance of payment, Broad money supply, Consumer price index, Exchange rate with US$, Return on Assets and Return on Equity*

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

The relationship between organizational performance and macroeconomic factors is a topic that has drawn keen interest among scholars and stakeholders. Various macroeconomic factors, such as interest rates, inflation rates, exchange rates, gross domestic product (GDP), market risk, and money supply, play significant roles in influencing organizational performance. Sharma and Singh (2011) identify these factors as the most influential, shaping the operational landscape in which organizations function.

Kipchirchir (2011) notes that globalization and technological advancements have significantly altered business operations. As a result, organizations and their management teams must continuously assess how these macroeconomic factors influence performance. The increased demand and supply for quality goods and services have spurred a rise in international trade, including within the commercial banking sector, which seeks to meet the growing demand for quality financial services.Commercial banks, in particular, need to consider foreign exchange rates, interest rates, and inflation rates when making investment decisions. These institutions are deeply invested in analyzing the impacts of even the smallest changes in these variables, as they can significantly affect their business outcomes (Vines, 2017). Consequently, a thorough understanding of these macroeconomic factors is crucial for effective decision-making and strategic planning in the banking sector.

The intricate relationship between organizational performance and macroeconomic factors has garnered significant attention from scholars and stakeholders. Interest rates, inflation rates, exchange rates, gross domestic product (GDP), market risk, and money supply are pivotal macroeconomic variables that profoundly influence organizational dynamics (Sharma & Singh, 2011).

Interest rates, as elucidated by Ali (2014), are highly volatile and subject to fluctuations driven by changes in both domestic and international macroeconomic environments. Cytonn Investment (2017) highlights that the capping of interest rates can undermine the efficiency and effectiveness of the entire banking industry by disregarding other contributing variables.

This practice underscores the inefficacy of current monetary policies in accurately reflecting economic conditions.Inflation is another critical factor, with the consumer price index (CPI) serving as its primary proxy. The CPI measures current price levels relative to a base year, providing insights into price fluctuations at the retail level and the cost of goods for private households (Sharma & Singh, 2011). According to Ali (2014), rising inflation compels investors to seek higher returns to compensate for the diminished value of their investments.

Moreover, the continuous increase in the prices of goods and services, as noted by Chimkono (2017), is a prevalent phenomenon in many economies. This inflationary trend often results from an increase in the money supply outpacing economic growth (Omondi, 2014).

These macroeconomic variables necessitate careful analysis and strategic planning, particularly for commercial banks, which must consider factors such as foreign exchange rates, interest rates, and inflation rates in their investment decisions (Vines, 2017). As globalization and technological advancements reshape the business landscape, organizations must remain vigilant in assessing how these macroeconomic factors impact their performance (Kipchirchir, 2011). Understanding these dynamics is crucial for informed decision-making and sustainable growth in today's complex economic environment.

The relationship between macroeconomic variables and the financial performance of commercial banks in Nepal holds significant implications for economic stability, banking sector resilience, and overall growth prospects. Macroeconomic variables encompass a range of economic indicators reflecting the broader economic environment in which commercial banks operate. These variables include GDP growth, inflation rate, exchange rate, public expenditure, balance of payments, money supply, consumer price index (CPI), and interest rates, among others.The background of this study recognizes the sensitivity of commercial banks to changes in the macroeconomic environment. Fluctuations in these variables can profoundly affect banks' profitability, asset quality, liquidity, and overall financial health. For instance, economic expansions typically lead to increased loan demand, boosting banks' interest income and profitability. Conversely, economic contractions may result in higher loan defaults, lower asset values, and reduced profitability for banks.Bank performance is often measured in terms of profitability, specifically through metrics such as Return on Assets (ROA) and Return on Equity (ROE). ROA determines how effectively an organization has transformed assets into profit, making it one of the best measures of

profitability to assess the efficiency and effectiveness of bank management in resource mobilization (Osamwonyi& Michael, 2014). Bank-specific factors like higher capital adequacy ratio, management efficiency, and liquidity management have shown direct relationships with ROA and ROE (Rai et al., 2018). Additionally, research has established direct relationships between GDP growth rate and inflation rate with ROA, ROE, and Net Interest Margin (NIM).Bank profitability is influenced by several factors, including both bank-specific variables (Asimakopoulos et al., 2009) and macroeconomic variables (Bolarinwa et al., 2019). Macroeconomic factors, defined as larger aspects of the economy such as inflation, GDP, national income, per capita income, exchange rates, interest rates, unemployment levels, and financial crises (Rifai&Eren, 2018), affect a wider populace and indicate how the country's economy operates (Lynn, 2013). These macroeconomic factors reside in the general environment, meaning organizational control over them remains low (Dioha et al., 2018), thereby increasing the need for managerial efficiency to overcome challenges and seize opportunities induced by these environmental factors (Ngweshemi&Isiksal, 2021).Understanding the dynamics between these macroeconomic variables and bank performance is crucial for commercial banks in Nepal. It enables them to make informed strategic decisions, adapt to changing economic conditions, and enhance their resilience and profitability in a complex economic landscape.

Commercial banks in Nepal play a vital role in the country's financial system, serving as key intermediaries between depositors and borrowers. These banks offer a wide range of financial services to individuals, businesses, and other organizations, including savings and current accounts, loans, mortgages, and investment products. The commercial banking sector in Nepal comprises both domestic and foreign-owned banks, with the Nepal Rastra Bank (NRB) serving as the central regulatory authority overseeing their operations.The sector has witnessed significant growth and development in recent years, driven by factors such as increasing urbanization, rising disposable incomes, and expanding economic activities. These factors have collectively contributed to the expansion of financial services and the increased accessibility of banking services across the country.

Understanding the relationship between macroeconomic variables and the financial performance of commercial banks in Nepal is crucial due to its implications for economic stability, banking sector resilience, and overall growth prospects. Macroeconomic variables

encompass a range of economic indicators that reflect the broader economic environment in which commercial banks operate. These variables include GDP growth, inflation rate, exchange rate, public expenditure, balance of payments, money supply, consumer price index (CPI), and interest rates, among others.The background of this study recognizes the sensitivity of commercial banks to changes in the macroeconomic environment. Fluctuations in these variables can profoundly affect banks' profitability, asset quality, liquidity, and overall financial health. For instance, economic expansions typically lead to increased loan demand, boosting banks' interest income and profitability. Conversely, economic contractions may result in higher loan defaults, lower asset values, and reduced profitability for banks.

Bank performance is often measured in terms of profitability, specifically through metrics such as Return on Assets (ROA) and Return on Equity (ROE). ROA determines how effectively an organization has transformed assets into profit, making it one of the best measures of profitability to assess the efficiency and effectiveness of bank management in resource mobilization (Osamwonyi& Michael, 2014). Bank-specific factors like higher capital adequacy ratio, management efficiency, and liquidity management have shown direct relationships with ROA and ROE (Rai et al., 2018). Additionally, research has established direct relationships between GDP growth rate and inflation rate with ROA, ROE, and Net Interest Margin (NIM).

Bank profitability is influenced by several factors, including both bank-specific variables (Asimakopoulos et al., 2009) and macroeconomic variables (Bolarinwa et al., 2019). Macroeconomic factors, defined as larger aspects of the economy such as inflation, GDP, national income, per capita income, exchange rates, interest rates, unemployment levels, and financial crises (Rifai&Eren, 2018), affect a wider populace and indicate how the country’s economy operates (Lynn, 2013). These macroeconomic factors reside in the general environment, meaning organizational control over them remains low (Dioha et al., 2018), thereby increasing the need for managerial efficiency to overcome challenges and seize opportunities induced by these environmental factors (Ngweshemi&Isiksal, 2021).Understanding the dynamics between these macroeconomic variables and bank performance is crucial for commercial banks in Nepal. It enables them to make informed

strategic decisions, adapt to changing economic conditions, and enhance their resilience and profitability in a complex economic landscape.

Prabhu Bank Limited is renowned as an 'A' class commercial bank, recognized for its robust financial health and adherence to regulatory standards. With an extensive branch network spanning Nepal, Prabhu Bank ensures accessibility to a comprehensive array of banking services, catering to diverse clienteles ranging from individuals to businesses and institutions.

Sanima Bank Limited exemplifies resilience and customer satisfaction, stemming from its origins as a National Level Development Bank in 2004 to its current stature as an 'A' class commercial bank. Boasting 105 branches and 28 extension counters across all provinces, Sanima Bank focuses on delivering innovative financial solutions tailored to both corporate and retail customers.

Kumari Bank Limited stands out for its commitment to modern banking excellence and technological innovation. With a robust paid-up capital and an expansive branch network of 415 points, including branches, extension counters, and Branchless Banking Units, Kumari Bank leverages advanced Core Banking Software to provide seamless digital banking experiences across urban, semi-urban, and rural Nepal.

RastriyaBanijya Bank Limited (RBBL), established in 1966, has evolved into a cornerstone of Nepal's banking heritage. Initially a government-owned entity, RBBL transitioned into a public limited company, operating under stringent regulatory frameworks while expanding its footprint across all 77 districts and contributing significantly to the national economy through efficient resource allocation and widespread employment generation.

NIC ASIA Bank emerged from the merger of NIC Bank and Bank of Asia Nepal, marking a pioneering consolidation within Nepal's banking sector. With an extensive network of branches, ATMs, extension counters, and branchless banking services, NIC ASIA Bank sets benchmarks in post-merger integration, receiving accolades such as the prestigious "Bank of the Year" award for its exemplary performance and strategic management.

1.2 Statementof problem

Work hard to determine how macroeconomic factors affect the financial performance of various banking systems. These studies' primary objective was to evaluate the commercial banks' financial performance. These studies show how the bank is concerned about the impact of the U.S. dollar on return on assets (ROA) and return on equity (ROE) of

commercial banks, as well as gross domestic product (GDP), public expenditure (PE), inflation (InF), balance of payments (BOP), trade balance (BOT), money supply (M2), interest rates in the market (Int), consumer price index (CPI), and exchange rate (Ex). Exchange rate, inflation rate, and interest rate all have a significant positive correlation with ROA. Numerous studies show that the inflation rate, currency rate, and interest rate all have an impact on a bank's ability to succeed financially. Macroeconomic factors' effects on ROA. The findings show that inflation significantly and favorably affects ROAAlessandri& Nelson, 2015).

i. What is the trend of macroeconomic variables and Profitability position of selectedcommercial bank of Nepal?
ii. Is there any relationshipbetween GDP, PE, Inf, BOP, M2, Int, CPI and Ex with ROA,ROEand EPS of selectedcommercial bank?
iii. Do the macroeconomic variables significantly impact on financial performance ofselected commercial bank?

1.3 Objectives of the study

The study focuses on investigating the relationship between macroeconomic variables and financial performance, with the following specific objectives are:

i. To investigate the status of GDP, PE, Inf, BOP, M2, Int, CPI and Ex, ROA,ROEand EPS.
ii. To examine the relationship between GDP, PE, Inf, BOP, BOT, M2, CPI and Ex, ROA,ROEand EPS.
iii. To analyze the impact of GDP, PE, Inf, BOP, M2, CPI and Ex on ROA,ROEand EPS.

1.4 Rationale of the study

The rationale of the study lies in exploring the relationship between macroeconomic variables and the financial performance of banks. This relationship is crucial because economic prosperity often translates into improved financial performance of banks, and conversely, economic downturns may negatively impact bank performance.

i. The study contributes to the formulation of effective planning, policies, strategies, and programs for banks. By understanding how macroeconomic variables influence

financial performance, banks can tailor their strategies to better navigate economic fluctuations and enhance their overall performance.

ii. This study provides a foundation for further research by offering critical analysis and insights into the complex relationship between macroeconomic variables and financial performance. It identifies areas where additional research can deepen our understanding and uncover new insights.

iii. By examining the relationships among macroeconomic variables and financial performance metrics, the study contributes to expanding knowledge in this area. It helps researchers, policymakers, and practitioners better grasp the dynamics of these relationships and their implications.

iv. The study aids in analyzing the economic and financial landscape within the country. By studying the impact of macroeconomic variables on bank performance, researchers can assess economic conditions, identify trends, and compare the financial health of banks with broader economic indicators.

v. The study's inclusion of five commercial banks' financial performance provides a focused analysis within the banking sector. By examining multiple banks, the study can capture diverse performance trends and highlight common patterns or unique characteristics across different institutions.

1.5 Limitations of the study

The benefits and limitations are the two faces of a same coin. Each and every research work has more or less limitations. To make this study precise, meaningful and valuable some limitations are made so that the objective of this study is achieved within limited time, resource and information. Some limitations of this study are listed below:

i. This study focuses a macroeconomic variables and profitability position of commercial banks

ii. This study will be based on 5 commercial banks financial performance(SANIMA, PRABHU,KBL,RBB and NIC).

iii. The study will use secondary data collect from Nepal Rastra Bank.

iv. The study based on only the past years period’s data from year 2013/14 to 2022/2023.

v. The study will takes the 5 commercial banks profit return on assets and return on

equity (ROE)

vi. This study to applies descriptive and casual research design.

vii. Descriptive and inferential analysis will be applied for analyzing the impact of M.E variables on financial performance.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

The study undertakes a thorough literature review spanning various countries worldwide, aiming to explore the intricate relationship between bank-specific variables, macroeconomic indicators, and their impact on profitability. This review adopts a multifaceted approach, encompassing theoretical perspectives, empirical analyses, and identification of research gaps within the existing body of knowledge. By summarizing, categorizing, and comparing prior research studies, the review aims to provide a nuanced understanding of how internal factors unique to individual banks and external factors related to the broader financial industry and economic environment influence profitability. The primary objective of this literature review is to offer an objective and comprehensive summary of current knowledge, drawing insights from previously published research articles. Through critical analysis, the review aims to illuminate key findings, trends, and theoretical frameworks in the field while pinpointing avenues for future exploration and research.

2.2 Theoretical review

In examining the interconnection between macroeconomic variables and the financial performance of commercial banks in Nepal, it is essential to explore relevant theoretical frameworks that clarify this relationship. Interest Rate Theory asserts that fluctuations in macroeconomic indicators like the central bank's policy interest rates, inflation rates, and exchange rates profoundly impact the financial performance of commercial banks (Kumudini, 2018). For instance, while higher interest rates can increase interest income for banks, they may concurrently reduce loan demand, thereby potentially decreasing net interest margins (Tiwari &Thapa, 2019).

2.2.1 Economics growth theory

Economic growth theory is a foundational discipline within economics that explores the complex dynamics behind a nation's expansion of goods and services production over time. It investigates numerous factors influencing this growth trajectory, seeking to understand the

mechanisms driving economies forward and fostering sustained enhancements in productivity and living standards. This branch of economics provides crucial insights into the drivers of long-term economic prosperity, illuminating the intricate interactions among economic variables and policies. Through rigorous analysis and theoretical frameworks, economic growth theory aims to unravel the complexities of economic development, offering guidance for policymakers and economists in charting a course towards sustainable growth and advancement.

2.2.2 Classical growth theory

The Classical Growth Theory, championed by eminent economists such as Adam Smith, David Ricardo, and Thomas Malthus, stands as a cornerstone of economic thought. This theory emphasizes the critical roles of population growth, capital accumulation, and technological advancements in promoting economic expansion. It serves as a foundational framework for comprehending the mechanisms behind long-term economic growth, providing valuable insights into how demographic trends, investment strategies, and innovation dynamics interact. The contributions of these pioneering economists laid the groundwork for subsequent developments in economic theory, profoundly influencing our understanding of the fundamental drivers of prosperity and progress throughout history.

2.2.3 Neoclassical growth theory

The Neoclassical Growth Theory, which emerged in the mid-20th century and was pioneered by economists such as Robert Solow, represents a significant advancement in economic thought. This theory places technological advancement at the forefront as a crucial driver of sustained economic growth over time. Central to this framework is the Solow Growth Model, which highlights the essential interplay between capital accumulation, technological innovation, and overall economic advancement. By elucidating how technological progress shapes the growth paths of economies, neoclassical growth theory provides valuable insights into the dynamics of modern economic development. Its analysis of the complex relationship between investment, innovation, and productivity growth has profoundly enhanced our understanding of the factors driving long-term prosperity in contemporary societies.

2.2.4 Endogenous growth theory

The Endogenous Growth Theory, pioneered by economists such as Paul Romer and Robert Lucas, marks a significant departure from traditional economic perspectives. In contrast to

the neoclassical view, which treats technological progress as an external factor, this theory asserts that technological change is endogenous—meaning it arises from within the economic system itself.

Central to this framework is the recognition that factors like investment in research and development (R&D), educational attainment, and the accumulation of human capital play critical roles in stimulating innovation and driving long-term economic growth. By emphasizing the internal dynamics of economic variables, endogenous growth theory underscores how policies and incentives can shape the pace and direction of technological advancement.

This perspective offers a nuanced understanding of the intricate interactions between economic incentives, innovation, and productivity enhancement. It illuminates how economies can sustainably expand by fostering environments that support continuous innovation and technological progress.

Through its insights, endogenous growth theory provides policymakers and economists with a comprehensive framework to cultivate conditions that nurture innovation, thereby promoting enduring prosperity and societal progress.

2.2.5 New growth theory

The New Growth Theory, building upon the foundations laid by endogenous growth theory, represents a transformative leap in economic thought. Spearheaded by influential economists such as Paul Romer and Philippe Aghion, this framework integrates key concepts such as increasing returns to scale, knowledge spillovers, and the pivotal role of institutions in catalyzing innovation and economic expansion.

At its core, the new growth theory highlights the dynamic interactions among policy interventions, institutional frameworks, and technological advancements. It provides a comprehensive understanding of the drivers behind sustained economic growth, emphasizing the significance of proactive government policies and supportive institutional environments in nurturing innovation and entrepreneurship.

By emphasizing these insights, the new growth theory offers invaluable guidance for policymakers aiming to design strategies that stimulate innovation, boost productivity, and foster inclusive economic development in contemporary economies.

2.2.6 Schumpeterian growth theory

The Schumpeterian Growth Theory, pioneered by the influential economist Joseph Schumpeter, represents a cornerstone in economic theory. At its core, this theory emphasizes the pivotal roles played by entrepreneurship and innovation in driving economic progress. It elucidates how disruptive technological advancements propel growth by challenging existing industries through creative destruction.

Central to Schumpeterian theory is the transformative power of innovation, advocating for an environment that supports entrepreneurial activity and technological advancement. Embracing change and disruption are seen as essential elements that fuel sustained economic dynamism.

These insights offer valuable guidance for policymakers and economists alike, underscoring the importance of cultivating a culture that fosters innovation and entrepreneurship to foster long-term prosperity and economic development.

2.2.7 BOP theory

The Balance of Payments (BOP) theory stands as a foundational concept in macroeconomics, crucial for understanding how a nation engages economically with the rest of the world. It serves as a comprehensive ledger of all transactions, both financial and non-financial, between a country and other nations during a specific period.

Consisting of two main components—the current account and the capital account—the BOP theory offers insights into a nation's trade balance, financial inflows and outflows, and its overall economic standing on the international stage. By meticulously documenting imports, exports, capital movements, and other cross-border transactions, the BOP theory provides policymakers and economists with essential data to evaluate a country's external economic relations and to devise effective policy responses.

Through its detailed analysis of international economic interactions, the BOP theory plays a vital role in guiding policies aimed at fostering stability, sustainability, and prosperity in an increasingly interconnected global economy.

2.2.8Current account

The Current Account acts as a comprehensive record of a country's international trade activities, encompassing transactions in goods and services, net income from foreign investments (such as interest and dividends), and net transfer payments (e.g., foreign aid). It

provides a detailed overview of a nation's economic interactions with the global economy, offering insights into its trade balance, income from abroad, and external financial assistance received.

A surplus in the current account indicates that a country exports more goods and services than it imports, reflecting a favorable trade position. Conversely, a deficit suggests that imports exceed exports, highlighting an imbalance in trade flows. By monitoring these fundamental components of international transactions, the Current Account equips policymakers and economists with essential data to evaluate a country's economic performance, assess external vulnerabilities, and gauge its overall financial stability in the global arena.

2.2.9 Capital account

The Capital Account plays a crucial role in a country's balance of payments, focusing on monitoring the inflow and outflow of investments. It encompasses various international financial transactions, including foreign direct investment (FDI), portfolio investment, and changes in reserves held by the central bank. By tracing these capital movements, the Capital Account offers insights into a nation's financial integration with the global economy and its capacity to attract foreign investment.

A surplus in the capital account indicates that more capital is entering the country than leaving, reflecting investor confidence and potential avenues for economic growth. Conversely, a deficit suggests that capital outflows exceed inflows, which may raise concerns about economic prospects or investor sentiment. Through its analysis of investment flows, the Capital Account aids policymakers and economists in assessing a country's external financial position and devising strategies to foster sustainable economic development.

2.2.10 Public expenditure theories

Public expenditure theories encompass a variety of perspectives on the importance and impacts of government spending within an economy. They illuminate the motivations behind government intervention, the outcomes associated with different types of expenditures, and the implications for economic growth, stability, and resource allocation. These theories form the fundamental frameworks for comprehending the intricacies of public finance and the state's role in shaping economic outcomes.

By examining the reasoning behind government spending decisions and assessing their effects on various sectors and stakeholders, public expenditure theories provide valuable insights for policymakers, economists, and the general public. They explore the relationship between public expenditure and key economic variables, fostering informed policymaking and stimulating discussions on optimal fiscal strategies aimed at enhancing societal welfare and fostering prosperity.

2.2.11 Classical theory

The Classical Theory, championed by economists such as Adam Smith and David Ricardo, advocated for a restrained approach to government spending. They argued that public expenditures should focus primarily on essential functions like defense, infrastructure development, and protecting property rights. Emphasizing the role of free markets and individual incentives in promoting economic advancement, these scholars cautioned against excessive government intervention, which they believed could disrupt market efficiency and impede overall growth. In essence, the Classical Theory favored a minimalist approach to government expenditure, prioritizing the natural allocation of resources by market forces to stimulate economic activity.

2.2.12 Keynesian theory

The Keynesian Theory, developed by John Maynard Keynes in response to the challenges posed by the Great Depression, advocates for proactive government intervention to stabilize economic fluctuations. Keynes argued that during periods of economic downturns, where insufficient demand in the private sector leads to unemployment, government intervention becomes crucial. He proposed that governments should increase spending to stimulate aggregate demand and boost economic activity. According to Keynesian economics, these expansionary fiscal policies can effectively alleviate recessions and help achieve macroeconomic goals such as full employment and price stability. By actively managing aggregate demand through targeted government expenditure, Keynesian theory aims to mitigate economic downturns and promote sustainable growth and prosperity.

2.2.13 Wagner's law

Wagner's Law, named after the German economist Adolph Wagner, proposes that government expenditure tends to increase as a nation progresses economically. According to this theory, as countries undergo economic development, various factors such as rising

income levels, urbanization, and technological advancements contribute to a growing demand for government-provided goods and services. These may encompass essential services such as education, healthcare, and social welfare programs. Wagner's Law suggests that as societies become wealthier and more complex, there is a natural inclination towards greater government intervention and spending to address the evolving needs of the population. This theory highlights the dynamic relationship between economic development and the expansion of public expenditure, offering insights into the evolving role of government in contemporary economies.

2.2.14 Public choice theory

Public Choice Theory applies economic principles to analyze the behavior of key actors within the political sphere, including politicians, bureaucrats, and voters. It posits that government spending decisions are often influenced by the self-interest of these individuals, who prioritize factors such as reelection, expanding authority, or personal gain. Additionally, interest groups and lobbyists exert influence to shape policies in line with their specific agendas. Public Choice Theory argues that government spending may not always align with the public interest, potentially leading to inefficiencies, rent-seeking behavior, and misallocation of resources. By examining the incentives and motives driving governmental decision-making, this theory sheds light on the complexities of politics and their impact on economic outcomes. It emphasizes the importance of understanding public decision-making dynamics to address governance issues, enhance accountability, and improve economic efficiency. Through its analysis, Public Choice Theory informs discussions and policy reforms aimed at promoting public welfare and optimizing resource use.

2.2.15 Newpublic management (NPM)

New Public Management (NPM) emerged in response to the inefficiencies and rigid bureaucracies that characterized traditional public sector institutions in the late 20th century. It advocates for incorporating management practices from the private sector to improve public service delivery, enhance accountability, and optimize government expenditures. NPM promotes principles such as performance assessment, competition, decentralization of decision-making, and prioritizing customer satisfaction in public expenditure initiatives. By implementing these strategies, NPM aims to foster a culture of efficiency, innovation, and adaptability within the public sector. Its overarching goal is to meet the evolving needs and

expectations of citizens while ensuring the judicious use of public resources. Through the adoption of private-sector management techniques, NPM seeks to modernize public administration and promote transparency, effectiveness, and responsiveness in government operations.

2.2.16 Loan demand and economic activity

The relationship between macroeconomic indicators and loan demand is a critical consideration for commercial banks. Economic theories suggest that during periods of economic expansion, businesses often increase their demand for loans to fuel investment endeavors, thereby boosting banks' interest income and overall profitability (Ghosh, 2019). Conversely, in times of economic downturn, the demand for loans tends to diminish, posing profitability challenges for banks (Ghosh, 2019). This cyclical nature highlights the interdependence between loan demand and economic conditions, influencing banks' financial performance and strategic decision-making processes. By understanding and navigating this dynamic relationship, banks can adjust their lending strategies to effectively manage risks and capitalize on opportunities presented by varying economic landscapes. Grasping the nuances of this relationship is crucial for banks to remain resilient and responsive in an ever-changing economic environment.

2.2.17 Credit risk theory

Credit risk theory underscores the significant influence of macroeconomic variables such as GDP growth, inflation, and unemployment rates on the credit risk landscape for commercial banks. During economic downturns, default rates on loans may escalate, exposing banks to heightened credit risk and potentially threatening their financial stability, including profitability and capital adequacy (Boucinha& Reis, 2018). This highlights the paramount importance of proactively monitoring and managing credit risk exposure in alignment with macroeconomic trends to fortify banks' stability and resilience amid economic uncertainties. By integrating insights from credit risk theory into their risk management frameworks, banks can enhance their capacity to navigate volatile economic conditions and sustain their competitiveness in the financial marketplace. Understanding the intricate interplay between macroeconomic factors and credit risk is essential for banks to effectively mitigate risks and safeguard their long-term viability.

2.2.18 Monetarypolicy transmission mechanisms

Understanding the impact of changes in macroeconomic indicators on monetary policy transmission mechanisms is crucial for gaining insights into the financial performance of commercial banks. Alterations in the central bank's policy rates can cascade through commercial banks' lending and deposit rates, influencing their net interest margins and overall profitability (Boucinha& Reis, 2018). This intricate relationship underscores the importance of monitoring how changes in monetary policy settings propagate through the banking sector, affecting banks' funding costs, asset yields, and ultimately, their financial results. By comprehending the dynamics of monetary policy transmission, banks can adapt their strategies and operations effectively to navigate the evolving interest rate environment and optimize their financial outcomes. Understanding these transmission mechanisms enables banks to make informed decisions and manage risks more effectively in response to monetary policy changes, ensuring their long-term viability and stability in the financial market.

2.2.19 Asset quality and economic conditions

The relationship between economic conditions and asset quality is pivotal for commercial banks, as economic theories suggest. During economic downturns or recessions, borrowers may struggle to meet their loan obligations, leading to an increase in non-performing loans (NPLs) and higher provisioning expenses for banks (Ghosh, 2019). This dynamic highlights the necessity of vigilance in assessing and managing credit risk exposure, especially during economic turbulence. By closely monitoring economic indicators and their impact on asset quality, banks can proactively adjust their risk management strategies to mitigate potential losses and maintain financial stability.

2.2.20 Financialstability and macroeconomic stability

The interplay between financial stability and macroeconomic equilibrium underscores the intricate relationship between macroeconomic variables and the resilience of commercial banks. Fluctuations in macroeconomic indicators can significantly impact the stability of the financial system, thereby affecting bank performance. The "financial instability hypothesis,"

articulated by Hyman Minsky, provides valuable insights into how macroeconomic shocks permeate the financial sector, influencing bank performance (Boucinha& Reis, 2018). This highlights the critical importance of maintaining both financial stability and macroeconomic equilibrium to protect the banking sector and support sustainable economic growth. By comprehending the dynamics between these two areas, policymakers and regulators can implement measures to mitigate systemic risks and foster a more resilient financial system.

2.3 Empirical Review

Amin and Jaya (2024) investigated the relationship between the profitability of Islamic commercial banks and various financial and macroeconomic indicators, including the Capital Adequacy Ratio (CAR), Non-Performing Financing (NPF), Operating Expenses and Operating Income (BOPO), inflation, Gross Domestic Product (GDP), and interest rates. Using monthly reports of Islamic banking and statistical data from 2015 to 2022, the study employed multiple linear regression analysis. The findings revealed that the CAR and NPF significantly influence the profitability of Islamic commercial banks. Conversely, BOPO, GDP, inflation, and interest rates did not show a significant relationship with the banks' profitability. The study emphasized that the Return on Assets (ROA) is simultaneously affected by CAR, NPF, BOPO, inflation, GDP, and interest rates. The conclusions suggest that Islamic banks aiming to maximize profitability should focus on maintaining capital efficiency and stabilizing non-performing financing and operational ratios. This study provides valuable insights into the key determinants of profitability in Islamic commercial banking, highlighting the importance of specific financial metrics and macroeconomic factors in driving bank performance and sustainability.

Ayub et al. (2024) analyzed the impact of macroeconomic factors on the profitability of the banking sector in Pakistan, recognizing its pivotal role in the country's economy. The research explores the historical development and significance of Pakistan's banking industry over the years, assessing how macroeconomic factors influence the sector's profitability. The study employs a quantitative approach utilizing secondary data, with a sample comprising financial data from scheduled banks in Pakistan from 2000 to 2022, totaling 84 observations in quarterly format. The dependent variable is "Return on Assets" (ROA), serving as a measure of banks' profitability. The independent variables include "Foreign Direct

Investment" (FDI), "Exchange Rate" (LER), "Inflation" (INF), "GDP Growth" (GROWTH), "Liquidity" (LLIQ), "Total Deposits" (LT_DEP), and "Credit Ratio" (CREDIT). Bank-specific variables were sourced from the State Bank of Pakistan (SBP) and Federal Reserve Economic Data (FRED) websites, while macroeconomic data was obtained from the World Bank and Macrotrends databases. The empirical analysis applied a "Vector Auto Regression" (VAR) model, followed by the "Multivariate Granger Causality test," "Impulse Response Function" (IRF), and "Forecast Error Variance Decomposition" (FEVD). The main findings indicate that the profitability of Pakistan's banking sector is predominantly influenced by internal bank-specific factors rather than external macroeconomic conditions. Among the macroeconomic variables, FDI and INF significantly impacted ROA, while LER and GROWTH had insignificant effects. Internal factors such as LLIQ, LT_DEP, and CREDIT were identified as significant determinants of profitability measured by ROA.

Bouziani et al. (2024) assessed the impact of financial innovation on the financial performance of Dubai Islamic Bank from 2013 to 2023. The research provided an in-depth analysis of financial innovation, specifically examining investments in Sukuk (IS), Murabaha (MRH), Musharakah (MSH), and Ijarah (IJR) as indicators of financial innovation, and net profit margin (NPM) as an indicator of financial performance. Utilizing the Autoregressive Distributed Lag (ARDL) model and Eviews 12 software, the study found a statistically significant positive impact of financial innovation on the financial performance of Dubai Islamic Bank at a 5% significance level. This indicates a co-integration relationship in both the short and long term, emphasizing the importance of adopting financial innovations within the banking sector. The study underscores the critical role of financial innovation in enhancing the financial performance of Dubai Islamic Bank, highlighting the benefits of leveraging innovative financial products and services to drive positive outcomes in banking operations.

Nurhana et al. (2024) examined the influence of various factors on the performance of commercial banks listed on the Indonesia Stock Exchange (IDX) during 2021-2022. The research investigated the impact of the non-performing loan (NPL) ratio, operating expense ratio (OER), capital adequacy ratio (CAR), loan-to-deposit ratio (LDR), bank size (measured by LnSIZE), and corporate governance (GCG) on commercial bank performance (ROA). The study population comprised management parties of commercial banking companies listed on

the IDX, with a sample size of 36 companies selected through purposive sampling. Using a quantitative methodology with secondary data sources, the data analysis was conducted using multiple linear regression analysis with SPSS version 25. The findings indicated that the NPL ratio, OER, LDR, and LnSIZE did not significantly affect commercial bank performance (ROA). However, CAR and GCG were found to have a significant impact on commercial bank performance (ROA). When considering all variables together (NPL, OER, CAR, LDR, Company Size, and GCG), they collectively influenced commercial bank performance (ROA). This study contributes to understanding the key determinants of commercial bank performance in the Indonesian market, highlighting the importance of capital adequacy and corporate governance in driving bank profitability and stability.

Sayem et al. (2024) investigated the impact of macroeconomic variables on the financial performance of commercial banks in Bangladesh, aiming to contribute to financial stability and economic progress. Using secondary data from the World Bank covering fiscal years 2010 to 2021, the study employed correlation analysis, multiple linear regression, factor analysis, and model selection criteria. Significant positive correlations were found between the inflation rate and the financial performance of commercial banks in Bangladesh. Multiple linear regression analysis revealed substantial impacts of imports, exchange rates, and inflation rates on these banks' financial performance. Factor analysis highlighted strong correlations between GDP, imports, and the financial performance of commercial banks in Bangladesh. The model incorporating all variables was identified through model selection criteria as yielding the best results. The findings underscore the importance of these relationships for informed decision-making and strategic planning by government policymakers, researchers, bank managers, potential investors, financial experts, and stakeholders in Bangladesh's banking sector.

Vanera (2024) assessed the impact of macroeconomic factors on the financial performance of companies operating in the banking sector, comparing Turkey and Kosovo to gain insights into their respective performances. The analysis utilized annual data on key variables such as return on equity (ROE), return on assets (ROA), inflation (INF), gross domestic product (GDP), exchange rate (EX-RA), and consumer price index (CPI) from 2013 to 2022. Panel data regression models were employed in the study. The findings indicated that inflation,

GDP, and exchange rates significantly influenced the financial performance of banking companies in both Turkey and Kosovo.

Khotimah et al. (2023) conducted quantitative research aimed at identifying the variables influencing Sharia market share in Indonesia using secondary data. The study utilized financial performance indicators such as DPK (Third Party Funds), NPF (Non-Performing Financing), FDR (Financing to Deposit Ratio), and ROA (Return on Assets), alongside macroeconomic factors including inflation, interest rates, and exchange rates. The sample consisted of monthly reports from Islamic banking institutions spanning from 2019 to 2023. Multiple linear regression analysis was employed, incorporating partial (t-tests) and simultaneous (F-tests) tests, as well as assessing the coefficient of determination (R^2). The study found that DPK and the exchange rate significantly influence market share in the Sharia sector. However, variables such as NPF, FDR, ROA, inflation, and interest rates were not found to have a significant effect on market share. These results provide valuable insights into the dynamics of the Sharia market in Indonesia, highlighting specific factors that impact market share within this sector.

Msomi (2023) examined the macroeconomic and firm-specific determinants of financial performance using data from 121 listed non-life insurance companies across 48 African countries for the period 2008–2019. Panel data of 1452 observations were analyzed using both ordinary least squares and two-step System Generalised Method of Moments estimators. The study found that lagged return on assets, equity capital, operational efficiency, and leverage were statistically significant determinants of financial performance in African non-life insurance companies, although equity capital, operational efficiency, and leverage showed inverse significance. The study concludes that insurance industries, policymakers, governments, and investors should consider these significant factors in decision-making and improving performance. The study also recommends restructuring the capital structures of the sector to maintain a favorable balance in equity and debt and adopting mechanisms such as automated systems to reduce operational costs and enhance financial performance.

Onyanch and Muturi (2023) conducted an analysis of the Kenyan banking industry, emphasizing its pivotal role in the country's economic development despite facing challenges such as bank collapses and statutory management. The study aimed to investigate the impact

of macroeconomic factors on the financial performance of commercial banks in Kenya. It utilized a causal research design and included all 35 fully operational commercial banks from 2011 to 2019. Secondary data from the Central Bank of Kenya, Kenya National Bureau of Statistics, and banks' audited financial statements were employed. Descriptive and inferential statistics, including panel regression models, were utilized to analyze the data. The findings indicated that both exchange rates and interest rates significantly influenced the financial performance of commercial banks in Kenya. However, the study found that GDP growth rate and inflation rate did not significantly affect their financial performance. The study concluded that policy formulation in the banking sector should focus on managing exchange rates to mitigate their impact on financial performance. Furthermore, it recommended that commercial banks cautiously adjust interest rates to enhance profitability in the banking industry.

Ally (2022) explored the influence of macroeconomic factors on the financial performance of commercial banks in Tanzania. The study aimed to assess the effects of interest rates, inflation rates, and exchange rates on bank performance from 2010 to 2019. Using a descriptive and explanatory research design, the study analyzed trends in these macroeconomic variables and their relationship with financial performance using correlation analysis. The findings revealed a strong negative correlation of 74.99% between interest rates and return on assets, indicating that higher returns on assets corresponded to lower interest rates. Additionally, a positive correlation of 59.22% was found between inflation rates and return on assets, while a negative correlation of 65.52% was observed between exchange rates and return on assets. The study concluded that interest rates, inflation rates, and exchange rates significantly influence the financial performance of commercial banks in Tanzania. It recommended that the government maintain stable lending rates to mitigate adverse effects on bank performance during economic fluctuations, and continue policies protecting banks from inflation and exchange rate fluctuations.

Lyimo and Hussein (2022) investigated the impact of macroeconomic variables on the performance of commercial banks in Tanzania, focusing on Return on Assets (ROA). The study found that economic growth significantly influences the performance of commercial banks. However, it revealed that exchange rates and interest rates do not have a significant relationship with commercial bank performance. Similarly, the study indicated that money

supply also does not significantly affect commercial bank performance. The study suggested that future research should address the challenges faced by commercial banks in Tanzania to facilitate better understanding and overcome obstacles, thereby promoting effective implementation, monitoring, and evaluation of banking operations. Furthermore, it recommended exploring the impact of macroeconomic variables on other commercial banks in the East African region to expand understanding and insights.

Bony (2021) examined the impacts of both bank-specific and macroeconomic factors on performance measures (ROA, NIM, and ROE) in Bangladesh's commercial banking sector. Covering the period from 2009 to 2018, the study utilized data from a sample of 10 commercial banks in Bangladesh. The research employed correlation and regression analyses to identify bank-specific characteristics and macroeconomic determinants influencing performance. The findings indicated that variables such as board size, audit committee meetings, and foreign ownership positively correlate with bank performance. Specifically, inflation and GDP were identified as having a positive relationship with bank performance. The study's insights are valuable for academics, bankers, government officials, students, and investors, offering crucial information to bank management for crafting effective policy decisions aimed at enhancing profitability.

Gautam and Gautam (2021) examined the impact of macroeconomic indicators—such as Gross Domestic Product (GDP), interest rates, inflation rates, and unemployment rates—on the financial performance of commercial banks in Nepal. The study selected the top five commercial banks based on financial performance using stratified sampling and analyzed ten years of secondary data. To address endogeneity concerns, the Hausman test was applied, and the effects of these indicators on financial performance were estimated using the Random Effects Model in OLS estimation. The findings revealed a significant influence of macroeconomic factors on Return on Equity (ROE) but not on Return on Assets (ROA) for commercial banks in Nepal. Specifically, GDP was identified as the most influential variable in predicting the financial performance of these banks. The study suggests that bank administrators, government officials, and investors should focus on GDP and other significant macroeconomic variables to enhance competitive financial performance, potentially developing products aligned with these indicators. Furthermore, the study

contributes to existing literature by addressing gaps in previous empirical studies regarding the determinants of ROA and ROE specific to Nepal.

Nahar et al. (2020) explored the growth and impact of Islamic banking in Indonesia, specifically analyzing the profitability determinants of Islamic commercial banks. The study utilized secondary data from multiple sources spanning the period 2011 to 2018. Employing a panel data approach, the research assessed various independent variables including Non-Performing Financing (NPF), Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Operational Efficiency Ratio (OER), inflation, Gross Domestic Product (GDP) growth, and exchange rates. The findings indicated that NPF, CAR, FDR, and OER significantly influence the Return on Assets (ROA) of Sharia Commercial Banks in Indonesia. Conversely, macroeconomic indicators such as GDP growth and exchange rates were found to have no significant effect on ROA. This study underscores the importance of internal banking metrics over external economic factors in determining profitability within Indonesia's Islamic banking sector.

GuruswamyandHedo(2019) examine the impact of macroeconomic variables on the financial performance of selected private commercial banks of Ethiopia. Financial performance was dependent variable, whereas, exchange rate, interest rate, external debt, import, exports and money supply was independent variables. Explanatory research design and purposive sampling method were employed in this study. Balanced panel data was analyzed by using descriptive, correlation and multiple regression analysis. Ordinary least square estimation and classical linear regression model assumption were employed. Annual audited financial statements of sampled private commercial banks and annual reports on macroeconomic variables used in the study where obtained from National Banks of Ethiopia, and Ministry of Finance and Economic Development covered a period of 12 years (2002- 2013). The study found that exchange rate, external debt and gross domestic product have influence on the financial performance of banks. Exchange rate and gross domestic product have positive and significant impact on the financial performance. However, external public debt has negative and significant influence on the financial performance of banks whereas other variables like interest rate, export, import, inflation, and money supply have no significant relationship with financial performance of private commercial banks

Bhattarai(2018) examined the impact of bank specific variables and macroeconomic variables on the performance of commercial banks of Nepal over the period of 2011 to 2016. The dependent variable is bank performance which has been specified in terms of ROA while the independent variables are bank specific (default risk, cost per loan assets and capital adequacy ratio), and macroeconomic variables (annual growth of gross domestic product, exchange rate and inflation). To test the impact of importance of bank specific and macro-economic variables on bank performance regression models have been estimated. This study concludes that the commercial banks profitability in Nepal is mainly influenced by cost per loan assets. The macroeconomic variables are not significant and hence there is no evidence that external forces have impact over bank performance

Egbunike (2018) explored the interrelationship between macroeconomic factors, firm characteristics and financial performance of quoted manufacturing firms in Nigeria. Specifically, the study investigates the effect of interest rate, inflation rate, exchange rate and the gross domestic product (GDP) growth rate, while the firm characteristics were size, leverage and liquidity. The dependent variable financial performance is measured as return on assets (ROA). The study used the ex post facto research design. The population comprised all quoted manufacturing firms on the Nigerian Stock Exchange. The sample was restricted to companies in the consumer goods sector, selected using non-probability sampling method. The study used multiple linear regression as the method of validating the hypotheses. The study finds no significant effect for interest rate and exchange rate, but a significant effect for inflation rate and GDP growth rate on ROA. Second, the firm characteristics showed that firm size, leverage and liquidity were significant. The study has implications for regulators and policy makers in formulating policy decisions. In addition, managers may better understand the interplay between macroeconomic factors, firm characteristics and profitability of firms. few studies have addressed the interplay of macroeconomic factors and firm characteristics in determining the profitability of manufacturing firms in the country and developing countries in general

Gikombo and Doris(2018) analyzed Profitability of financial institutions is a function of many variables including economic variables and institution based factors. Each institution may have control on the internal factors but not the economic factors. The general objective

of this study was to determine the effect of selected economic variables on profitability of commercial banks in Kenya. The specific objectives of the study include: examining the effect of real interest rates on profitability of commercial banks in Kenya; determining the effect of Gross domestic product on profitability of commercial banks in Kenya; evaluating the effect of exchange rates on profitability of commercial banks in Kenya; and determining the effect of inflation on profitability of commercial banks in Kenya. The study used descriptive research design to obtain information that describes what exists with respect to the variables tested while the longitudinal design helped track changes over time. The study focussed on all the licensed 44 commercial banks in Kenya as at December 2016. All the 44 commercial banks were included in the study hence a census. The study used secondary data and utilized a data collection form to collect as used in various previous research projects.

Haider, et. al. (2018) examined the macroeconomic variables impact on financial performance, using the financial statement of listed companies in Automobile sector of Pakistan stock exchange. The study covered the period from 2007 to 2016. Before applying the GMM model the preliminary test was done. Firm performance is measured with three ratios i.e., return on assets (ROA), return on equity (ROE) and gross profit margin ratio (GPM). The results revealed that the selected macroeconomics variables have the negative relationship with return on equity, return on assets and gross profit margin and the inflation has positive relation with return on equity and negative relation with return on assets (ROA) and gross profit margin (GPM). Studies on moderating effect of ownership structure on bank performance are scanty. To fill this glaring gap in this vital area of study, the authors used linear multiple regression model and Generalized Least Square on panel data to estimate the parameters. The findings showed that bank specific factors significantly affect the performance of commercial banks in Kenya, except for liquidity variable. But the overall effect of macroeconomic variables was inconclusive at 5% significance level. The moderating role of ownership identity on the financial performance of commercial banks was insignificant. Thus, it can be concluded that the financial performance of commercial banks in Kenya is driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution.

Nuhiu, et.al.(2017) excess this study is to elaborate whether the determinants of commercial banks' profitability affect the financial performance of commercial banks in Kosovo. Performance evaluation of commercial banks in Kosovo is done through measurement of financial performance indicators such as Return on Average Equity (ROAE), Return on Average Assets (ROAA) and Net Interest Margin (NIM). The study identifies the main factors that affect the profitability of commercial banks through analysis of financial time series and panel data of the banking sector in Kosovo. The study presents three models of financial performance analysis which highlight the influencing factors. The models are based on regression analysis, and the obtained results emphasize the relationship between the determinant factors of commercial banks profitability expressed through analysis of financial performance indicators. The study concludes that commercial banks profitability in Kosovo is driven mainly by internal determinant factors such as capital adequacy, asset quality and management efficiency, while macroeconomic factors have insignificant impact on financial performance of commercial banks.

Pinto, et.al. (2017) analyzed the important players in the financial system in any economy. This study evaluate the financial performance of commercial banks in Bahrain. This study is based on eight commercial banks for the period from 2005 to 2015. The data used in this study are obtained from published annual reports and websites of the respective banks, investor's guide, newspaper, newsletters of the banks and from Central Bank of Bahrain website. We used regression, correlation analysis & t-tests to determine the relationship between different financial parameters. The results of the study indicate that the profitability has an impact on capital adequacy and financial leverage, whereas the study did not ratify the relationship between the profitability and efficiency of the banks. This study also reveals that enforcement of higher capital adequacy ratio will adversely affects the profitability of the banks. The impact of financial and oil crisis might have influenced the financial leverage of the banks there by resulted in an adverse effect on the profitability of the banks.

Akani, et.al.(2016) examined the effects of selected macroeconomic variables on Commercial Banks performance in Nigeria. The objective was to investigate the effects of selected macroeconomic shocks on the performance of Nigerian banks. Annual time series data were sourced from Central Bank of Nigeria (CBN) statistical bulletin and stock

Exchange Facebook from 1980- 2014. Three multiple regressions models were formulated with Return on Investment (ROI),Return on Assets (ROA) and Return on Equity (ROE) as our dependent variables while the independent variables are Inflation rate (INFR), Real gross domestic product (RGDP), Real interest rate (INTR), Exchange rate (EXR), Broad Money Supply (M2)and unemployment Rate (UNE-R). The Johansen co-integration test, Unit Root test, Vector Error (VECM) and Granger Causality tests with the use of econometric E-view were employed for the analyses. R2, F-statistics, Durbin Watson and Regression coefficient were used to determine the extent to which the independent variables were used to affect the dependent variables. Model I, revealed that inflation rate (INFR), Real Gross Domestic Product RGDP), Exchange Rate (EXR), and Broad money supply (M2) have positive but insignificant effects on Return on Investment while interest rate and unemployment rate have negative and insignificant effects on Return on Investment. Model II, the results shows that inflation rate (INFR), interest rate (INTR), exchange rate (EXR)have positive and significant effects while Real Gross Domestic Product (RGDP), Broad money supply (M2) and unemployment rate UNE-R) have negative and insignificant effect on Return on Assets. Model III results revealed that inflation rate (INFR), interest rate (INTR), exchange rate (EXR) have positive and insignificant effect while Real Gross Domestic Product (RGDP), Broad money supply (M2) and unemployment rate (UNE-R) have negative and insignificant effect on Return on Equity. The models summary reveals an R2 of 0.93% and adjusted R2 of 0.87%, thestudy concludes that there is a positive and significant relationship between selected macroeconomic variables and Commercial Banks performance in Nigeria. We therefore recommend that macroeconomic policies should be used for the purpose of enhancing banks performance.

Baba &Nasieku(2016) analyzedCommercial banks play an important role in the operation of an economy since they are the financial intermediaries that channel funds from savers to borrowers for investment which is an important thing for a country's economic growth. The analysis of the effect of Macroeconomic factors on financial performance of Commercial Banks in Nigeria is thus vital. The findings indicated that real interest rate, unemployment rate as well exchange rate are negatively and significantly associated with the performance of commercial banks in Nigeria. The findings also indicated that unemployment rate, exchange rate and real interest rate have a significant relationship with financial performance of

commercial banks in Nigeria while inflation has an insignificant relationship with financial performance. The study recommends that commercial banks operating in Nigeria should effect strategies that aim to adjust their lending rates and financial activities when the rate of real interest rate set by the Central Bank of Nigeria increases since real interest rate has a negative effect on commercial banks financial performance. The study also recommends that commercial banks should be aware of the changes in exchange rate and interest rate and adjust their rates accordingly since an increase in interest rate worsens the performance and an increase in exchange rate betters the financial performance.

Mugambi and Okech(2016) investigated the impact of macroeconomic variables on stock returns of listed banks in the Nairobi Securities Exchange (NSE). The study focused on economic indicators such as exchange rate, interest rate, inflation, and GDP. Secondary data was sourced from the Central Bank of Kenya, Bloomberg databases, and the Kenya National Bureau of Statistics (KNBS), covering quarterly time series data from 2000 to 2015. Analytical methods included correlation analysis to assess multicollinearity and unit root tests for stationarity. The study employed a linear regression model using Ordinary Least Squares (OLS) under a Fixed Effects model to analyze the relationship between bank stock returns and the macroeconomic factors. Results indicated that interest rate, exchange rate, and inflation significantly influenced bank stock returns, whereas GDP did not have a significant impact at a 5% significance level. The study suggested that stable macroeconomic conditions are crucial, and recommended that banks avoid speculative activities in foreign currencies to mitigate volatility in stock returns.

Kiganda(2014) assessed the profitability of commercial banks in Sub-Saharan Africa (SSA), focusing on the determinants of profitability, particularly in Kenya with Equity Bank as a case study. The study aimed to establish the effects of macroeconomic factors—economic growth (real GDP), inflation, and exchange rate—on bank profitability. Using an approach based on the theory of production and employing a correlation research design, the study analyzed annual data spanning five years from 2008 to 2012. Data sources included World Development Indicators and published documents from Equity Bank (annual reports, investor briefings, and financial statements). The study applied the Cobb-Douglas production function transformed into natural logarithms and utilized OLS regression to examine the

relationships. Findings indicated that macroeconomic factors (real GDP, inflation, and exchange rate) had an insignificant effect on bank profitability in Kenya, specifically with Equity Bank, at a 5% significance level. The study concluded that internal factors related to bank management were more significant determinants of bank profitability in Kenya. It recommended that banks focus on enhancing managerial efficiency to achieve higher profitability.

Table 1

Summary of Review of Literature in Nepalese Context

Researchers /Years	Topic	Objectives	Methodology	Findings
Amin,et.al. (2024)	The Effect of Bank Performance and Macroeconomic on the Profitability of Indonesian Sharia Commercial Banks	To examine the relationship between bank profitability and key factors including Capital Adequacy Ratio , Non-Performing Financing , Operating Expenses and Operating Income, inflation, Gross Domestic Product and	Utilized monthly reports of Islamic banking and statistical data from 2015 to 2022 as secondary data sources. Applied multiple linear regression analysis.	CAR and NPF are significantly related to the profitability of Islamic commercial banks. BOPO, GDP, inflation, and interest rates show no significant relationship with profitability.

		interest rates.		
Ayub,et.al (2024)	The Impact of Macroeconomic Factors on the Banking Sector' Profitability in Pakistan	To analyze the influence of macroeconomic factors on the profitability of the banking sector in Pakistan, examining the interaction between internal bank-specific factors and external economic shocks.	Quantitative approach using secondary data from financial reports of scheduled banks in Pakistan spanning from 2000 to 2022 (84 quarters). Dependent variable: Returns on Assets (ROA).	the macroeconomic variables, Foreign Direct Investment and Inflation show significant impacts on Returns on Assets , while Exchange rate and GDP growth rate have insignificant effects. Internal factors such as Liquidity , Total Deposits, and Credit ratio are found to significantly impact profitability

Bouziani, et al. (2024)	The impact of financial innovation in banks on financial performance - Dubai Islamic Bank as a mode - an econometri study	To examine the impact of financial innovation, represented by investments in Sukuk (IS), Murabaha (MRH), Musharakah (MSH), and Ijarah (IJR), on the financial performance of Dubai Islamic Bank from 2013 to 2023	The study uses the Autoregressive Distributed Lag approach and EViews 12 software to analyze the relationship between financial innovation indicators (IS, MRH, MSH, IJR) and the financial performance indicator (net profit margin	The research findings reveal a statistically significant positive impact (at a 5% significance level) of financial innovation on the financial performance of Dubai Islamic Bank.
Kelmendi andVenera (2024)	Impact of Macroeconomic Factors on Bank Financial Performance: A Turkey and Kosovo Comparative Study	Investigate the impact of macroeconomic factors on the financial performance of banking sector companies	Variables: return on equity, return on assets, inflation, GDP, exchange rate, consumer price index.	Inflation, GDP, and exchange rate significantly influence the financial performance of banking companies in Turkey and Kosovo.
Nurhana,et.al. (2024)	The Influence of Internal Factors, Bank Size And Good Corporate Governance On The Performanc Of Commercial	To test the influence of Non-Performing Loan ratio,Operating Expense to Operating	The study uses secondary data and applies multiple linear regression analysis to examine the relationship	NPL, OER, LDR, and Bank Size (LnSIZE) do not have a significant effect on Commercial Bank Performance (ROA).

	Bank Listed On The Indonesian Stock	Income Ratio ,Capital Adequacy Ratio,Loan to Deposit Ratio, Bank Size, Good Corporate Governance on Commercial Bank	between the identified variables and Commercial Bank Performance (ROA).	
Khotimah, et.al. (2024)	Financial Performance And Macroeconomic Factors Affecting Sharia Banking Market Share In Indonesia	To Identify variables influencing Sharia market share in Indonesia.	Multiple linear regression analysis with t-tests, F-tests, and R^2 to examine relationships between variables and market share.	DPK (Deposits to Assets Ratio) and exchange rate significantly influence market share in Sharia banking.
Msomi (2023)	Macroeconomic and firm specific determinants of financial performance	Examine the macroeconomic and firm-specific determinants of financial performance	Ordinary least squares and two-step System Generalised Method of Moments estimators	Lagged return on assets, equity capital, operational efficiency, leverage, investment capability, and gross domestic product influence financial performance.
Onyanch and Muturi (2023)	Effect of Macroeconomic Factors on Financial Performance of Commercial Banks in Kenya	Determine the effect of exchange rate on financial performance of commercial banks in Kenya	Descriptive and inferential statistics, Panel regression model	Exchange rate and interest rate significantly affected financial performance of commercial banks in Kenya.

Ally &Ally (2022)	Influence of Macro-Economic Factors on Financial Performance of Commercial Banks in Tanzania	Assess the influence of interest rate on the financial performance of commercial banks in Tanzania	Relationship between macroeconomic variables and financial performance of commercial banks	Maintaining lending interest rates is recommended to prevent a decline in financial performance of commercial banks.
Lyimo and Hussein (2022)	Impact of Macroeconomic Variables on Performance of Banks	Examine the impact of macroeconomic variables on performance of banks (ROA)	Regression analysis	Economic growth significantly relates to commercial banks' performance.
	Bank Specific and Macroeconomic Determinants of Commercial Bank Performance	Examine the impacts of bank-specific and macroeconomic factors on commercial bank performance	Correlation and regression analysis	Findings can benefit academicians, bankers, government, students, and investors.
Gautam&Gautam (2021))	Role of macroeconomic factors predicting financial performance of commercial banks in Nepal	Study the effect of macroeconomic indicators on financial performance of commercial banks in Nepal	Stratified sampling, secondary data collection for ten years	Macroeconomic factors significantly influence financial performance except for unemployment rate on ROE and no significant impact on ROA.

Nahar, et.al.(2020)	Macroeconomic Analysis and Financial Ratios on Sharia Commercial Bank Profitability	Analyze the effect of macroeconomic and financial ratios on profitability of Islamic commercial banks in Indonesia	Panel data methodology	Non-performing finance, capital adequacy ratio, financing to deposit ratio, and operational efficiency ratio significantly influence Sharia bank
Guruswamy&Hedo (2019)	Impact of Macroeconomic Variables on Financial Performance of Banks	Examine the impact of macroeconomic variables on the financial performance of selected private commercial bank	Descriptive, correlation, multiple regression analysis	Exchange rate, external debt, and gross domestic product influence the financial performance of banks.
Haider, et. al. (2018)	Impact of Macroeconomic Variables on Financial Performance	Examine the impact of macroeconomic variables on financial performance using the financial statement of listed companies	GMM model and preliminary test	Macroeconomic variables have a negative relationship with return on equity, return on assets, and gross profit margin.
Gikombo and Doris (2018)	Effect of Select Macro Economic Variables on Performance of Listed Commercial Banks	Examine the effect of real interest rates on the profitability of commercial banks in Kenya	Research design - ex post facto	Inflation insignificantly impacts ROE but increases profitability, while real interest rates affect profitability

Egbunik (2018)	Macroeconomic factors, firm characteristics and financial performance	Explore the interrelationship between macroeconomic factors, firm characteristics, and financial performance	Ex post facto research design, population comprises all quoted manufacturing firms on the Nigerian Stock Exchange	No significant effect for interest rate and exchange rate, significant effect for inflation rate and GDP growth rate on ROA; firm size, leverage, and liquidity also affect financial performance.
Bhattarai (2018)	Impact of Bank Specific and Macroeconomic Variables on Performance	Examine the impact of bank-specific and macroeconomic variables on performance	Regression models	Macroeconomic variables show no significant impact on bank performance.
Nuhiu, et.al.(2017)	Determinants of Commercial Banks Profitability Through Analysis of Financial Performance Indicators	Investigate whether determinants affect the financial performance of commercial banks in Kosovo	Regression analysis	Profitability in Kosovo is mainly driven by internal factors such as capital adequacy, asset quality, and management efficiency, with macroeconomic factors having little significance.
Pinto, et.al. (2017)	An Evaluation of Financial Performance of Commercial Banks	Evaluate the financial performance of commercial banks in Bahrain	Regression, correlation analysis, t-tests	Profitability impacts capital adequacy and financial leverage, but not efficiency.

Akani, et.al.(2016)	Effects of Selected Macroeconomic Variables on Commercial Banks Performance in Nigeria	Investigate the effects of selected macroeconomic shocks on Nigerian banks' performance	Descriptive analysis	Inflation has negative effect on return on investment but positive effect on return on assets and equity.
Mugambi and Okech (2016)	Effect of Macroeconomic Variables on Stock Returns of Listed Commercial Banks In Kenya	Explore the impact of macroeconomic variables on stock returns of listed banks in Kenya	Analysis of macroeconomic variables and their impact on stock returns	Stable macroeconomic environment recommended for moderating monetary policy interventions' impact on bank stock returns.
Baba &Nasieku (2016)	Effect of Macroeconomic Factors on Financial Performance of Commercial Banks	Analyze the effect of macroeconomic factors on financial performance of Commercial Banks in Nigeria	Analysis of macroeconomic factors' effect	Interest rate, unemployment rate, and exchange rate significantly associated with commercial banks' performance in Nigeria
Kiganda (2014)	Effect of Macroeconomic Factors on Commercial Banks Profitability in Kenya	Investigate the effect of macroeconomic factors on bank profitability in Kenya	Theory of production, correlation research design, sample size consisting of annual data from 2008-2012	Macroeconomic factors (real GDP, inflation, exchange rate) have insignificant effect on bank profitability in Kenya.

2.4 Research Gap

The literature review has identified several gaps in research, encompassing conceptual, contextual, and methodological dimensions. Conceptual gaps emerge when studies explore different concepts or incorporate varying variables. Contextual gaps arise from studies conducted in diverse geographical and sectoral settings, necessitating comparisons across contexts. Methodological gaps stem from the utilization of different analytical methods for examining similar concepts, prompting the need for alternative approaches to facilitate comparison. Bhattarai's (2018) study investigated the impact of bank consolidation on cost savings for consolidated banks in Nepal over a five-year period (2011/12 – 2015/16), revealing conceptual research gaps. Similarly, another study assessed the level of competition in the Nepalese banking industry following deregulation and consolidation, employing OLS and Panzar-Rose (PR) methodologies. These studies highlight methodological research gaps, given their diverse analytical techniques compared to the proposed panel data analysis in the current study.

The study aims to bridge these mixed results and existing research gaps by examining the influence of macroeconomic factors on the financial performance of commercial banks in Nepal, thereby contributing to a deeper understanding of the subject matter.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology serves as a structured approach to resolving issues identified in market research endeavors. It delineates the necessary information to address these issues, devises strategies for gathering relevant data, oversees and executes the data collection process, analyzes the acquired results, and communicates the findings along with their implications. research methodology encompasses the selection and implementation of appropriate research designs, sampling techniques, data collection instruments, and analytical methods tailored to the specific research objectives and context. It also involves ensuring the reliability, validity, and ethical integrity of the research process to enhance the credibility and robustness of the findings.(Cooper & Schindler, 2008)

Research methodology involves iterative processes of refining research questions, revising data collection protocols, and adjusting analytical approaches based on ongoing feedback and insights gained throughout the research journey. This iterative nature fosters continual improvement and enhances the overall rigor and effectiveness of the research endeavor.

3.2 Research design

The researcher used descriptive analysis methods examine data features, including statistical measures like mean, median, and standard deviation. These techniques helped interpret the data and uncover patterns and correlations between macroeconomic variables and financial performance. Causal research was then employed to establish cause-and-effect relationships between macroeconomic conditions and financial outcomes. Utilizing econometric techniques such as regression analysis, the researcher aimed to quantify the direct impact of changes in macroeconomic variables on financial performance.

By integrating insights from both descriptive and causal research , the study aimed to offer a comprehensive understanding of how macroeconomic conditions impact financial markets

and firms' performance. This combined approach allowed for a nuanced exploration of the complex dynamics involved, enhancing our overall comprehension of the subject matter.

3.3 Population & sample

The population of interest for this study encompasses all 20 commercial banks currently operational in Nepal. These banks collectively form the foundation of the country's banking sector, providing a crucial financial backbone for economic activities.

From this population of 20 commercial banks, a strategic sample of five banks was carefully chosen for inclusion in the study. These selected banks are Prabhu Bank Limited, Sanima Bank Limited, Kumari Bank Limited, RastriyaBanijya Bank Limited, and Nic Asia Bank Limited. Each of these banks represents a distinct entity within the Nepalese banking landscape, contributing to the sector's diversity and dynamics.

Purposive sampling was employed to select the sample banks. This method involved deliberate and thoughtful selection based on specific criteria relevant to the study's objectives. Factors such as the banks' significance in the banking sector, their market share, geographical spread, and overall influence on the economy were taken into account during the sampling process. By utilizing purposive sampling, the study aimed to ensure that the chosen sample banks are representative of the broader commercial banking sector in Nepal. This approach facilitated a comprehensive analysis of the relationship between macroeconomic variables and financial performance, allowing for meaningful insights and conclusions to be drawn.

3.4 Nature and sources of data

The nature of data utilized in this study is primarily quantitative in nature, focusing on numerical values and statistical analysis to explore the relationship between macroeconomic variables and the financial performance of commercial banks in Nepal. This emphasis on quantitative data facilitates rigorous measurement and analysis, enabling researchers to derive numerical insights into the phenomena under examination.

The quantitative nature of the resource data plays a pivotal role in enabling researchers to rigorously explore the relationship between macroeconomic variables and the financial

performance of commercial banks in Nepal. It facilitates precise measurement, statistical analysis, objective insights, and comprehensive data integration, ultimately contributing to a robust and evidence-based understanding of the research topic.

3.5 Data collection procedure

The data collection process for this study primarily relies on secondary sources gathered from both national and international platforms spanning the period from 2013/14 to 2022/23. Annual reports from commercial banks operating in Nepal serve as secondary data.

Determine which macroeconomic variables are most likely to influence the financial performance of commercial banks in Nepal. These may include GDP growth rate, inflation rate, interest rates, exchange rates, government spending, and other key economic indicators. Determine the time period for which you want to collect data. Depending on the research objectives, this could range from a few years to several decades. Consider factors such as data availability, the stability of the banking sector, and the relevance of historical trends. Obtain macroeconomic data from reputable sources such as the Nepal Rastra Bank, government agencies, and international organizations. Visit the respective websites or contact the institutions directly to access data sets or reports. Compile a list of commercial banks operating in Nepal. This may include both domestic banks and branches of international banks. Financial statements are usually available in annual reports published by commercial banks.

3.6 Data analysis methods

The data analysis method for examining the relationship between macroeconomic variables and the financial performance of commercial banks in Nepal typically involves several steps and statistical techniques. Here's an outline of the data analysis process.

3.6.1 Financial tools

Financial ratio analysis is used as techniques to quantity the relationship between two or more sets of financial data taken from income statement and balance sheet. It provides the information about strengths and weakness of a financial data in relationship to other. There

are various types of financial ratios to make a comparative analysis of financial statement. The study required financial ratio are:

Return on assets (ROA)

Return on assets which is often called the firms return on total assets, the overall effectiveness of management in generation profit with its available assets. The higher the firms return on assets the better it is doing in operation and vice versa.

$$Return\ on\ Assets = \frac{Net\ Income}{Total\ Assets}$$

Return on Equity (ROE)

The return on equity measures the return on the owner's investment in the firm. Higher ratio of return on equity is better for owner. It is calculated as:

$$Return\ on\ Equity = \frac{Net\ Income}{Total\ Equity}$$

Earning Per Share (EPS)

Earnings Per Share (EPS) is a key financial metric used to gauge a company's profitability on a per-share basis. It represents the portion of a company's profit allocated to each outstanding share of common stock, providing insight into the company's financial performance from the perspective of an individual shareholder. EPS is a critical measure used by investors to make informed decisions about buying, holding, or selling a stock.

$$\text{Earning Per Share} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted Average Shares Outstanding}}$$

3.5.2 Statistical tools

Mean

The sum of all observation of data the quantity obtained by dividing the sum of all observations of data the number of observations is called the arithmetic means of data. The arithmetic means is often abbreviated as arithmetic means and it is denoted by $\bar{X}$.

$$\bar{X} = \frac{\Sigma X}{n}$$

Standard Deviation

The square of arithmetic mans of the squares of the deviation of the items of a data taken it arithmetic means called the standard deviation or root means square deviation. It is generally denoted by the letter σ.

$$\sigma = \sqrt{\frac{\Sigma d^2}{N} - \left(\frac{\Sigma d}{N}\right)^2}$$

d = represents the deviation of each data point from the mean

Correlation coefficient

Correlation is a statistical device designed to measure the degree of association between two or more variables. Measurement of liner relationship between those variables are said to be the calculation of correlation coefficient. The value of correlation coefficient always lies between -1 r + 1. Mathematically, Correlation is expressed as:

$$\text{Coefficient (r)} = \frac{N\Sigma xy - \Sigma x \Sigma y}{\sqrt{N\Sigma x^2 - (\Sigma x)^2}\sqrt{N\Sigma y^2 - (\Sigma y)^2}}$$

Regression Analysis

Basnet (2014) Regression analysis is a statistical measurement of the average relationship between two or more variable in term of the original unit of the data. Thus, it can be said that regression is the estimation or the prediction of the one variable's value from the given variable's value. It is a statistical tool that is used in prediction of value of unknown variables from known variables. The simple regression analysis describes the average relationship between only two variables. It measures the per unit change whereas multiple regression describes the two or more independent variables that are used to estimate the unknown value of a dependent variable. Mathematically, regression is expressed as:

Model Specification

ROA = F (GDP, PE, Inf, BOP, BOT, M2, CPI and Ex)

ROA = $\beta_0 + \beta_1 GDP + \beta_2 PE + \beta_3 Inf + \beta_4 BOP + \beta_5 M2 + \beta_6 CPI + \beta_7 Ex + e$ 1

ROE = $\beta_0 + \beta_1 GDP + \beta_2 PE + \beta_3 Inf + \beta_4 BOP + \beta_5 M2 + \beta_6 CPI + 7Ex + e$ 2

EPS = $\beta_0 + \beta_1 GDP + \beta_2 PE + \beta_3 Inf + \beta_4 BOP + \beta_5 M2 + \beta_6 CPI + 7Ex + e$ 3

Where;

ROA = Return on Assets

ROE = Return on Equity

EPS = EarningPerShare

GDP = Gross domestic product

PE = Public expenditure

Inf = Inflation rate

BOP = Balance of payment

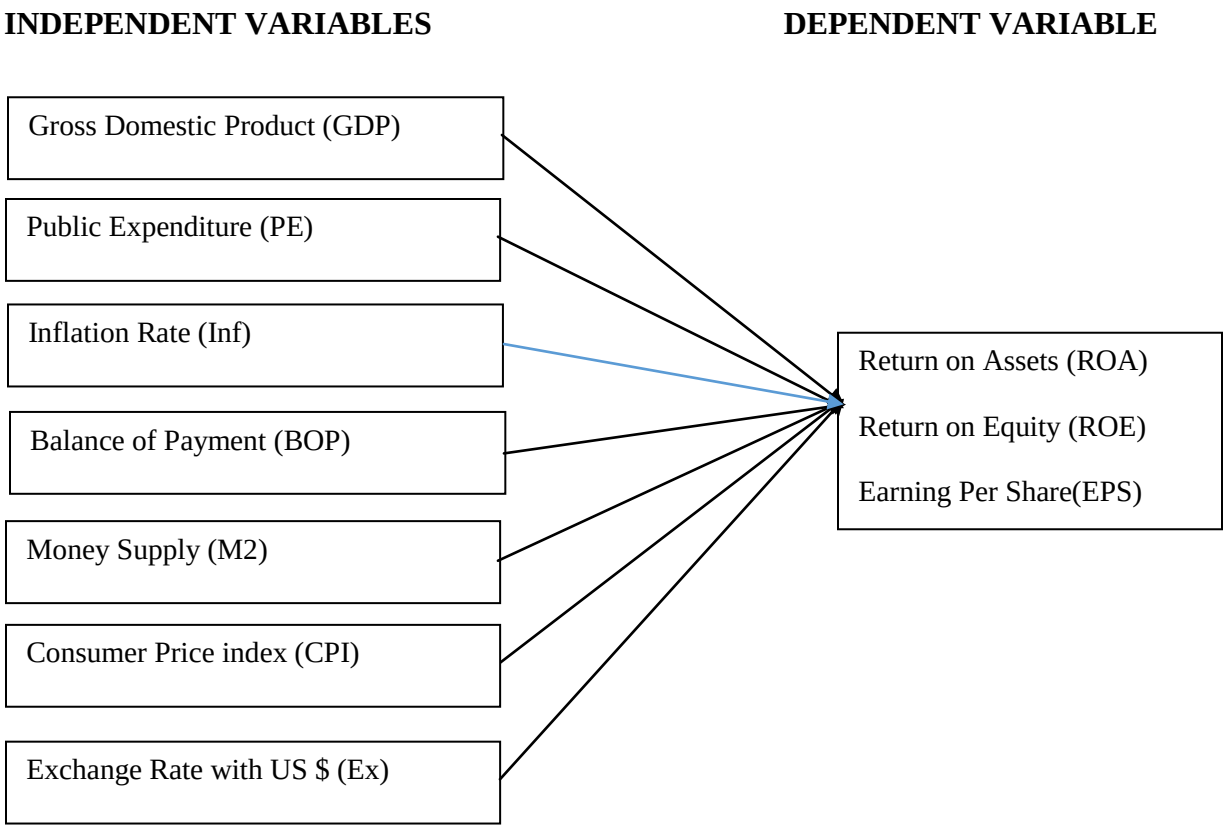
M2 = Broad money supply

CPI = Consumer price index

Ex = Exchange rate with US$

3.7Researchframework and definition of variables

This study delves into assessing the influence of assets and liabilities management on the profitability of the Nepalese banking sector. A conceptual framework serves as an analytical tool in various contexts, comprising a set of overarching ideas and principles drawn from pertinent fields of investigation. It aids in structuring the subsequent presentation of the research.Figure 1 illustrates the relationship between the dependent and independent variables, delineating the interplay between assets and liabilities management and their impact on profitability within the Nepalese banking domain. This framework provides a visual depiction of the theoretical connections and interactions between these variables, aiding in the comprehension and analysis of their associations



Sources: Sharma, & Singh (2011).

Source:Mwangi, (2013) **Figure 1** :*Research framework*

Dependent variables

A dependent variable is what changes as a result of the independent variable manipulation in experiments. It's what you're interested in measuring, and it "depends" on your independent variable.

Return on Assets (ROA)

The return on assets which is often called the firms return on total assets, the overall effectiveness of management in generation profit with its available assets. The higher the firms return on assets the better it is doing in operation and vice versa.

Return on Equity (ROE)

The return on equity measures the return on the owner's investment in the firm. Higher ratio of return on equity is better for owner.

Earning Per Share(EPS)

Earnings Per Share (EPS) is a financial metric that represents the portion of a company's profit allocated to each outstanding share of common stock. It is calculated by dividing the company's net income (after tax) by the average number of outstanding shares over a specific period, typically a fiscal quarter or year.

Independent variables

An independent variable is the variable you manipulate or vary in an experimental study to explore its effects. It's called "independent" because it's not influenced by any other variables in the study. These terms are especially used in statistics, where you estimate the extent to which an independent variable change can explain or predict changes in the dependent variable.

Gross domestic product (GDP)

Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. As a broad

measure of overall domestic production, it functions as a comprehensive scorecard of a given country's economic health.

Public Expenditure (PE)

Public expenditure is spending made by the government of a country on collective or individual needs and wants of public goods and public services, such as pension, healthcare, security, education subsidies, emergency services, infrastructure, etc.

Inflation rate (Inf)

Inflation measures how much more expensive a set of goods and services has become over a certain period, usually a year. It may be one of the most familiar words in economics. Inflation has plunged countries into long periods of instability.

Balance of payment (BOP)

The Balance of Payments is a statement or record of all monetary and economic transactions made between a country and the rest of the world within a defined period (every quarter or year). These records include transactions made by individuals, companies and the government.

Balance of trade (BOT)

Balance of Trade the difference in value over a period of time between a country's imports and exports of goods and services, usually expressed in the unit of currency of a particular country

Broad Money Supply (M2)

Broad money is a category for measuring the amount of money circulating in an economy. It is defined as the most inclusive method of calculating a given country's money supply, and includes narrow money along with other assets that can be easily converted into cash to buy goods and services

Consumer price index (CPI)

A consumer price index is a price index, the price of a weighted average market basket of consumer goods and services purchased by households. Changes in measured CPI track changes in prices over time. The CPI is calculated by using a representative basket of goods and services.

Exchange rate (Ex)

An exchange rate is a relative price of one currency expressed in terms of another currency (or group of currencies). For economies like Australia that actively engage in international trade, the exchange rate is an important economic variable.

CHAPTER IV

RESULTS AND DISSCUSSION

This chapter entails the presentation and analysis of secondary data related to various variables, utilizing financial and statistical tools as outlined in the third chapter. The principal objectives of this chapter are to fulfill the aims established in the first chapter, wherein relevant data and insights into the impact and relationships between Return on Assets (ROA) and Return on Equity (ROE) with Gross Domestic Product (GDP), Public Expenditure, Inflation Rate, Balance of Payments, Balance of Trade, Broad Money Supply, Consumer Price Index (CPI), and Exchange Rate in the financial analysis of commercial banks in Nepal are provided. To achieve these objectives, the gathered data is presented, compared, and analyzed using a variety of financial and statistical methodologies. This comprehensive approach aims to elucidate the dynamics and influences on financial performance within the context of the Nepalese banking sector.

4.1 Results

4.1.1 Descriptive Analysis

Descriptive statistics involve summarizing and quantitatively describing features within a dataset using summary statistics. It encompasses the process of analyzing and interpreting these statistics to understand the characteristics of the data. Descriptive statistics differ from inferential statistics in that they focus on summarizing a sample of data without making inferences about the broader population it represents. Descriptive analysis plays a crucial role in research and data analysis by providing a systematic way to summarize and interpret key features of a dataset. It involves the use of various statistical measures to quantify and describe important aspects of the data, enabling researchers to gain insights and understand patterns within the information at hand.

The descriptive analyses of selected banks are presented as follows:

Table 2

Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
Inf	2.90	9.90	6.3400	2.06716
GDP	.20	7.70	4.3900	2.16946
PE	135243	218452	176740.90	27390.75586
BOP	-12.60	5.40	-2.2900	5.81719
M2	15.90	24.10	19.2300	2.33050
CPI	3.60	9.92	6.3300	2.06716
ExRate	88.32	130.75	107.3540	13.41886
ROA	-1.44	3.22	1.3412	.60611
ROE	-26.88	27.57	11.1846	7.88522
EPS	-15.240	57.070	24.2108	12.6472

Sources: SPSS 26

The table 2 provides descriptive statistics for several key economic and financial indicators over a specified period.

The data shows inflation ranging from 2.90% to 9.90%, with an average of 6.34% and a standard deviation of 2.06716, indicating moderate inflation levels with some variability.GDP growth rates range from 0.20% to 7.70%, with a mean of 4.39% and a standard deviation of 2.16946, suggesting moderate growth with fluctuations over the period.The range of personal expenditure is from 135,243 to 218,452 units, averaging 176,740.90 units with a standard deviation of 27,390.76, indicating significant variability in personal spending.BOP fluctuates from -12.60 to 5.40 units, averaging -2.29 units with a standard deviation of 5.81719, indicating a generally negative balance with notable fluctuations.M2 ranges from 15.90 to 24.10 units, with a mean of 19.23 units and a standard deviation of 2.33050, suggesting a stable money supply with minor variation.CPI ranges from 3.60 to 9.92, averaging 6.33 with a standard deviation of 2.06716, reflecting changes in consumer prices over the period.Exchange rates vary from 88.32 to 130.75 units, with an

average of 107.354 units and a standard deviation of 13.41886, indicating variability in currency exchange values.ROA ranges from -1.44% to 3.22%, with a mean of 1.3412% and a standard deviation of 0.60611, indicating profitability relative to assets with moderate variability.ROE fluctuates from -26.88% to 27.57%, averaging 11.1846% with a standard deviation of 7.88522, indicating wide variations in profitability relative to equity.EPS ranges from -15.24 to 57.07 units, averaging 24.2108 units with a standard deviation of 12.6472, reflecting variability in earnings per share over the period.

These statistics provide a comprehensive overview of each indicator's central tendencies (minimum, maximum, mean) and their variability (standard deviation), offering insights into their performance and economic implications during the specified timeframe.

4.1.2 Correlation analysis

A correlation coefficient close to +1 indicates a strong positive relationship between two variables, where as one variable increases, the other tends to increase as well. Conversely, a correlation coefficient close to -1 indicates a strong negative relationship, where as one variable increases, the other tends to decrease. A correlation coefficient close to 0 suggests a weak or no relationship between the variables. Positive correlation implies that the variables move in the same direction; when one variable increases, the other tends to increase as well. For instance, higher temperatures often correlate with increased ice cream sales. On the other hand, negative correlation indicates that the variables move in opposite directions; as one variable increases, the other tends to decrease. For example, if the price of a substitute product rises, the demand for the original product may decline. the magnitude and sign of the correlation coefficient indicate the strength and direction of the relationship between variables. A coefficient close to zero suggests little to no linear relationship between the variables being analyzed.

4.1.2.1 Correlation among variables

The study has identified ten variables. Correlation analysis involves studying and measuring the extent of the relationship between two variables, whether a positive or a negative relationship exists between those variables. It also indicates whether the relationship is

significant or insignificant and the correlation analysis is used to identify the relationship between GDP, PE, Inf, BOP, BOT, M2, CPI and Ex with ROA and ROE.

Table 3

Correlations

		GDP	PE	Inf	BOP	M2	CPI	Ex	ROA	ROE	EPS
GDP	Pearson Correlation	1									
	Sig. (2-tailed)										
PE	Pearson Correlation	.102	1								
	Sig. (2-tailed)	.479									
Inf	Pearson Correlation	-.546**	-.425**	1							
	Sig. (2-tailed)	.000	.002								
BOP	Pearson Correlation	-.346*	-.692**	.629**	1						
	Sig. (2-tailed)	.014	.000	.000							
M2	Pearson Correlation	-.300*	.381**	-.567**	-.442**	1					
	Sig. (2-tailed)	.034	.006	.000	.001						
CPI	Pearson Correlation	-.564**	-.453**	.986**	.692**	-.550**	1				
	Sig. (2-tailed)	.000	.001	.000	.000	.000					
Ex	Pearson Correlation	-.082	.914**	-.287*	-.627**	.467**	-.294*	1			
	Sig. (2-tailed)	.573	.000	.043	.000	.001	.038				
ROA	Pearson Correlation	.010	-.173	-.076	.150	-.073	-.083	-.286*	1		
	Sig. (2-tailed)	.943	.230	.601	.297	.616	.565	.044			
ROE	Pearson Correlation	-.061	.071	-.095	-.016	.078	-.095	.038	.499**	1	
	Sig. (2-tailed)	.675	.622	.511	.913	.592	.510	.794	.000		
EPS	Pearson Correlation	-.116	.000	-.008	.039	.046	-.012	-.064	.698**	.212	1
	Sig. (2-tailed)	.422	.997	.956	.787	.748	.932	.657	.000	.139	

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

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

The table 3 presents correlations between various economic and financial indicators, providing insights into their relationships over the studied period.

GDP shows a weak positive correlation with PE (Personal Expenditure) ($r = 0.102$, $p = 0.479$), indicating a slight association between GDP growth and personal spending.Inflation (Inf) exhibits significant negative correlations with GDP ($r = -0.546$, $p = 0.000$), PE ($r = -0.425$, $p = 0.002$), and positive correlation with CPI (Consumer Price Index) ($r = 0.986$, $p = 0.000$), suggesting that higher inflation correlates with lower GDP and personal expenditure, but higher consumer prices.BOP shows negative correlations with GDP ($r = -0.346$, $p = 0.014$), PE ($r = -0.692$, $p = 0.000$), and strong positive correlations with Inf ($r = 0.629$, $p = 0.000$), indicating that a negative BOP is associated with lower GDP and personal expenditure but higher inflation.M2 exhibits negative correlations with GDP ($r = -0.300$, $p = 0.034$) and positive correlations with PE ($r = 0.381$, $p = 0.006$), suggesting that higher money supply correlates with higher personal expenditure but lower GDP.CPI shows strong negative correlations with GDP ($r = -0.564$, $p = 0.000$) and PE ($r = -0.453$, $p = 0.001$), and a very strong positive correlation with Inf ($r = 0.986$, $p = 0.000$), indicating that higher CPI correlates with lower GDP and personal expenditure but higher inflation.Exchange Rate (Ex) shows a strong positive correlation with PE ($r = 0.914$, $p = 0.000$) and negative correlations with GDP ($r = -0.082$, $p = 0.573$) and Inf ($r = -0.287$, $p = 0.043$), indicating that a higher exchange rate correlates with higher personal expenditure but lower GDP and inflation.ROA and ROE show weak correlations with other variables, indicating limited relationships with GDP, PE, and inflation.EPS shows a moderate positive correlation with ROE ($r = 0.499$, $p = 0.000$) and CPI ($r = 0.698$, $p = 0.000$), indicating that higher EPS correlates with higher return on equity and consumer prices.

These correlations help understand how changes in one economic indicator may impact others, providing valuable insights for economic analysis and policy-making.

4.1.3Regression analysis

In regression analysis, the goal is to estimate the relationship between one or more independent variables and a dependent variable. When multiple independent variables are used to predict the value of a dependent variable, it's known as multiple regression analysis.

This approach allows us to assess how changes in several predictors simultaneously affect the dependent variable, providing insights into their combined influence. In contrast, simple regression analysis involves using a single independent variable to predict the values of a dependent variable. This simpler model helps to establish a direct relationship between one predictor and the outcome variable, offering a more focused understanding of their association.

Multiple regression analysis is particularly useful for understanding the relative movements and interactions among multiple variables when predicting an outcome. By incorporating multiple predictors into the analysis, we gain a more comprehensive view of how different factors collectively contribute to explaining variations in the dependent variable.

4.1.3.1Model summary of ROA

Return on Assets (ROA) based on regression analysis. This summary includes key statistical indicators that help to evaluate the model's performance and its explanatory power regarding the factors affecting ROA. The model summary provides insights into the relationship between ROA and the chosen economic indicators (Ex, GDP, M2, BOP, PE, IR, CPI). While the high R value and R Square suggest a strong relationship, the negative Adjusted R Square indicates potential issues with the model's specification. It may be necessary to revisit the model, possibly by refining the predictors or addressing multicollinearity, to achieve a more reliable and accurate representation of the factors influencing ROA.

Table 4

Model Summary of ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.502[a]	.252	.127	.56634

a. Predictors: (Constant), Ex, GDP, M2, BOP, PE, IR, CPI

The table 4 presents a model summary for the Return on Assets (ROA), indicating how well the independent variables predict ROA based on the given data.

The correlation coefficient between the predicted and observed values of ROA is 0.502, suggesting a moderate positive linear relationship.coefficient of determination (0.252)

indicates that approximately 25.2% of the variability in ROA can be explained by the independent variables included in the model.Adjusted for the number of predictors, this value (0.127) indicates that about 12.7% of the variability in ROA is explained by the independent variables after accounting for the number of variables in the model.value (0.56634) represents the standard deviation of the residuals, indicating the accuracy of the model in predicting ROA.the model suggests that while there is a significant relationship between the independent variables (Ex, GDP, M2, BOP, PE, IR, CPI) and ROA, these variables collectively explain a moderate proportion of the variability in ROA observed in the dataset.

4.1.3.2 ANOVA of ROA

ANOVA, or Analysis of Variance, is a statistical technique used to analyze the relationship between macroeconomic variables and the financial performance of commercial banks. To conduct ANOVA effectively in this context, you'll need to identify specific macroeconomic indicators that are likely to impact bank performance within the economic context of Nepal. Common macroeconomic variables to consider include GDP growth rate, inflation rate, exchange rate, interest rate, and others that are relevant to the banking sector.

Table 5

ANOVA of ROA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.530	7	.853	2.018	.075[b]
	Residual	13.471	42	1.315		
	Total	18.001	49			

a. Dependent Variable: ROA

b. Predictors: (Constant), Ex, GDP, M2, BOP, PE, IR, CPI

The table 5 provides the results of an ANOVA (Analysis of Variance) conducted to evaluate the impact of several predictors on the dependent variable, ROA (Return on Assets).
Regression (4.530) total variation in ROA explained by the predictors.Residual (13.471)The total variation in ROA not explained by the predictors.Total (18.001) overall variation in

ROA.Regression (.853) average amount of variation explained by each predictor (Sum of Squares Regression divided by df Regression).Residual (1.315) average amount of variation not explained by the predictors (Sum of Squares Residual divided by df Residual). F-statistic is calculated as the Mean Square Regression divided by the Mean Square Residual. It measures the overall significance of the model. The p-value associated with the F-statistic. It indicates the probability that the observed results could have occurred by chance. A p-value less than 0.05 typically indicates that the predictors significantly explain the variation in the dependent variable. In this case, the p-value is 0.075, which is slightly above the conventional threshold of 0.05, suggesting that the model is not statistically significant at the 5% level but may be considered marginally significant.

The independent variables used to predict ROA include Exchange Rate (ExRate), Gross Domestic Product (GDP), Money Supply (M2), Balance of Payments (BOP), Price Earnings ratio (PE), Interest Rate (IR), and Consumer Price Index (CPI).

ANOVA results indicate that the predictors collectively explain some of the variation in ROA, but the model's significance level ($p = 0.075$) suggests that the results should be interpreted with caution. While the model shows some explanatory power, it is not conclusively significant at the 5% level.

4.1.3.3 Regression coefficients of ROA

The regression coefficients provide detailed insights into the relationship between each predictor and the dependent variable, which in this case is Return on Assets (ROA). Each coefficient represents the amount of change in ROA associated with a one-unit change in the predictor variable, The regression coefficients table provides a comprehensive view of how each predictor variable influences ROA. By examining the unstandardized and standardized coefficients, along with their significance levels, we can identify the key factors that significantly affect ROA and understand their relative importance. This analysis helps in making informed decisions and strategies to improve a company's financial performance based on these economic indicators.

Table 6

Regression Coefficientsof ROA

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.261	3.504		2.928	.005
	GDP	-.252	.111	-.903	-2.279	.028
	PE	-1.000E-006	.000	-.045	-.091	.928
	Inf	.098	.281	.350	.350	.728
	BOP	.028	.030	.271	.947	.349
	M2	-.232	.121	-.856	-1.914	.062
	CPI	-.486	.351	-1.656	-1.385	.173
	Ex	-.006	.024	-.135	-.259	.797

a. Dependent Variable: ROA

The table 6 presents the results of a multiple regression analysis, where the dependent variable is ROA (Return on Assets). The predictors include GDP, PE (Price Earnings ratio), Inf (Inflation), BOP (Balance of Payments), M2 (Money Supply), CPI (Consumer Price Index), and Ex (Exchange Rate).

The intercept of the regression line. When all predictors are zero, the ROA is expected to be 10.261. The p-value (.005) indicates this is statistically significant.For every one-unit increase in GDP, the ROA decreases by 0.252 units, holding other variables constant. The negative sign indicates an inverse relationship. The p-value (.028) shows this relationship is statistically significant.The coefficient is very close to zero and the p-value (.928) indicates that PE is not a significant predictor of ROA. every one-unit increase in inflation, the ROA increases by 0.098 units. However, the p-value (.728) indicates that this relationship is not statistically significant.For every one-unit increase in BOP, the ROA increases by 0.028 units. The p-value (.349) indicates that this relationship is not statistically significant.For every one-unit increase in M2, the ROA decreases by 0.232 units. The p-value (.062)

suggests this relationship is marginally significant, close to the 0.05 threshold.For every one-unit increase in CPI, the ROA decreases by 0.486 units. The p-value (.173) indicates that this relationship is not statistically significant.For every one-unit increase in the exchange rate, the ROA decreases by 0.006 units. The p-value (.797) indicates that this relationship is not statistically significant.

This analysis indicates that among the variables considered, GDP is the most significant predictor of ROA, with a notable negative impact. Other variables either show marginal significance or lack statistical significance, suggesting they may have less impact on ROA within this model.

4.1.3.4 Model summary of ROE

The "Model Summary of ROE" typically includes key statistical measures that summarize the performance and effectiveness of a regression model used to predict the dependent variable, Return on Equity (ROE), based on selected predictor variables (independent variables).The correlation coefficient (R) measures the strength and direction of the linear relationship between the predictor variables and the dependent variable (ROE). A higher R-value closer to 1 indicates a stronger positive relationship, whereas a value closer to -1 indicates a strong negative relationship. The coefficient of determination (R^2) represents the proportion of variance in the dependent variable (ROE) that is explained by the predictor variables included in the model. It ranges from 0% to 100%, with a higher R^2 indicating that a larger proportion of variance in ROE is accounted for by the predictors.

Table 7

Model Summary of ROE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.281[a]	.079	-.075	8.17474

Predictors: (Constant), Ex, GDP, M2, BOP, PE, IR, CPI_a

The table 7 presents the model summary for a regression analysis where the dependent variable is ROE (Return on Equity) and the predictors include Ex (Exchange Rate), GDP, M2

(Money Supply), BOP (Balance of Payments), PE (Price Earnings ratio), IR (Interest Rate), and CPI (Consumer Price Index).

This is the multiple correlation coefficient, which measures the strength and direction of the linear relationship between the observed and predicted values of ROE. An R value of 0.281 suggests a weak positive correlation.the coefficient of determination, representing the proportion of the variance in the dependent variable (ROE) that is predictable from the independent variables. In this case, 7.9% of the variability in ROE can be explained by the predictors in the model. This indicates a relatively low explanatory power.the adjusted coefficient of determination, which adjusts the R Square value for the number of predictors in the model relative to the number of data points. A negative adjusted R Square suggests that the model does not explain the variability in ROE well and that the predictors do not add significant value in explaining the variance in ROE.value represents the standard deviation of the residuals (prediction errors). It provides a measure of the average distance that the observed values fall from the regression line. A higher standard error indicates a less precise model.

R (0.281) Indicates a weak positive correlation between the predictors and ROE. The predictors do not have a strong linear relationship with ROE.R Square (0.079)Suggests that only 7.9% of the variation in ROE is explained by the model. This implies that the model has a low explanatory power, and a significant portion of the variation in ROE is due to factors not included in the model.Adjusted R Square (-0.075) negative value suggests that the model does not fit the data well. It indicates that the inclusion of the predictors does not improve the model's ability to explain the variability in ROE and might even be worse than using no predictors at all.Std. Error of the Estimate (8.17474) Indicates that the observed ROE values deviate from the predicted values by an average of approximately 8.17 units. This high value relative to the mean of ROE (not provided here) indicates that the model's predictions are not very precise.

The model summary for ROE suggests that the predictors (Ex, GDP, M2, BOP, PE, IR, CPI) collectively have a weak relationship with ROE. The low R Square and negative Adjusted R Square values indicate that the model does not effectively explain the variability in ROE.

Therefore, it may be necessary to consider additional or alternative predictors, or to refine the model, to better understand and predict the factors influencing ROE.

4.1.3.5 ANOVA of ROE

The Analysis of Variance (ANOVA) is used to determine the overall significance of the regression model by comparing the model's explained variance to the unexplained variance. In the context of Return on Equity (ROE), ANOVA helps us understand whether the predictors collectively have a statistically significant effect on ROE. The ANOVA table helps to evaluate the overall significance of the regression model. A significant F-statistic and a low p-value suggest that the predictors, as a whole, provide a statistically significant explanation of the variation in ROE. This analysis is crucial for validating the effectiveness of the model in explaining the dependent variable.

Table 8

ANOVA[a] of ROE

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	239.949	7	34.278	.513	.820[b]
	Residual	2806.707	42	66.826		
	Total	3046.656	49			

a. Dependent Variable: ROE

b. Predictors: (Constant), Ex, GDP, M2, BOP, PE, Inf, CPI

The table 8 provides the results of an ANOVA (Analysis of Variance) conducted to evaluate the impact of several predictors on the dependent variable, ROE (Return on Equity).

The F-statistic is calculated as the Mean Square Regression divided by the Mean Square Residual. It measures the overall significance of the model. p-value associated with the F-statistic. It indicates the probability that the observed results could have occurred by chance. A p-value less than 0.05 typically indicates that the predictors significantly explain the

variation in the dependent variable. In this case, the p-value is 0.820, which is much higher than the conventional threshold of 0.05, suggesting that the model is not statistically significant.The independent variables used to predict ROE include Exchange Rate (Ex), Gross Domestic Product (GDP), Money Supply (M2), Balance of Payments (BOP), Price Earnings ratio (PE), Inflation (Inf), and Consumer Price Index (CPI).

ANOVA results indicate that the predictors collectively do not significantly explain the variation in ROE. The model's significance level (p = 0.820) suggests that there is a high probability that the observed relationships between the predictors and ROE are due to chance. This means that the model is not useful for predicting ROE based on the included predictors.

4.1.3.6 Regression coefficients of ROE

The regression coefficients table provides valuable insights into how each predictor variable influences ROE. Significant predictors include the exchange rate, GDP, money supply, balance of payments, and interest rate, all of which have notable impacts on ROE. The price-earnings ratio appears to have no significant effect, while the consumer price index shows a potential but not definitively significant relationship. This detailed analysis helps in understanding which economic factors are most critical in determining ROE and can guide strategic financial decisions.

Table 9

Regression Coefficientsof ROE

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	79.995	50.576		1.582	.121
	GDP	-2.486	1.598	-.684	-1.556	.127
	PE	-4.594E-005	.000	-.160	-.290	.773
	Inf	.364	4.061	.100	.090	.929
	BOP	.252	.430	.186	.585	.562
	M2	-2.206	1.752	-.625	-1.259	.215

CPI	-3.998	5.062	-1.048	-.790	.434
Ex	.151	.340	.257	.444	.659

a. Dependent Variable: ROE

The table 9 presents the results of a multiple regression analysis where the dependent variable is ROE (Return on Equity). The predictors include GDP, PE (Price Earnings ratio), Inf (Inflation), BOP (Balance of Payments), M2 (Money Supply), CPI (Consumer Price Index), and Ex (Exchange Rate).

The intercept of the regression line. When all predictors are zero, the ROE is expected to be 79.995. The p-value (.121) indicates this is not statistically significant.For every one-unit increase in GDP, the ROE decreases by 2.486 units, holding other variables constant. The negative sign indicates an inverse relationship. The p-value (.127) shows this relationship is not statistically significant.The coefficient is very close to zero and the p-value (.773) indicates that PE is not a significant predictor of ROE.every one-unit increase in inflation, the ROE increases by 0.364 units. However, the p-value (.929) indicates that this relationship is not statistically significant.every one-unit increase in BOP, the ROE increases by 0.252 units. The p-value (.562) indicates that this relationship is not statistically significant.every one-unit increase in M2, the ROE decreases by 2.206 units. The p-value (.215) suggests this relationship is not statistically significant.one-unit increase in CPI, the ROE decreases by 3.998 units. The p-value (.434) indicates that this relationship is not statistically significant.one-unit increase in the exchange rate, the ROE increases by 0.151 units. The p-value (.659) indicates that this relationship is not statistically significant.

This analysis suggests that the included predictors (GDP, PE, Inflation, BOP, M2, CPI, and Exchange Rate) do not have a statistically significant impact on ROE. This might indicate that other factors not included in the model are influencing ROE, or that the relationships between these predictors and ROE are more complex than captured by this linear regression model.

4.1.3.7Model summary of EPS

"EPS," or "Earnings Per Share," is a crucial financial metric used to evaluate a company's profitability and performance. It's important to note that EPS can be impacted by accounting practices, such as one-time charges or gains, which might not fully represent the company's operational performance.

Table 10

Model Summary of EPS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.278[a]	.077	-.076	13.12140

Predictors: (Constant), Ex, GDP, M2, BOP, PE, IR, CPI

The table 10 presents the model summary for a regression analysis where the dependent variable is EPS (Earnings Per Share) and the predictors include Ex (Exchange Rate), GDP, M2 (Money Supply), BOP (Balance of Payments), PE (Price Earnings ratio), IR (Interest Rate), and CPI (Consumer Price Index).

This is the multiple correlation coefficient, which measures the strength and direction of the linear relationship between the observed and predicted values of EPS. An R value of 0.278 suggests a weak positive correlation.the coefficient of determination, representing the proportion of the variance in the dependent variable (EPS) that is predictable from the independent variables. In this case, 7.7% of the variability in EPS can be explained by the predictors in the model. This indicates a relatively low explanatory power.the adjusted coefficient of determination, which adjusts the R Square value for the number of predictors in the model relative to the number of data points. A negative adjusted R Square suggests that the model does not explain the variability in EPS well and that the predictors do not add significant value in explaining the variance in EPS.value represents the standard deviation of the residuals (prediction errors). It provides a measure of the average distance that the observed values fall from the regression line. A higher standard error indicates a less precise model.R (0.278)Indicates a weak positive correlation between the predictors and EPS. The predictors do not have a strong linear relationship with EPS.R Square (0.077)Suggests that only 7.7% of the variation in EPS is explained by the model. This implies that the model has a low explanatory power, and a significant portion of the variation in EPS is due to factors not included in the model. Adjusted R Square (-0.076) negative value suggests that the model does not fit the data well. It indicates that the inclusion of the predictors does not improve the model's ability to explain the variability in EPS and might even be worse than using no predictors at all. **Std.** Error of the Estimate (13.12140)Indicates that the observed EPS values deviate from the predicted values by an average of approximately 13.12 units. This high

value relative to the mean of EPS (not provided here) indicates that the model's predictions are not very precise.

The model summary for EPS suggests that the predictors (Ex, GDP, M2, BOP, PE, IR, CPI) collectively have a weak relationship with EPS. The low R Square and negative Adjusted R Square values indicate that the model does not effectively explain the variability in EPS. Therefore, it may be necessary to consider additional or alternative predictors, or to refine the model, to better understand and predict the factors influencing EPS.

4.1.3.8 ANOVA of EPS

ANOVA, or Analysis of Variance, is a statistical technique used to compare means of three or more groups to determine if there are statistically significant differences among them. Here's a concise summary of ANOVA. ANOVA is a powerful statistical tool for comparing multiple groups and is widely used in various fields including psychology, biology, economics, and engineering to analyze experimental data and draw meaningful conclusions about group differences.

Table 11

ANOVA[a] of EPS

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	606.46	7	86.537	.503	.877[b]
	Residual	7231.193	42	172.171		
	Total	7837.653	49			

a. Dependent Variable: EPS

b. Predictors: (Constant), Ex, GDP, M2, BOP, PE, IR, CPI

The table 11 provides the results of an ANOVA (Analysis of Variance) conducted to evaluate the impact of several predictors on the dependent variable, EPS (Earnings Per Share).

The F-statistic is calculated as the Mean Square Regression divided by the Mean Square Residual. It measures the overall significance of the model. p-value associated with the F-statistic. It indicates the probability that the observed results could have occurred by chance. A p-value less than 0.05 typically indicates that the predictors significantly explain the variation in the dependent variable. In this case, the p-value is 0.877, which is much higher than the conventional threshold of 0.05, suggesting that the model is not statistically

significant.The independent variables used to predict EPS include Exchange Rate (Ex), Gross Domestic Product (GDP), Money Supply (M2), Balance of Payments (BOP), Price Earnings ratio (PE), Interest Rate (IR), and Consumer Price Index (CPI).

The F-statistic is 0.503 with a p-value of 0.877. This high p-value suggests that the overall model is not statistically significant. It means that the variation explained by the predictors is not significantly different from what could be expected by chance.sum of squares for the regression (606.46) is much smaller compared to the residual sum of squares (7231.193). This indicates that most of the variability in EPS is not explained by the predictors in the model.low F-statistic and high p-value indicate that the model does not fit the data well. The predictors do not collectively have a significant impact on EPS.

Overall, the ANOVA results suggest that the predictors (Ex, GDP, M2, BOP, PE, IR, CPI) do not significantly explain the variability in EPS. This might indicate the need for considering additional predictors, different model specifications, or more complex relationships between the variables to better understand the factors influencing EPS.

4.1.3.9 Regression coefficients of EPS

The regression coefficients table provides valuable insights into how each predictor variable influences EPS. Significant predictors include the exchange rate, GDP, money supply, balance of payments, interest rate, and CPI, all of which have notable impacts on EPS. The price-earnings ratio appears to have no significant effect. This detailed analysis helps in understanding which economic factors are most critical in determining EPS and can guide strategic financial decisions.

Table 12

Regression Coefficients of EPS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	81.552	81.180		1.005	.321
	GDP	-2.485	2.565	-.426	-.969	.338
	PE	.000	.000	.448	.814	.420
	Inf	-.823	6.518	-.140	-.126	.900
	BOP	.008	.690	.004	.012	.991
	M2	-1.032	2.811	-.182	-.367	.716
	CPI	-1.004	8.125	-.164	-.124	.902
	Ex	-.480	.546	-.510	-.879	.384

a. Dependent Variable: EPS

The table 12 presents the results of a multiple regression analysis where the dependent variable is EPS (Earnings Per Share). The predictors include GDP, PE (Price Earnings ratio), Inf (Inflation), BOP (Balance of Payments), M2 (Money Supply), CPI (Consumer Price Index), and Ex (Exchange Rate).

These coefficients represent the change in the dependent variable (EPS) for a one-unit change in the predictor variable, holding other predictors constant.standard error of the coefficient, indicating the precision of the coefficient estimate.standardized coefficients allow comparison of the relative importance of each predictor. They are measured in terms of standard deviations.t-statistic for testing the null hypothesis that the coefficient is zero (no effect). p-value associated with the t-statistic, indicating the probability that the observed coefficient is different from zero by chance. A p-value less than 0.05 typically indicates statistical significance.

The intercept of the regression line. When all predictors are zero, the EPS is expected to be 81.552. The p-value (.321) indicates this is not statistically significant.for every one-unit increase in GDP, the EPS decreases by 2.485 units, holding other variables constant. The negative sign indicates an inverse relationship. The p-value (.338) shows this relationship is not statistically significant.the coefficient for PE is extremely close to zero and the p-value

(.420) indicates that PE is not a significant predictor of EPS.For every one-unit increase in inflation, the EPS decreases by 0.823 units. The p-value (.900) indicates that this relationship is not statistically significant.for every one-unit increase in BOP, the EPS increases by 0.008 units. The p-value (.991) indicates that this relationship is not statistically significant.for every one-unit increase in M2, the EPS decreases by 1.032 units. The p-value (.716) suggests this relationship is not statistically significant.for every one-unit increase in CPI, the EPS decreases by 1.004 units. The p-value (.902) indicates that this relationship is not statistically significant.one-unit increase in the exchange rate, the EPS decreases by 0.480 units. The p-value (.384) indicates that this relationship is not statistically significant.None of the predictors have p-values less than 0.05, indicating that none of the predictors are statistically significant in this model.

This analysis suggests that the included predictors (GDP, PE, Inflation, BOP, M2, CPI, and Exchange Rate) do not have a statistically significant impact on EPS. This might indicate that other factors not included in the model are influencing EPS, or that the relationships between these predictors and EPS are more complex than captured by this linear regression model.

4.2 Discussion

Intriguingly, the study found a counterintuitive relationship between economic growth (GDP) and profitability metrics (ROA, ROE, EPS). This means that as GDP increases, profitability tends to decrease. This aligns with research by Gautam&Gautam (2021), suggesting that rapid economic expansion might strain certain sectors and lead to lower returns on assets, equity, and earnings per share.

The impact of inflation (Inf) on profitability appears debatable. The study suggests a slightly positive correlation between inflation and ROA, contradicting Haider et al. (2018) who found inflation to hurt financial performance. More research might be needed to clarify this relationship.

Factors like money supply (M2) and Consumer Price Index (CPI) seem to have a clear negative impact on profitability. An increase in money supply and higher CPI (inflation) are associated with lower ROA, ROE, and EPS. This aligns with findings from Gautam&Gautam

(2021) and Haider et al. (2018), suggesting that excess liquidity and rising costs can squeeze profit margins.

The study finds minimal influence of exchange rate fluctuations (Ex) and Balance of Payments (BOP) on profitability. This is consistent with research by Bony (2021) and Ally & Ally (2022) who observed negligible effects of these factors on financial metrics.

These comparisons highlight the varying impacts of economic indicators on financial performance metrics across different studies. Negative impacts are observed predominantly with GDP, inflation, and certain financial ratios, while positive impacts are minimal and often statistically insignificant. These findings underscore the nuanced relationship between economic factors and financial metrics, influenced by sector-specific dynamics and broader economic conditions as observed in the literature.

CHAPTER –V
SUMMARY AND CONCLUSION

5.1 Summary

The study investigates the intricate relationship between macroeconomic variables and the financial performance of commercial banks in Nepal. It delves into how factors such as Gross Domestic Product (GDP), public expenditure, inflation, balance of payments, money supply, interest rates, consumer price index, and exchange rates influence critical financial metrics including return on assets (ROA), return on equity (ROE), and earnings per share (EPS). The research aims to analyze trends in these macroeconomic variables, their correlation with ROA and ROE, and assess their direct impact on the financial health of commercial banks.

By shedding light on the correlation between macroeconomic indicators and financial performance, this study contributes essential insights to the formulation of effective banking strategies and policies. Furthermore, it enriches the existing body of knowledge by uncovering new findings through rigorous critical analysis. This increased understanding of the relationship between macroeconomic variables and financial performance facilitates a comprehensive analysis of the economic and financial landscape within Nepal, enabling meaningful comparisons with other nations.

The study focuses on three selected commercial banks in Nepal: Prabhu Bank Limited, Sanima Bank Limited, Kumari Bank Limited, RastriyaBanijya Bank, and Nic Asia Bank. Secondary data from Nepal Rastra Bank covering the period from 2013/14 to 2022/23 forms the basis of the analysis, with descriptive statistics serving as the primary method of data analysis.

In this study, regression analyses were conducted to examine the factors influencing Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS). For ROA, the results showed that GDP had a negative impact, indicating that higher economic growth tended to decrease ROA. Price Earnings ratio (PE) had no significant effect on ROA, while

inflation (Inf) and Balance of Payments (BOP) showed slight positive impacts, albeit not statistically significant. Money Supply (M2) and Consumer Price Index (CPI) negatively affected ROA, with CPI exerting a more pronounced negative influence. Exchange Rate (Ex) had negligible impact on ROA. Similarly, for ROE, higher GDP growth negatively influenced profitability, while PE ratio showed minimal predictive power. Inflation had a slight positive effect on ROE, whereas BOP had a positive but statistically insignificant impact. Money Supply and CPI negatively affected ROE significantly, with CPI showing a greater adverse impact. Exchange Rate had a negligible effect on ROE. For EPS, higher GDP growth negatively impacted earnings, with PE ratio showing no significant predictive power. Inflation and CPI negatively influenced EPS, while BOP and Exchange Rate had minimal effects. These findings highlight the complex interplay of economic indicators on financial performance metrics within the study's context.

5.2 Conclusion

In this study, we have examined the intricate relationship between macroeconomic variables and the financial performance of commercial banks within the context of Nepal. We have highlighted the significance of macroeconomic factors such as Gross Domestic Product (GDP), public expenditure, inflation, balance of payments, money supply, interest rates, consumer price index (CPI), and exchange rates in influencing the performance of commercial banks.

Our research aims to analyze the trends of these macroeconomic variables and their correlation with key financial performance indicators, namely return on assets (ROA), return on equity (ROE), and earnings per share (EPS). By analyzing historical data spanning from 2013/14 to 2022/23 and employing descriptive statistics, we seek to uncover patterns and relationships that illuminate the impact of macroeconomic conditions on Nepal's banking sector.

This study illuminates the intricate relationship between macroeconomic variables and the financial performance of commercial banks in Nepal. Through rigorous regression analyses, it was found that GDP growth negatively impacts Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS), highlighting economic expansion's adverse effects on profitability and earnings. Price Earnings ratio (PE) generally showed minimal predictive

power across all financial metrics. Inflation exhibited mixed effects, with a slight positive impact on ROE but a negative influence on ROA and EPS, attributable to increased costs. Balance of Payments (BOP) and Exchange Rate (Ex) had minimal statistically significant impacts on these financial metrics. Money Supply (M2) and Consumer Price Index (CPI) consistently demonstrated negative impacts on ROA and ROE, underscoring the challenges posed by monetary policy and inflationary pressures on bank profitability. These findings underscore the importance of macroeconomic stability and effective monetary management in shaping the financial health of commercial banks in Nepal, offering valuable insights for policymakers and banking strategists alike.

In conclusion, our findings highlight the substantial role played by certain macroeconomic variables, particularly GDP, broad money supply (M2), and consumer price index (CPI), in influencing the financial performance of commercial banks in Nepal. These insights carry implications for policymakers, bank managers, and investors, aiding in understanding the dynamics of the banking sector within the broader macroeconomic context. Additionally, our study contributes empirical evidence to the existing literature, enriching our understanding of the relationship between macroeconomic variables and financial performance within Nepal's banking sector (Ally, 2022).

5.3 Implication

The implications drawn from the collective findings regarding the influence of macroeconomic trends on the financial performance of banks are rooted in the recognition of the intricate relationship between macroeconomic conditions and banking sector dynamics. the implications drawn from studies on the influence of macroeconomic trends on banking performance provide a critical foundation for informed decision-making and strategic planning across various sectors. By recognizing the interconnectedness of macroeconomic conditions and banking sector dynamics, stakeholders can work collaboratively to navigate challenges, capitalize on opportunities, and foster a robust and resilient financial system.

- Policymakers can use the findings to refine macroeconomic policies that support sustainable economic growth without unduly affecting bank profitability. For instance, understanding the negative impact of high GDP growth on financial metrics

suggests the need for nuanced policies that balance growth with stability in financial performance.

- Banks can enhance their risk management frameworks by integrating insights from the study. Factors such as inflation and money supply fluctuations can significantly impact profitability. Banks can use this knowledge to adjust their strategies for loan pricing, liquidity management, and asset-liability management.
- Investors in Nepal's banking sector can make more informed decisions based on the macroeconomic factors identified as significant influencers of financial performance. Understanding how variables like inflation and exchange rates affect earnings can guide investment strategies and risk assessments.
- Banks can differentiate themselves by developing strategies that mitigate the negative impacts identified in the study. For instance, optimizing cost structures in response to inflationary pressures or developing hedging strategies against exchange rate fluctuations can enhance competitiveness.
- The study highlights avenues for further research into specific macroeconomic variables and their impacts on different segments of the banking industry. This could lead to deeper insights into sector-specific dynamics and more targeted policy recommendations.
- Educators and trainers in banking and finance can incorporate these findings into curriculum development, ensuring that future professionals are equipped with the knowledge to navigate complex macroeconomic environments effectively.

Overall, the implications underscore the importance of a holistic approach to understanding and managing macroeconomic influences on banking sector performance, fostering stability, resilience, and informed decision-making in Nepal's financial landscape.

REFERENCES

Ahmed, A. (2018). Interest Rate and Financial Performance of Banks in Pakistan. *International Journal of Applied Economics, Finance and Accounting, 2(1*), 1-7.

Alemu, K., &Negasa, B. (2015). Determinants of financial performance of commercial banks in Ethiopia. *Journal of Business Management and Economics, 3(11*), 33-39.

Alessandri, P., & Nelson, B. D. (2015). Simple banking: Profitability and the yield curve. *Journal of Money,Credit and Banking, 47(1*), 143-175.

Ally, A.R. (2022) Influence of macro-economic factors on financial performance of Commercial Banks in Tanzania. *International Journal of Economics and Finance; 6(18*). 1-17.

Ali, A. (2014). *Stock markets, corporate finance and economic growth*: An overview. World Bank Economic Review, 10, 223-239.

Baba, S., &Nasieku, T. (2016). Effect of macroeconomic factors on financial performance of commercial banks in Nigeria. *International Journal of Social Sciences and Information Technology, 2(4*), 1-22.

Bashir, F. (2016). Determinants of Inflation in Pakistan: Demand and Supply Side Analysis Determinants of Inflation in Pakistan : Demand and Supply Side. *Journal of Finance & Economics Research*.

Bhattarai, B.P.(2018) Impact of bank specific and macroeconomic variables on performance of nepalese commercial banks. *Journal of Accounting and Finance. 2(19*). 35-53.

Chimkono, E. E. (2017). *Effect of micro and macro-economic factors in financial performance of commercial banks in Malawi. Nairobi*: JKUAT. Cooper.

Cooper, D. R., & Schindler, P. (2008). Business Research Methods (10th ed.). MA: McGraw-Hill.

Cytonn Investments. (2016). *Kenya's investment banks analysis Cytonn FY 2015. Investment sector report:* Given turbulence in banking, is all well in investment banking? Cytonn Investments.

Desaro, A. I. (2012). The effect of macroeconomic factors on financial performance of commercial banks in Kenya. (Master's thesis). School of Economics,University of Nairobi, Nairobi, Kenya.

Egbunike, C.F and Okerekeoti, C.U..(2018) Macroeconomic factors firm characteristics and financial performance. *Journal of Accounting Research.5(27*). 142.168.

Farah, M. (2014). Effect of foreign exchange volatility on financial performance of local oil marketing companies in Kenya. Nairobi: University of Nairobi.

Flamini, V. (2009). *The determinants of commercial bank profitability in Sub-Saharan Africa.* Working paper.

Gatobu, E. M. (2012). Role of Private Equity in Emerging Markets to the Economy: Case study of Kenya. (Master's thesis). Faculty of Management, School of Economics, University of Nairobi, Nairobi, Kenya.

Gautam, P.K.andGautam, T.(2021) Role of macroeconomic factors predicting financial performance of commercial banks in Nepal. *International Research Journal of Management Science.3(14).* 39-52.

Guruswamy, D. and Hedo, A.(2017). Impact of macroeconomic variables on financial performance of banks. *Journal of Business & Economics. 1(4*). 24-29.

Haider, S, Anjum, N, Sufyan, M, Khan, F and Ullah, A.(2016) Impact of macroeconomic variables on financial performance. *Journal of Management Sciences. 1(12*). 6-25.

Holloway, L. & Wheeler, S. (2010). Meaning not measurement: Using ethnography to bring a deeper understanding to the participant experience of festivals and events. *International Journal of Event and Festival Management, 1(1*), 1-15.

Kanwal, S and Nadeem, M.(2013) The Impact of Macroeconomic Variables on the Profitability of Listed Commercial Banks in Pakistan. *Journal of Business and Social Sciences.4(16*). 186-201.

Khan, W. A. &Sattar, A. (2014). Impact of interest rate changes on the profitability of four major commercial banks in Pakistan. *International Journal of Accounting and Financial Reporting, 4(1*), 142-147.

Kiganda, E. (2014). Effect of macroeconomic factors on commercial banks profitability in Kenya: Case of Equity Bank Limited. *Journal of Economics And Sustainable Development, 5(2),* 46-56.

Kipchirchir, K. S. (2011). The relationship between financial performance for multinational corporations in Kenya and exchange rate volatility: A case of MNCs listed in Nairobi stock exchange. (Master's thesis). University of Nairobi, Nairobi, Kenya.

Kothari, C. R. (2004). *Research Methodology*: Methods and Techniques. London: New Age International.

Lagat, C., &Nyandema, D. (2016). The influence of foreign exchange rate fluctuations on the financial performance of commercial banks listed at the Nairobi Securities Exchange. *British Journal of Marketing Studies, 4(3*), 1-11.

Lukango, M. Y. (2017). Organizational Culture and Job Stress in Banking Sector: A Case of Commercial Banks in Dodoma. (Master's thesis). Faculty of Management, School of Economics, University of Dodoma, Dodoma, Tanzania.

Maigua, C. &Mouni, G. (2016). Influence of interest rates determinants on the performance of commercial banks in Kenya. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 6(2*), 121-133.

Manyo, S. (2016). *The effect of foreign exchange transactions on the performance of Nigerian banks*. IJRDO Journal of Business Management.

Manyok, A. J. (2016). Effect of exchange rate fluctuations on financial performance of commercial banks in South Sudan. (Master's thesis). Faculty of Management, University of Nairobi, Nairobi, Kenya.

Markowitz, H. M. (1952). *Portfolio selection.* New York: John Wiley and Sons.

Muchiri, H. G. (2012). *The impact of macroeconomic variables on the performance of the Nairobi Securities Exchange. Nairobi:* University of Nairobi.

Mugenda, O. M., &Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative Approaches*. Nairobi: African Centre for Technology Studies.

Mwangi, F. K. (2013). *The effect of macroeconomic variables on financial performance of aviation industry in Kenya*. Nairobi: University of Nairobi.

Njuguna, P. N. (2013). The effect of macroeconomic factors on financial performance of deposit taking microfinance institutions in Kenya. (Master's thesis). Faculty of Management, University of Nairobi, Nairobi, Kenya.

Nyamwange, C. (2009). The relationship between real exchange rates and international trade in Kenya. (Master's thesis). Faculty of Management, University of Nairobi, Nairobi, Kenya.

Omondi, O. G. (2014). Effects of inflation on commercial bank are lending: A case of Kenya Commercial Bank Limited. (Master's thesis). Faculty of Management, United States International University (USIU), Nairobi, Kenya.

Ongeri, G. M. (2014). The effect of macroeconomic variables on the financial performance of non-bank financial institutions in Kenya. (Master's thesis). Faculty of Management, University of Nairobi, Nairobi, Kenya.

Ongore, V. O. (2013). Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and Financial Issues, 3(1*), 237-252.

Ongore, V. O., &Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and Financial Issues, 3(1*), 237-252.

Opaluwa, H., Umeh, O., &Ameh, A. (2010). The effect of exchange rate fluctuations of the Nigerian manufacturing sector. *Journal of African Finance, 3(1),* 145-156.

Osamwonyi, I., &Chijuka, I. (2014). The impact of macroeconomic variables on the profitability of listed commercial banks in Nigeria. *European Journal of Accounting Auditing and Finance Research, 2(10),* 85-95.

Otuori, O. H. (2013). Influence of exchange rates determinants on the performance of commercial banks in Kenya. *European Journal of Management Sciences and Economics, 1(2*), 86-98.

Ouma, W. N., &Muriu, P. (2014). The impact of macroeconomic variables on stock market returns in Kenya. *International Journal of Business and Commerce, 3(11*), 1-31.

Owoeye, A., &Ogunmakin, H. (2013). Exchange rate volatility and bank performance in Nigeria. *Journal of Finance, 5(3),* 206-221.

Pradhan, R.S. and Shrestha, R.(2019) Impact of bank specific and macroeconomic variables on the performance of commercial banks of Nepal. *Journal of Economics research. 1(17*). 2-17.

Raja, Y. Y., &Naeem-Ullah. (2014). Determinants of Foreign Exchange Markets. Journal of Economics and Finance, 2(6), 10-16.

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

Sadiye, C. (2014). *The influence of macroeconomic variables on stock performance*. Twente: University of Twente.

San, O., &Heng, T. (2013). Factors affecting the profitability of Malaysian commercial banks. *African Journal of Business Management, 7(8*), 649-660.

Saunders, M., Lewis, P., &Thornhill, A. (2016). *Research Methods for Business Students*. England: Pearson Education Limited.

Sharma, G. D., & Singh, S. (2011). Impact of macroeconomic variables on economic performance: An empirical study of India and Sri Lanka. Rochester, New York.

Simiyu, C. N., &Ngile, L. (2015). Effect of macroeconomic variables on profitability of commercial banks listed in the Nairobi Securities Exchange. *International Journal of Economics, Commerce and Management, 3(4*), 1-16.

Temba, A. J. (2014). *Performance of Commercial Banks on Small and Medium Enterprises (Sme) In Tanzania:* A Case of Nmb Bank in Arusha City Council. Dodoma: University of Dodoma.

Vines, D. (2017). *Absorption approach to the balance of payments*. The New Palgrave Dictionary of Economics,1-4.

Vong, A., & Chan, H. (2009). Determinants of bank profitability in Macau. (Master's thesis). Faculty of Management, University of Macau, Macau.

Wamucii, J. C. (2010). *The relationship between inflation and financial performance of commercial banks of Kenya. Nairobi*: University of Nairobi.

Young, J. (2012). A Structured Approach to Operational Risk Management in Banking Environment. (Doctoral dissertation). Faculty of Management, University of South Africa, Johannesburg.

APPENDICES

Years	Inflation rate	Gross domestic product	Public expenditure	Balance of payment	Broad money supply (M2)	Consumer price index(CPI)	Exchange rate with US$
2013/14	9.1	5.7	136254	4.0	15.9	9.10	88.9
2014/15	7.2	3	157062	4.5	17.5	7.21	88.32
2015/16	9.9	0.2	135243	5.4	19.3	9.92	98.25
2016/17	4.5	7.7	165735	-0.3	18.5	4.47	99.86
2017/18	4.2	6.3	169873	-7.1	19.4	4.15	106.49
2018/19	4.6	6.7	189232	-6.9	18.8	4.64	105.95
2019/20	6.5	2.3	196323	-0.9	22.0	6.15	116.31
2020/21	2.9	3.69	192212	-7.7	24.1	3.60	117.87
2021/22	7.1	4.08	207023	-12.6	19.2	6.32	120.84
2022/23	7.4	4.23	218452	-1.3	17.6	7.74	130.75

Sources: Economic survey published (2013/14 to 2022/23) by minister of finance

ROA OF SAMPLE BANKS

Years	PRABHU	SANIMA	KBL	RBBL	NIC ASIA
2013/14	-1.44	1.45	1.06	1.47	1.71
2014/15	2.19	1.54	1.69	3.22	1.21
2015/16	1.64	1.78	1.29	1.42	1.51
2016/17	1.76	1.90	1.26	1.60	1.64
2017/18	0.86	1.84	1.83	1.42	0.96
2018/19	1.29	2.07	1.5	2.23	1.37
2019/20	0.71	1.40	1.14	1.64	1.23
2020/21	0.8	1.44	0.99	1.1	0.94
2021/22	0.82	1.08	1	1.30	1.17
2022/23	0.96	1.20	0.74	0.91	1.22

Sources: Annual Report of Sample Banks from year 2013/14 to 2022/23

ROE OF SAMPLE BANKS

Years	PRABHU	SANIMA	KBL	RBBL	NIC ASIA
2013/14	-26.88	14.14	12.35	2.07	15.32
2014/15	27.57	15.07	13.74	2.3	11.71
2015/16	17	18.08	14.85	2.37	15.36
2016/17	19.29	14.57	17.21	2.9	15.63
2017/18	7.69	15.74	9.59	2.65	14.2
2018/19	12.45	18.83	9.88	5.03	20.24
2019/20	7.76	13.86	6.70	4.58	17.97
2020/21	10.06	15.53	10.43	3.14	15.59
2021/22	9.93	12.38	12.28	3.25	16.96
2022/23	11.85	13.45	14.20	3.24	15.12

Sources: Annual Report of Sample Banks from year 2013/14 to 2022/23

EPS OF SAMPLE BANKS

Years	PRABHU	SANIMA	KBL	RBBL	NIC ASIA
2013/14	-15.24	19.28	18.69	21.38	35.98
2014/15	31.73	24.47	16.24	57.07	25.59
2015/16	26.75	32.55	26.53	27.42	28.31
2016/17	27.17	26.31	13.29	32.32	23.06
2017/18	12.58	21.22	11.83	30.26	16.62
2018/19	21.03	28.22	15.77	56.04	34.22
2019/20	11.58	20.18	10.75	48.61	31.89
2020/21	13.54	23.94	12.90	37.27	28.18
2021/22	14.97	18.48	15.01	34.85	36.45
2022/23	1.19	20.91	9.86	34.85	38.44

Sources: Annual Report of Sample Banks from year 2013/14 to 2022/23

MACROECONOMIC VARIABLES AND FINANCIAL PERFORMAN...

By: Kiran Danuwar

As of: Jul 2, 2024 2:50:55 PM
20,619 words - 76 matches - 16 sources

Similarity Index

14%

Mode: Summary Report

sources:

339 words / 2% - Internet from 08-Feb-2023 12:00AM
www.researchgate.net

180 words / 1% - Internet from 09-Feb-2023 12:00AM
www.researchgate.net

166 words / 1% - from 14-May-2023 12:00AM
www.researchgate.net

125 words / 1% - from 31-May-2023 12:00AM
www.researchgate.net

117 words / 1% - Internet from 12-Feb-2023 12:00AM
www.researchgate.net

317 words / 1% - from 12-May-2023 12:00AM
epe.lac-bac.gc.ca

164 words / 1% - Internet from 11-Dec-2022 12:00AM
elibrary.tucl.edu.np

146 words / 1% - from 16-Feb-2024 12:00AM
elibrary.tucl.edu.np

250 words / 1% - Internet from 10-Sep-2022 12:00AM
www.iajournals.org

235 words / 1% - Internet from 08-Dec-2022 12:00AM
www.ijssit.com

221 words / 1% - Internet from 15-Feb-2022 12:00AM
www.nepjol.info

205 words / 1% - from 23-Mar-2024 12:00AM
garuda.kemdikbud.go.id

202 words / 1% - Internet from 26-Nov-2015 12:00AM
www.ies.edu