



ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF MANAGEMENT

**THE MEDIATING EFFECT OF ORGANIZATIONAL LEARNING ON
THE RELATIONSHIP BETWEEN NBE MONETARY POLICY AND
SELECTED STATE-OWNED AND PRIVATE COMMERCIAL BANKS OF
ETHIOPIA PROFITABILITY**

BY

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July, 2024

ADDIS ABABA, ETHIOPIA

**The Mediating Effect of Organizational Learning on the Relationship between NBE
Monetary Policy and Selected State-Owned and Private Commercial Banks of
Ethiopia Profitability**

By

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**A Thesis Submitted to Addis Ababa University College of Business and
Economics Department of Management for the Partial Fulfillment of Master
of Science in International Business**

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DECLARATION

I Hailemeskel Wegayehu Gebregiorgis, declare that the thesis entitled, “*The Mediating Effect of Organizational Learning on the Relationship between NBE Monetary Policy and Selected State-Owned and Private Commercial Banks of Ethiopia Profitability*” which is the result of my own original work and technical assistance that I have received, is detailed in the acknowledgement parts; that all field work, data collection, and data analysis were undertaken by me; and that I am responsible for this study's summary. As a result, I completed this thesis independently, with the help and supervision of my research advisor, Dr. Dejene Tulu.

I hereby declare that this thesis was not submitted for the award of any academic degree or diploma from any university. This thesis has been submitted in partial fulfillment of the requirements for an MSC in International Business at Addis Ababa University. Brief quotations from this thesis are permitted without special permission, provided that the source is properly acknowledged. In all other cases, you must obtain permission from the author.

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Abstract

A country's economy is heavily reliant on a properly functioning banking system to keep money flowing smoothly. The banking sector has consistently served the economy by ensuring profitability. Monetary policy, on the other hand, is a short-term government policy used to control a money supply and keep inflation under control. The objective of this study was to examine the mediating effect of organizational learning on the relationship between NBE monetary policy and the commercial banks of Ethiopia profitability. To achieve the study's objective, the researcher employed an explanatory research design and a quantitative research approach. The study's target population consisted of senior managers from seventeen Ethiopian commercial banks. 264 respondents were selected using a random sampling technique. A structured and self-administered questionnaire was developed for NBE monetary policy dimensions (reserve requirement, liquidity requirement, Treasury bond purchase, foreign exchange surrender requirement, and credit cap expansion), organizational learning, and bank profitability, and distributed to target respondents. This study used 211 questionnaires, and the results were analyzed using descriptive and inferential statistics. Pearson Correlation analysis reveals a statistically significant negative relationship between all NBE monetary policy dimensions, while organizational learning had a statistically significant positive relationship with bank profitability. Furthermore, the regression results showed that NBE monetary policy dimensions (reserve requirement, Treasury bond purchase, foreign exchange surrender requirement, and credit cap expansion) had a negative and statistically significant effect on bank profitability, whereas liquidity requirement and organizational learning had a positive and statistically significant effect on bank profitability. Among the study's variables, credit cap expansion was identified as the most important factor in bank profitability. According to Hayes' SPSS Process Macro findings, organizational learning partially mediates the relationship between NBE monetary policy and commercial bank profitability. Thus, it is strongly advised that banks diversify their revenue streams through organizational learning, such as expanding wealth management services, interest-free banking, and increasing commissions, service charges, and fees, rather than relying solely on loans and advances. Decision-makers also needed learning agility to seize the opportunity and adapt the bank's business model to changes in monetary policy. Depending on the study findings, additional recommendations were made.

Keywords: *Reserve Requirement, Liquidity Requirement, Treasury Bond Purchase, Foreign Exchange Surrender Requirement, Credit Cap Expansion, Organizational Learning, and Bank Profitability*

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List of Abbreviations

BP=Bank Profitability

CCE=Credit Cap Expansion

FESR=Foreign Exchange Surrender Requirement

LR= Liquidity Requirement

NBE= National Bank of Ethiopia

OL=Organizational Learning,

RR=Reserve Requirement

TBP=Treasury Bond Purchase

CHAPTER ONE: INTRODUCTION

1.1 Introduction

The banking industry is the most important player in any country's financial system. Economic development and growth in every country are strongly reliant on the strength of its banking sector. Commercial banks must maintain liquidity, profitability, and efficiency for a banking system to be sound. Banking institutions have been crucial in the dissemination of monetary policy (Dang & Huynh, 2021). The fundamental functions of commercial banks are to provide funds to deficit sectors and acquire deposits from surplus sectors. Monetary policy involves the use of monetary instruments to regulate or control the volume, cost, availability, and direction of money and credit in an economy to achieve some macroeconomic objectives such as price stability, full employment, and sustainable economic growth (Mishkin, 2022).

Monetary policy is the government's way of controlling the amount and cost of money in a country through its central bank. The goal of monetary policy is to keep the currency stable and prevent inflation (Kithandi, 2022). To do this, the government sets rules that affect how much credit people and businesses can access. The banking sector is considered as the most important channel for implementing monetary policy. The central bank controls the national money supply, whereas commercial banks facilitate the flow of money in the marketplaces in which they operate. Monetary policy refers to central banks' actions that influence the amount of money in circulation in the economy. Hoque et al. (2020) also broaden the idea of monetary policy as the policy issued by a country's central bank to control the supply of money in its economy.

Because money influences numerous economic variables that are critical to our economy's health, lawmakers and policymakers all over the world are concerned about monetary policy, the management of money and interest rates. A country's monetary policy is managed by the central bank. The Federal Reserve System is the United States' central bank, the Bank of England is the United Kingdom's central bank, the Bank of Canada is Canada's central bank, the Bank of Japan is Japan's central bank, the People's Bank of China is China's central bank, and so on (Mishkin, 2022). Ethiopia, like many other countries, has a central bank that oversees the banking industry by making recommendations and providing rules for the establishment and running of a banking business. The majority of operating standards in the banking sector are intended to decrease the

likelihood of financial and liquidity instability. Some of the orders issued by the NBE are part of the central bank's monetary policy, while others are meant to ensure that the sector is doing enough to deliver money to the most vulnerable parts of the economy. The NBE regulates Ethiopian commercial banks by issuing directives based on monetary policy tools. These include directives on reserve requirement (RR)-SBB/84/2022, liquidity requirement (LR)-Directives No. SBB/57/2014, foreign exchange surrender requirement- Directives No. FXD/83/2023, treasury bond purchase-Directives No. MFAD/TRBO/001/2022 and caps on credit expansion-Press release. The purpose of these directives is to maintain financial stability and enhance the service efficiency of the banking sector.

Organizations, like individuals, are constantly engaged in a dynamic dance of learning and adaptation. Organizational learning is an ongoing process that involves the acquisition, interpretation, and application of knowledge and experience. Organizations build their collective memory and improve their awareness of the world around them by actively acquiring insights from both official projects and everyday interactions. This knowledge is then used to fuel both individual and collective growth, allowing employees to improve their skills while also contributing to the organization's overall effectiveness in meeting its goals. Finally, organizational learning serves as a critical improvement engine, allowing businesses to manage changing environments, maximize performance, and constantly push the boundaries of what is possible (Edmondson & McManus, 2023).

Organizational learning is the ability of an organization to acquire, store, and transfer the knowledge of individuals to the knowledge of the organization (Basten & Haamann, 2018). Organizations can improve their performance by effectively learning from and adapting to changes(Oh, 2018).

To summarize, banks are critical to any country's economy, and their activities are closely monitored. The National Bank of Ethiopia has implemented a number of monetary policies in an attempt to stabilize the country's economic situation. However, it does not appear that the NBE considers the impact of these policies on bank profitability. As a result, the researcher is interested in investigating the impact of NBE monetary policy on bank profitability mediating the effect of organizational learning.

1.2 Statement of the Problem

Ethiopia's one-year general inflation rate reached 29.3 percent in June 2023. In the 2015 Ethiopian Budget year, general inflation increased by an average of 2.2% per month (Ethiopian Statistics Service (ESS) Report). This alarming development has inflicted considerable strain on the Ethiopian economy, posing a serious challenge to the nation's financial stability. In this regard, the National Bank of Ethiopia has become more active in the banking sector, taking on a larger role in regulating and supervising banks through the implementation of a series of bold monetary policy measures, including new regulations and changes to existing ones. These measures include the following:

Liquidity requirements: According to NBE directive No. SBB/57/2014, banks must hold at least 15% of their net current liabilities. This ensures that banks have sufficient resources to meet their obligations (NBE 2014). However, this may limit their ability to lend to businesses and individuals. The second monetary policy measure is the *reserve requirement*: The regulatory body's 8th amendment to reserve requirements, NBE directive no. SBB/84/2022, which took effect on June 9, 2022, requires any bank to keep 7% of its total net deposit liabilities in reserve at the national bank on an average basis in each calendar month (NBE 2022).

The third monetary policy measure mandated by NBE Directives No. MFAD/TRBO/001/2022 is the purchase of *Treasury bonds* equal to 20% of all loans and advances disbursed monthly, beginning November 1, 2022. This mandatory bond purchase increases banks' financial commitment, influencing their lending capacity and potentially affecting their interactions with borrowers (NBE 2022). The fourth monetary policy measure is *Foreign Exchange Surrender Requirements*: banks must surrender a portion of their foreign exchange receipts to the NBE, as mandated by Directive No. FXD/83/2023, which stated that a bank shall surrender Fifty percent (50%) of receipts from the export of goods and services, Seventy percent (70%) from private transfers (remittance), and NGO transfers to the National Bank of Ethiopia every month within the first five working days of the next month which can reduce their ability to provide foreign exchange services to customers (NBE 2023). The fifth is *Credit Cap*: On August 7, 2023, the National Bank of Ethiopia (NBE) Board of Directors adopted a new monetary policy statement

during its regular meeting. The statement obligated all commercial banks to limit credit growth to a maximum of 14% of their outstanding loans and advances (NBE 2023).

The success of these monetary policy is reliant on a central bank's exhaustive understanding of the relationship between its objectives and the consequences of its actions (Udeh, 2015). The effectiveness of these NBE monetary policy measures in achieving their intended goals remains to be seen. However, their impact on the commercial banks is expected to be substantial. Banks must carefully manage their liquidity, balance sheet composition, and credit risk in order to comply with these regulations and achieve their financial objectives.

TEKALIGN (2017) and Kebede (2014), national bank regulations have a negative impact on Ethiopian private bank profitability. The analysis found that the NBE Bill and credit cap had a negative and statistically significant effect on banks' profit, whereas reserve requirements had a negative and modest effect. Yusuf & Shikur (2023) investigated the impact of bank regulations on the performance of commercial banks in Ethiopia. Data from nine banks was collected from 2011-2021. The results showed that legal reserve requirements positively impacted the performance of selected banks. However, statutory reserve requirements had a positive but insignificant impact. Additionally, Tekalegn (2020) investigated the impact of the National Bank of Ethiopia's prudential regulations on private commercial banks' financial performance. The findings revealed that the liquidity requirement ratio had a positive and statistically significant impact on banks' profitability, while the capital adequacy ratio and bank size had a negative impact.

Thus, after carefully reviewing the prior empirical literature, the researcher concluded that, to the best of the researcher's knowledge, the relationship between NBE monetary policy and commercial bank profitability, as well as the role of organizational learning as a mediator, remains largely unexplored. There is a need to understand how the National Bank's monetary policy affects commercial bank profitability, as well as how organizational learning can mediate this relationship.

1.3 Research Question

This study is designed to answer the following research questions:

1. What is the effect of reserve requirement on commercial banks profitability?
2. What is the impact of liquidity requirements on the profitability of commercial banks?

3. How does the purchase of treasury bonds affect commercial banks' profitability?
4. What is the impact of credit cap on commercial banks' profitability?
5. What is the effect of foreign exchange surrender requirement on banks profitability?
6. How does organizational learning influence on the relationship between National Bank monetary policy and the profitability of commercial banks in Ethiopia?

1.4 Objective

1.4.1 General Objective

To analyze the effect of National Bank monetary policy on the profitability of commercial banks in Ethiopia, considering the mediating effect of organizational learning.

1.4.2 Specific Objective

The specific objectives of the study are;

1. To identify the effect of the reserve requirement on the profitability of the banks
2. To investigate the effect of liquidity requirement on the profitability of the banks
3. To examine the effect of treasury bond purchase on the profitability of the banks
4. To analyze the effect of credit cap on credit expansion on banks' profitability
5. To examine the effect of foreign exchange surrender requirements on banks' profitability.
6. To explore the mediating effect of organizational learning on the relationship between National Bank policy and the profitability of commercial banks in Ethiopia.

1.5 Significance of the Study

The main purpose of the study is to investigate the impact of NBE monetary policy and selected commercial banks of Ethiopia profitability with a mediating effect on organizational learning. The study's findings will benefit a wide range of stakeholders, including the banks studied, NBE, MOFEC, and other interested users. Finally, the study would serve as a benchmark for future researchers who will conduct similar and related studies to demonstrate its accuracy or develop new theories. It would make an important contribution to the body of knowledge by identifying

the link between monetary policy and bank profitability with a mediating effect on organizational learning.

1.6 The Scope of Study

Deeply understanding something requires constant exploration from various angles, across different contexts, and throughout one's lifetime. While complete examination is impossible, researchers often define the boundaries of their inquiry in terms of concepts, methods, and geographic focus.

This research specifically focused on how national bank policies in Ethiopia, particularly reserve requirements, liquidity requirements, treasure bond purchases, forex rules, and credit caps, affect commercial banks' profitability mediated by organizational learning. The study involved selected Ethiopian commercial banks and used only primary data via a cross-sectional design. These specific variables were chosen based on existing research and their ability to explain the topic effectively.

1.7 Limits of the Study

The study was limited to seventeen commercial banks in Ethiopia that opened before 2020 G.C., excluding other commercial banks that were established later. The researcher limited to primary data to analyze the effects of recently introduced NBE policies like foreign exchange regulations and credit limitations.

The study was to address the effect of only the five NBE monetary policy instruments, on commercial banks. Thus, it doesn't include additional variables influencing commercial banks, such as interest rates, open market operations, bank size, and so on.

1.8 Organization of the Study

The remainder of the article is organized in such a way that Chapter 2 reviews relevant literature on the NBE monetary policy instrument, bank profitability, and organizational learning. Chapter three defines variables and discusses methodology. The fourth chapter discusses data analysis and presents the key findings and results. Chapter five contains the conclusion and recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Review of Theoretical Literature

2.1.1 The Quantity Theory of Money

The quantity theory of money, developed by classical economists in the late nineteenth and early twentieth centuries, explains how the nominal value of total income is calculated. The theory is a money demand theory because it calculates how much money is held for a given amount of aggregate income. The Quantity Theory of Money (QTM) is a basic macroeconomic concept that proposes a direct relationship between the amount of money in circulation (money supply) and the overall price level of goods and services. In simple terms, it implies that more money chasing the same amount of goods results in higher prices, and vice versa (Mankiw, 2022). The most important aspect of this theory is that it claims that interest rates have no effect on the demand for money (Mishkin, 2022).

QTM theory have the following components: *Money supply*: The total amount of money in an economy, including physical currency, bank deposits, and other easily accessible financial instruments. *Velocity of money*: the frequency with which a unit of currency is used to purchase goods and services over a given period. *Price level*: This is the average price of all goods and services in an economy. The basic equation of QTM states that the nominal value of all transactions in an economy (MV) is equal to the real output (Y) multiplied by the price level (P) (Mankiw, 2022).

$$Money \times Velocity = Price \times Transactions$$

The quantity equation connects the money supply and velocity on the left with the total value of transactions on the right. T is the total number of transactions that occur during a given time period, and P is the average price per transaction. Simply put, the equation depicts how the quantity of money in circulation influences the total value of goods and services traded in an economy (Howden, 2013).

2.1.2 Keynes's Theory of Monetary Policy

John Maynard Keynes proposed it in his book *The General Theory of Employment, Interest, and Money*. Keynes disagreed with the classical view that the money supply had a direct influence on price levels and that the economy was always at full employment. Keynes believed that changes in the money supply, along with changes in government spending and fiscal policy, drive changes in the price level and aggregate output, and that the economy is not inherently stable (Mishkin, 2022).

According to Keynesian theory, monetary policy has a significant effect on economic activity. It claims that changes in the money supply may permanently affect variables like interest rates, aggregate demand, employment, output, and income. Keynes advocated for a loose monetary policy during times of unemployment. As a result, when the money supply is increased, the interest rate tends to fall. Interest rate cuts will increase investment because of the marginal efficiency of capital. Increased investment will have a multiplier effect on effective demand, increasing income, output, and employment. According to Keynes' analysis, the demand and supply of money determine the rate of interest (Keynes, 2018).

Keynesian Theory of Monetary Policy is a macroeconomic theory that argues that government intervention can stabilize the economy and prevent recessions. This theory states that the level of economic activity is determined by three main concepts: the investment multiplier, the marginal efficiency of capital, and the interest rate (Green, 1992). *The investment multiplier* is the ratio between the change in income and the change in investment. It measures how much income is generated by an increase in investment spending. The higher the multiplier, the more income is created by a given amount of investment. *Capital's marginal efficiency* refers to the expected rate of return on an investment project. It measures how profitable an investment is compared to its cost. The higher the marginal efficiency of capital, the more investment is undertaken. *The interest rate* is the price of borrowing money. It affects both the cost of investment and the demand for money. The lower the interest rate, the cheaper it is to invest and the more money people want to hold.

Keynesian Theory of Monetary Policy explains how these three concepts interact to determine the equilibrium level of output, employment, and prices in the economy. Short-term fluctuations in

output and employment can be caused by changes in aggregate demand. Keynes argued that counter-cyclical monetary policies, such as lower interest rates or increasing the money supply, can stimulate aggregate demand and boost output and employment. However, he also warned that such policies may have unintended consequences, such as inflation or crowding out of private investment. In the long run, Keynes argued that the economy tends to gravitate towards a long-period equilibrium position that is characterized by unemployment. This is because the marginal efficiency of capital tends to fall over time due to diminishing returns and uncertainty, while the interest rate tends to be sticky due to liquidity preference and institutional factors. As a result, there may be a chronic deficiency of effective demand that prevents full employment from being achieved. Keynes suggested that the only way to overcome this problem is to use fiscal policy, such as raising spending or reducing taxes, to increase aggregate demand and move the economy toward a full-employment equilibrium (Green, 1992) and (Dickens, 2011).

2.1.3 Monetarist Theory

A more recent theory of monetary policy is the monetarist theory, emphasizing the primary role of the money supply in influencing economic activity (Friedman & Schwartz, 1963). The changes in the money supply have a significant impact on both short-run national output and long-term price levels. Monetarists contend that instead of pursuing discretionary monetary policy, focusing on the growth rate of the money supply is the most effective way to achieve monetary policy objectives (Cagan, 2008). According to this theory, monetary policy has only temporary and unpredictable effects on output and employment because economic agents adjust their expectations and behavior in response to changes in the money supply (Humphrey, 1975). Its core propositions revolve around the notion that fluctuations in the money supply exert a significant and predictable influence on various economic indicators, particularly inflation and output (Shah, 2015).

Inflation is at all times a monetary phenomenon which means it is caused by excessive money supply growth. According to this theory, the primary goal of monetary policy is to maintain price stability by sustaining a consistent growth rate of the money supply (Mishkin, 2022).

2.1.4 Modern Theory of Monetary Policy

Modern monetary policy theory argues that sovereign governments with their own currency, like the US, UK are not constrained by the same budgetary limitations as households or businesses.

They can spend freely without causing inflation, as long as they also control the money supply and have access to financial markets (Kelton, 2020). This enables them to actively manage aggregate demand and achieve economic objectives such as full employment and social well-being. It challenges traditional macroeconomic thinking, particularly regarding the relationship between government spending, taxation, and inflation. Unlike classical and neoclassical theories that emphasize the importance of balancing the budget and controlling the money supply, MMT argues that governments with their own currency can, in theory, afford to spend as much as they need, as long as they do so responsibly and within the limits of real resource constraints (Palley, 2013).

The modern monetary holds a completely different perspective. It is argued that because the public portfolio is composed of a wide variety of assets, such as mortgages, stocks, bonds, savings accounts, and other securities when the central bank purchases securities on the open market, substitution and wealth effects take place. These effects will eventually drive up aggregate money demand and output. This theory is linked to the field of monetary economics, which investigates how money works in economies. Its primary goal is to advance monetary policy and influence economic activity and the money supply. Monetary policy affects almost every aspect of the economy, including inflation, interest rates, and employment (Prates, 2020).

2.2 Review of Empirical Literature and Hypothesis Development

Dang & Huynh (2021) study investigated the relationship between monetary policy and bank performance, with a particular emphasis on the role of bank business models. The study used a unique dataset of Vietnamese commercial banks from 2007 to 2019. The authors discovered that the effects of monetary policy vary according to the bank's business model. Banks with more diversified income sources are less affected by changes in monetary policy. Banks with business models that generate more non-interest income or that are more diversified across income sources tend to be less affected by monetary policy changes. This holds true across various measures of bank performance, including risk-taking behavior, earning capacity, and financial stability. The study concludes that banks should carefully consider the implications of monetary policy when designing their business models.

2.2.1 Reserve Requirement and Bank profitability

Hoque et al. (2020) examined the relationship between monetary policy instruments and commercial bank profitability in Bangladesh. The study's findings show that raising the cash

reserve ratio (CRR), a key monetary policy tool, has a negative and statistically significant impact on bank profits. This implies that when the central bank raises the CRR, commercial banks are required to keep more reserves, reducing their ability to lend and thus lowering profitability.

Increasing the percentage of RR reduces banks' available funds for lending, whereas lowering RR frees up more deposits for banks to lend, increasing credit availability. As result, lowering the RR can boost the money supply and decrease interest rates, encouraging banks to lend more and stimulating economic activity (Atlaw, 2017). Mihret (2020) examined the impact of reserve requirements on performance of commercial banks on commercial bank performance in Ethiopia generally, as well as its effect on profitability, lending capacity, and cost intermediation in particular. Between 2000 and 2018, seven commercial banks used a balanced panel random effect regression model. The panel regression model found that reserve requirements have a negative and statistically significant effect on commercial bank performance. Based on the empirical evidence, the following hypothesis was formulated.

H1: Reserve requirements significantly and negatively influence the profitability of commercial banks.

2.2.2 Liquidity Requirement and Bank profitability

Liquidity requirement acts as a financial safety net, ensuring banks have enough resources to weather unexpected withdrawals or market fluctuations. While this requirement serves as a crucial buffer, safeguarding depositors and fostering public trust in the banking system, it's not without its trade-offs. By effectively reducing the pool of funds freely available for lending, this liquidity lockbox can potentially constrict the lifeblood of economic activity – loans to businesses and individuals (Hoque et al., 2020). Deneke & Gujral (2022) investigated the impact of liquidity on the profitability of private commercial banks in Ethiopia. Both primary through questionnaires and secondary data panel data was taken from the audited financial statements of the commercial banks for ten consecutive years starting from 2010/11 to 2019/20 were used. The study results revealed that the liquidity ratio has a positive and significant effect on the return on assets or profitability of commercial banks. The researcher proposed the following hypothesis:

H2: There is a negative relationship between liquidity requirements and the profitability of commercial banks.

2.2.3. Treasury Bond Purchase and Bank profitability

When governments borrow more money by issuing Treasury bonds, banks tend to lend less to businesses and individuals, especially using short-term debt. This happens because increased government borrowing makes safe assets like Treasury bonds more attractive for banks to hold. As a result, banks have less money available for riskier loans (Krishnamurthy & Vissing-Jorgensen, 2015). Mbabazize et al. (2020) used a causal relationship study design to investigate how monetary policy affects the profitability of commercial banks in Uganda. The data spans from 2010 to 2018. According to the findings, treasury bonds had little effect on commercial bank profitability. Fanos (2020) investigated the effect of NBE regulations on the profitability and liquidity of Ethiopian private commercial banks between 2008 and 2017. The findings revealed NBE bill purchase requirement did not exhibit statistical significance. The mandatory of purchasing of government bond lower banks' profit margins (Kühl, 2018). Hence, the researcher proposed the following hypothesis:

***H3:** The mandatory purchase of treasury bonds has a negative influence on profitability of commercial banks*

2.2.4 Foreign Exchange Surrender Requirement and Bank profitability

Zezelew (2023) study sought to assess the impact of Ethiopia's central bank's foreign exchange surrender requirements on commercial banks. The study, which used exploratory and descriptive research designs, the findings shown that the surrender requirement reduces forex mobilization capacity, harms customer relationships, and results in financial losses for commercial banks.

The NBE directive on Forex rules had a negative impact on Private Banks' Forex utilization and hindered banks from meeting their goals within a specified time frame (Dereje, 2019) as cited (Zezelew, 2023). The NBE intervenes or controls commercial banks' allocation of foreign currency that cannot be used in accordance with the banks' business objectives. Based on the empirical evidence, the following hypothesis was formulated. The study discovered that there had been insufficient previous research on the influence of foreign exchange surrender requirement on profitability of commercial banks. As a result, based on the limited empirical evidence, the researcher proposed the following hypothesis.

***H4:** Foreign exchange surrender requirement negative impact the profitability of commercial banks*

2.2.5 Credit Cap Expansion and Bank profitability

National Bank of Ethiopia (NBE) made a pivotal move on August 7, 2023. During its regular meeting, the Board of Directors unveiled a new monetary policy statement, a key component of which was a strict ceiling on credit expansion for commercial banks. This bold measure, limiting credit growth to a mere 14%, signals a shift in priorities for the NBE, prioritizing price stability and economic prudence over unchecked credit expansion. This targeted intervention aims to curb inflationary pressures, potentially stemming from excessive lending, while ensuring responsible lending practices within the banking sector (NBE 2023). According to TIZAZU (2020), TEKALIGN (2017) and Kebede (2014) credit cap negatively affected commercial bank performance by limiting the amount of fund for loan. The study identified that there was lack prior research on the influence of credit cap expansion on profitability of commercial banks. Consequently, based on the limited empirical evidence, the researcher proposed the following hypothesis.

H5: Credit caps expansion negatively impact the profitability of commercial banks

2.2.6 Organizational Learning as a Mediator

Hassan et al. (2017) found that organizational learning has positive and reliable scores on competitive advantage in the banking sector of Pakistan. Jimenez-Jimenez & Sanz Valle (2011) discovered the relationship between organizational learning, innovation, and performance: The findings revealed a strong positive relationship between organizational learning, performance, and innovation. Esendemir & Zehir (2017) investigate the mediation effect of organizational learning and technological capability on the relationship between innovation and performance. The study's findings revealed a significant correlation between innovation and performance. Furthermore, organizational learning and technological capability had partially a mediating effect on the relationship between innovation types and performance. López et al. (2005) investigated the relationship between organizational learning and business performance. The findings indicate a positive relationship between innovation, competitiveness, and economic/financial performance. Furthermore, the researchers suggested that organizational learning improves innovation, competitiveness, and economic performance. Akhtar et al. (2012) looked into how organizational learning influences organizational performance in Pakistani higher education institutions. The researchers discovered that organizational learning significantly improves organizational

performance. This study argues that the association between central bank monetary policy and commercial banks' profitability is subject to mediation by organizational learning. Lack of research on the mediating effect of organizational learning was identified; it would be interesting to see how organizational learning mediates the connotation between NBE monetary policy and commercial banks' profitability. Accordingly, the following exploratory mediating hypothesis was formulated.

***H6:** Organizational learning mediates the relationship between National Bank monetary policy and the profitability of commercial banks in Ethiopia.*

2.3 Conceptual Framework

2.3.1 Monetary Policy

Monetary policy refers to the actions taken by a central bank or government body in order to influence the level and growth of an economy's money supply, interest rates, exchange rates, and credit conditions (Mankiw, 2022). Monetary policy seeks to achieve specific macroeconomic goals, including price stability, full employment, economic growth, and financial stability. It can be expansionary or contractionary, depending on whether the money supply expands or contracts and interest rates fall or rise.

Monetary policy is the process by which central banks control the money supply and interest rates to achieve macroeconomic goals like price stability, economic growth, and full employment. Central banks use a variety of tools to implement monetary policy, including open market operations, reserve requirements, and the discount rate (Mishkin, 2022).

The central bank is the government's highest authority in charge of developing and enforcing monetary policy to achieve a country's specific economic objectives. The National Bank of Ethiopia (NBE) is the government authority in charge of monetary policy in Ethiopia (Monetary and Banking Proclamation of 1994). The central bank's principal goal is to keep inflation low and stable. It also strives to support stable national output growth, low unemployment, and well-functioning financial markets (Hailemariam, 2021). If output grows rapidly and inflation rises, the central bank is likely to hike interest rates, slowing the economy and reducing inflationary pressures.

2.3.2 Bank Profitability

Every company aims to make a profit, which is the main measure of its success. Banks are unique types of companies that specialize in gathering deposits and making loans to be profitable. Bank profitability is the ability of a bank to generate income above expenses which is critical for the financial system's stability and efficiency. Factors influencing bank profitability include bank-specific factors like efficiency, financial risk, and size, industry-specific factors like competition and ownership status, and macroeconomic factors like economic growth and inflation (Athanasoglou et al., 2008).

Bank profitability is an important indicator of the health of the financial system and the overall economy. A well-functioning banking sector is indispensable for economic growth and development. Banks provide a variety of services to businesses and individuals, including lending, deposit-taking, and payment processing. By channeling funds from depositors to borrowers, banks play a vital role in the allocation of capital (Xu et al., 2019).

Bank profitability assesses a bank's financial health by measuring the ratio between income and expenses, as well as the amount of profits earned relative to the bank's investments. These ratios can be used to summarize massive amounts of financial data and make conclusions about a bank's performance (Velnampy & Nireesh, 2012).

2.3.3 Organizational Learning

Organizational learning is the continuous process by which organizations acquire, interpret, and apply knowledge and experience to enhance their individual and collective capabilities and performance (Edmondson & McManus, 2023).

Organizational learning is the process by which organizations capture, share, and apply individual knowledge to improve their performance. By applying organizational learning (OL), organizations can convert the knowledge of individuals into the knowledge of the organization (Basten & Haamann, 2018). For businesses to benefit from open innovation and gain a long-term competitive advantage, organizational learning is required. Exploratory learning assists businesses in identifying new opportunities and developing new knowledge, whereas exploitative learning assists businesses in commercializing new knowledge and improving existing products and services (Zhang et al., 2023). Organizational learning is a key ingredient for organizational success, but it requires commitment and effort from managers at all levels.

According to (Kiziloglu, 2015) organizational learning refers to the process of acquiring, sharing, and applying knowledge within a company. It is measured by learning commitment, shared vision, openness, and intra-organizational knowledge sharing. Banks that have a shared vision, are open-minded and share knowledge effectively are more likely to be innovative. He also suggested that bank leaders should invest in learning initiatives, create a culture of learning, and focus on acquiring, sharing, and using knowledge effectively.

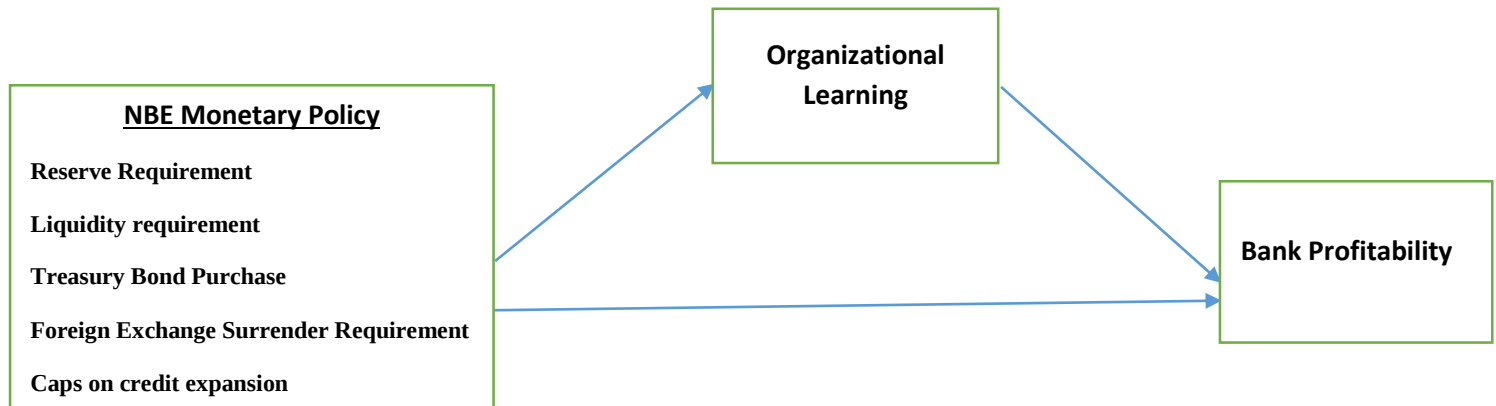


Figure 2.1: Conceptual framework adapted from Baron & Kenny (1986).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 The Research Design

Creswell (2009) research design is like the architect's blueprint for a project, meticulously guiding every step from overarching presumptions to detailed gathering of data and analysis. Choosing the right design is driven by the researcher's goals, which range from exploring uncharted territory to explaining existing phenomena, predicting future trends, or evaluating programs. In this study, the aim is to shed light on how National Bank monetary policy affects the profitability of Ethiopian commercial banks, with a particular focus on the mediating role of organizational learning. This necessitates a closer look at cause-and-effect relationships, making an explanatory and descriptive research design the optimal choice.

3.2 Research Approach

According to Creswell (2009), quantitative research is a type of research that investigates and comprehends individuals or groups while also providing deeper insights into real-world problems based on testing theory composed of variables measured with numbers and analyzed using statistical procedures. The research process includes developing questions and processes, collecting data from participants, analyzing the data inductively, progressing from specifics to general themes, and interpreting data significance. The quantitative study approach was chosen since the researcher's purpose is to investigate the current influence of NBE monetary policy on Ethiopian commercial banks. This allows the researcher to capture the varied experiences and perceptions of participants, resulting in a more comprehensive picture of this changing financial landscape.

3.3 Data Type and Source

The researcher used primary sources of data that is cross-sectional studies in nature. Primary data were collected using surveys, experiments, and observations. Rather than relying on existing data, firsthand information produces more specific, accurate, and current results.

3.4 Population of the Study

The target population is a universal group of people, events, or objects to which an investigator generalizes the results. The population of this study is all senior managements (directors and above) of commercial banks in Ethiopia that established before 2020 G.C. The rationale for this choice

lies in the well-defined organizational structures of these banks, as well as those who have longer banking experience and are decision makers of these staffs, which are conducive to the acquisition of accurate and reliable data. As a result, there are seventeen registered commercial banks, including one state-owned commercial bank, Commercial Bank of Ethiopia, and sixteen private commercial banks, including Awash Bank, Dashin Bank, Bank of Abssiniya, Cooperative Bank of Oromia, United Bank, NIB International Bank, Zemen Bank, Buna International Bank, Abay Bank, Berhan Bank, Wegagen Bank, Oromia International Bank, Lion International Bank, Enat Bank, Addis International Bank and Global Bank Ethiopia.

According to the Commercial Bank of Ethiopia's HR report, the bank has 22 executive managements and 122 directors. According to their organizational structure; Awash Bank has 19 executive managements and 55 directors. Dashen Bank has 11 executive managements and 37 directors. The Bank of Abssiniya has 8 chiefs, 3 vice presidents, 2 deputy chiefs, and 39 directors. Cooperative Bank of Oromia has 13 executive managements and 43 directors. United Bank has 14 executives and 29 directors. NIB International Bank has 9 executive managements, 8 senior management and 40 department directors. Zemen Bank's senior management team consists of seven chief executives, two deputy chief executives, and 29 directors. Buna International Bank has 11 executive managements and 27 directors. Abay Bank has 10 chiefs, 2 deputy chiefs, and 19 directors. Berhan Bank includes 8 executive managements and 26 directors. Wegagen Bank has 15 executives and 38 directors. Oromia International Bank consist 15 executive managements and 20 directors. Lion International Bank has 7 executive managements and 16 directors. Enat Bank has seven executive managements and eleven directors. Addis International Bank has 3 executives and 9 directors. Finally, according to the organizational structure of Global Bank Ethiopia, the bank has 8 executive managements and 15 directors. As a result, the study has a total of 778 respondents.

3.5 Sample and Sampling Techniques

Sampling is the process of collecting information about an entire population by examining a subset of it. The probability sampling method was chosen because it is the most commonly associated survey-based research method for drawing inferences from a sample about a population in order to answer research questions and achieve research objectives. Specifically, a random sampling

strategy was used among the target population so that everyone has an equal chance of being selected.

Yamane's random sampling formula is used for collecting simple which is:

$$n = \frac{N}{(1 + N(e)^2)}$$

Where,

n = the sample size

N = the population of the study

e = the margin error in the calculation

The simple respondents of the study are:

$$n = \frac{778}{(1 + 778(0.05)^2)}$$

$$n = 264 \text{ respondents}$$

The sample size of the study is 264 respondents and the way of distribution of the study is proportional to the number of senior managements of the commercial banks.

3.6 Data Collection Instruments

The researcher collected data from seventeen (17) commercial banks at a time using cross-sectional studies. To gather firsthand information on the current state of NBE monetary policy and its effects on banks, the study employed primary data collected directly from selected banks.

The survey questionnaire is one of the primary tools used to collect data from study participants. This study used seven variables, as shown in Figure 1, and assessed them using different items adapted from various existing literatures (Appendix A). The variable Reserve Requirement was measured using items adapted from KIMANI (2013), while items for evaluating Liquidity

Requirement were modified from KIMANI (2013) and Rana (2024). The Treasury bond purchase measures were modified from Kühl (2018) and Teixeira et al. (2021), while the items evaluating foreign exchange surrender requirements were borrowed from Zelelew (2023). The items for measuring the variable Credit cap expansion were modified and adapted from the previous study by Rana, (2024), TEKALIGN (2017) and Kebede (2014). Items about organizational learning were adapted from Marsick (2013) and López et al. (2005). The variables in this study were assessed using a variety of items derived from existing literature, which were then tailored to the specific research context. As a result, the items used to evaluate bank profitability were adapted from (Schwarze, 2007).

Cronbach's alpha and test-retest for reliability testing to assess the data source's validity and reliability.

3.7 Data Analysis

This study used both descriptive and inferential statistics to investigate the role of organizational learning in mediating the relationship between monetary policy and the profitability of selected Ethiopian commercial banks. First, data from participants was collected and rigorously coded, validated, and entered into an SPSS version 26 as well as an extended SPSS Process Macro for analysis. Following that, the processed data be subjected to stringent inspections (including real-time data supervision) and analyzed using SPSS software. Extensive diagnostic tests, including normality, heteroskedasticity, and multicollinearity were checked to ensure model suitability.

To fully characterize the variables under consideration, descriptive statistics like mean, standard deviation, minimum, and maximum values are presented. Following that, a correlation matrix used to detect and quantify any multicollinearity between variables. Finally, a sophisticated multivariate regression model used to determine the effect of each explanatory variable and intervening variable on the dependent variable. This analysis was not only identifying correlations between variables, but also measure their strength and allow for reliable predictions based on the model's output. Following that, the regression results was given in a clear and succinct table, along with detailed explanations of each parameter aligned with established literature.

3.8 Variable Specification

The researcher uses monetary policy as an explanatory variable in this study, which is represented by the reserve requirement (RR), liquidity requirement (LR), foreign exchange surrender requirement (FXSR), Treasury bond purchase (TBP), and credit cap (CC). Commercial banks' profitability is the dependent variable. Organizational learning as an intervening variable

3.9 Model Specification

The following model is developed for the purposes of this study:

$$y = \alpha + \beta_i * NBE \text{ Monetary Policy Measurements} + \mu_i * Organizational Learning + \varepsilon$$

Where:

- y = Commercial Banks Profitability
- α = intercept
- β_i = coefficient of NBE monetary policy
- μ_i = coefficient of organizational learning
- ε = error term

Therefore, the general model that incorporates all of the variables to test the hypotheses of the study is:

$$y = \alpha + \beta_1 * RR + \beta_2 LR + \beta_3 FXSR + \beta_4 TBP + \beta_5 CC + \mu_1 * Organizational Learning + \varepsilon$$

3.10 Validity and Reliability

3.10.1 Validity

Validity test is a test that is used to indicate the extent of measuring instruments used in a measure what is being measured. Ghazali (2011) states that, the validity of the test used to measure invalid or valid. Validity refers to how accurately a measure represents what it is supposed to. It is concerned with how accurately the concept is defined by the measure(s). To ensure the validity of the study, the researcher adapted and developed from previous studies and journals and took the advisor's comment and discussed the questionnaires with the selected senior management of commercial banks before they were distributed. Therefore, the study tried to address the validity

through the review of literature (theories and principles) regarding each predictors and variables as well as intervening variables, besides that the instrument has been adopted from the previous related researches with relevant amendments based on the theories and principles accordingly.

3.10.2 Reliability

A reliability analysis determines a questionnaire's internal consistency. It expresses how consistent some variables or sets of variables are in their intended measurements. Cronbach's alpha is a widely used measure of internal consistency and reliability, making it appropriate for this study. According to Meyers et al. (2006) Cronbach's alpha coefficient should be greater than 0.7, indicating acceptable internal consistency or reliability. As shown in the table below, the study used SPSS to test reliability, and the result was 0.756, which exceeded the threshold.

Table 3.1 Reliability Statistics

Variables	Cronbach's Alpha	N of Items
Reserve Requirement (RR)	0.906	7
Liquidity Requirement (LR)	0.938	6
Treasury Bond Purchase (TBP)	0.924	6
Foreign Exchange Surrender Requirement FESR	0.928	5
Credit Cap Expansion (CCE)	0.934	5
Organizational Learning (OL)	0.952	7
Bank Profitability (BP)	0.917	5
Total	0.756	41

Source: Own Survey, 2024

3.11 Ethical Considerations

This study took ethical considerations for informants and similar issues very seriously. As a result, data were not manipulated or exaggerated to support predetermined conclusions. The study's goal was explicitly disclosed to both bank participants, and informed consent was requested.

The following points summarize the ethical principles that were adhered to:

- *Honesty and integrity:* Data, Data results, methods, procedures, and publication status were all reported truthfully and accurately. There were no attempts to create, falsify, or deceive the data.
- *Carefulness and critical thinking:* The research was carried out with due diligence to avoid negligent mistakes and carelessness. The work was thoroughly and critically examined.
- *Confidentiality:* Data was anonymized and securely stored, with access limited to the research team.
- *Intellectual property rights,* including patents and copyrights, were protected. Unpublished data, methods, or results are not used without permission, and all research contributors receive proper acknowledgement.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter contains findings from a study of the mediating effect of organizational learning on the relationship between NBE monetary policy and the profitability of seventeen commercial banks in Ethiopia, including descriptive statistics, diagnostic tests, correlation and regression analysis, and an examination of the research methodology.

4.2 Sample and Response Rate

The questionnaires were designed for the senior management (directors and above) of seventeen commercial banks. The questionnaire was distributed to the study's sample size of 264 respondents. As shown in the table below, 211 of the 264 questionnaires were completed and returned, while the remaining 53 were not. So the overall response rate was 80% (refer to Table 4.1 below). As a result, the analysis is conducted using this valid number of responses.

Table 4.1. Survey Response Rate

Sample Size	264
Completed and returned questionnaires	211
Response rate	80%

Source: Computed from own data survey, 2024

4.3 Demographic Characteristics of the Respondents

The demographics of the study's respondents' characteristics are described in the following table. 145 (68.7%) of the 211 respondents are male, while 66 (31.3%) are female. This demonstrates that men constitute the majority of senior management in the selected commercial banks.

Table 4.2: Frequency Distribution for Gender

Item	Frequency	Percent	Cumulative Percent
Male	145	68.7	68.7
Female	66	31.3	100.0
Total	211	100.0	

Source: Own Survey, 2024

According to the respondents' educational backgrounds (table 4.3), second-degree holders accounted for 60.2%, first-degree holders for 27.5%, and the remaining third-degree PHD holders (12.3%). Based on this finding, we can conclude that second-degree holders of senior management are more dominant than the others. The difference between Percent and Valid Percent in the following tables is that Valid Percent does not count missed data, whereas Percent does.

Table 4.3: Frequency Distribution- Education Background of Respondents

Education Background of Respondents			
Item	Frequency	Percent	Cumulative Percent
First Degree	58	27.5	27.5
Second Degree	127	60.2	87.7
PHD	26	12.3	100.0
Total	211	100.0	

Source: Own Survey, 2024

The data in Table 4.4 reveals that the most common work experience among respondents fell within the 15-20-year range, with 92 individuals (43.6%) having this amount of experience. The next most frequent category was 10-15 years, with 68 respondents (32.2%). Fewer respondents had either more than 20 years (29, or 13.7%) or less than 10 years (22, or 10.4%) of experience. Overall, the data indicate that the majority of respondents have 15-20 years of experience in the banking industry.

Table 4.4: Frequency Distribution- Working experience of the respondents

Working Experience of the Respondents			
Item	Frequency	Percent	Cumulative Percent
Less than 10 years	22	10.4	10.4
10 years-15 years	68	32.2	42.7
15 years-20 years	92	43.6	86.3
Above 20 years	29	13.7	100.0
Total	211	100.0	

Source: Own Survey, computed in SPSS, 2024

4.4. Descriptive Statistics Results

Table 4.5 Descriptive Statistics

	N	Mean	Std. Deviation
Item	Statistic	Statistic	Statistic
RR	211	3.14	.938
LR	211	3.03	1.215
TBP	211	3.09	1.248
FESR	211	3.36	1.432
CCE	211	2.85	1.372
OL	211	3.60	1.273
BP	211	3.65	1.383

Source: Own Survey, computed in SPSS, 2024

Descriptive statistics is critical for determining data normality, choosing a parametric or non-parametric test, and identifying outliers in a data set. The above table displays that the mean value of bank profitability BP (3.65) is higher than the other variables, namely OL (3.60), FESR (3.36), RR (3.14), TBP (3.09), LR (3.03), and CCE (2.85). The mean score for bank profitability indicates that most respondents agreed with the presented profitability measures.

Another descriptive statistic is the standard deviation, which shows how dispersed the data is in relation to the mean. The standard deviation measures the distribution of data around the mean. Lower standard deviation indicated that data points were closer to the mean, implying greater consistency. Reserve requirement (RR) had the lowest standard deviation (0.938), indicating a

high level of consistency in responses. Conversely, foreign exchange surrender requirement (FESR) had a higher standard deviation (1.432), implying a wider range of responses and potentially greater disagreement.

4.5. Assumptions of the Model

To ensure the reliability of the research findings, this paper's model was tested under five multiple linear regression assumptions. The most important of these are the multicollinearity test, heteroscedasticity, normality test, linearity, and error independence. As a result, the tests are described in detail in the subsections that follow.

4.5.1. Multicollinearity Tests

In statistics, multicollinearity occurs when multiple independent variables in a regression model are highly correlated. This can make it difficult to determine how each variable affects the dependent variable. According to (Kennedy, 2008), correlation coefficients greater than 0.7 can cause multicollinearity, which leads to inefficient estimation and less reliable results. This implies that there is no consistent argument over the level of correlation that causes multicollinearity.

Gujarati & Porter (2009) claims that a Variance Inflation Factor (VIF) greater than 10 and a tolerance level near zero indicate a high degree of collinearity between a variable and other independent variable. A tolerance greater than 0.1 and a VIF less than 10 indicate no multicollinearity problem. According to Table 4.6, both conditions are met. All of the independent variables (RR, LR, TBP, FESR, CCE, and OL) have tolerance values greater than 0.1 and VIFs less than ten. This suggests that there is no significant multicollinearity in the regression models.

Table 4.6: Summary of collinearity test

Model.	Collinearity Statistics	
	Tolerance	VIF
RR	.721	1.388
LR	.690	1.449
TBP	.344	2.909
FESR	.454	2.200
CCE	.354	2.826
OL	.263	3.809

Source: Own survey, computed in SPSS, 2024

4.5.2 Heteroscedasticity Test

Consistent results in linear regression are based on the assumption that errors are distributed equally (homoscedasticity) across all levels of the independent variables. When this assumption is violated, the result is heteroscedasticity, which leads to unreliable regression results. To assess heteroscedasticity, this study used the Breusch-Pagan test. A significant p-value (0.05) indicates heteroscedasticity. In this case, the Breusch-Pagan test p-value from Table 4.7 is 0.108, which exceeds the usual threshold. Because the p-value is not significant, the study concludes that there is no heteroscedasticity and that the assumption of homoscedasticity is satisfied.

Table 4.7: Summary of Heteroscedasticity test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.489	6	.082	1.767	.108 ^a
	Residual	9.414	204	.046		
	Total	9.903	210			

a. Predictors: (Constant), RR, LR, TBP, FESR, CCE, OL

Source: Own survey, computed in SPSS, 2024

4.5.3 The Normality Test

Normality means that the residuals, or the difference between the actual outcome values and the values predicted by the model, are normally distributed. This produces a bell-shaped curve when plotted as a histogram or Q-Q plot. The normality assumption helps to produce unbiased estimates of standard errors, which are required when calculating confidence intervals and p values. These statistics show how confident you can be in your model's results and the importance of the relationships between variables.

To test the normality assumption, a residuals histogram was used to determine how well the residuals were distributed normally. Figure 4.1 below shows a residuals histogram for the variable, which has a fairly normal distribution. According to these findings, the dependent variable bank profitability meets the residual normality assumption.

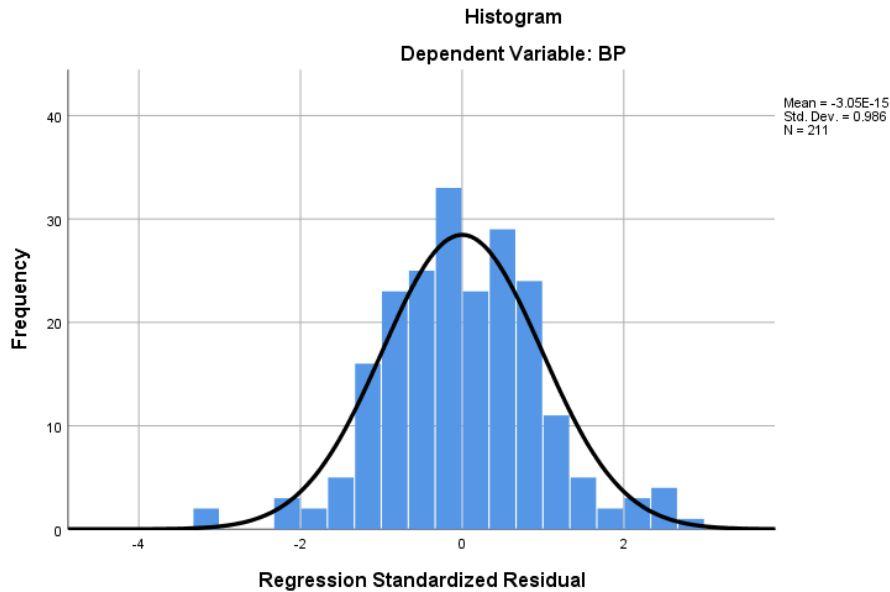


Figure 4.1 Histogram Normality test

4.5.4 The Linearity Test

Multiple linear regression assumes a linear relationship between the dependent (outcome) variable and the independent variables. If the residuals are normally distributed and homoscedastic, the P-P plot should be approximately linear. To test the linearity assumption in multiple linear regressions, the normal P-P plot was used; the plot shows all observed values are distributed along a straight diagonal line, indicating that the regression model's linearity assumption is met.

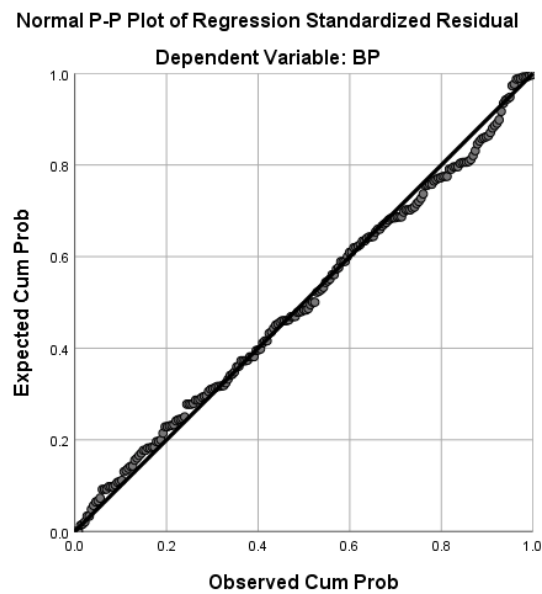


Figure 4.2 P-P plot of normality test

4.5.5 Independent Error

The residual terms are assumed to be independent and without pairwise covariance. This indicates that neither the residuals nor the predicted values are correlated. This assumption states that the regression's errors are independent. The assumption is likely to be met if the Durbin-Watson statistic falls between 0 and 4, but a value near 2 is preferable. The Durbin-Watson statistic test in the table below for this study was 2.156, indicating that the assumption of error independence was fulfilled.

Table 4.8: Summary of Independent error test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.925a	.856	.852	.532	
2	.966b	.933	.931	.364	2.156

a. Predictors: (Constant), CCE, LR, FESR, TBP, RR

b. Predictors: (Constant), CCE, LR, FESR, TBP, RR, OL

c. Dependent Variable: BP

Source: Own survey, computed in SPSS, 2024

4.6 Analysis of Inferential Statistics Results

The purpose of this study is to determine how organizational learning mediates the relationship between NBE monetary policy and commercial banks. Inferential statistics of correlation are used to answer questions about the relationship between two (or more) variables, such as magnitude and direction. And regression analysis is used to answer the question of whether there is a cause and effect relationship between the two variables, and if so, to what extent and in which direction. The results of inferential statistics are presented in the sections below.

4.6.1 Correlation Analysis

A correlation analysis was used to look into the relationships between the independent, mediating, and dependent variables, as well as to test the research hypotheses. This analysis assessed the degree of association between the variables and their ability to forecast how a variable might deviate from the expected norm. Pearson's correlation coefficient (r) was used to specifically

examine the relationship between the explanatory variables, organizational learning, and bank profitability.

The coefficient ranges between -1.0 and +1.0, with higher absolute values indicating a stronger relationship. A positive sign indicates that both variables are increasing or decreasing at the same time, whereas a negative sign indicates that one variable is increasing while the other is decreasing. Values between ± 0.50 and ± 1 indicate a strong correlation. Values between ± 0.30 and ± 0.49 indicate a moderate correlation. Values less than ± 0.29 denote a weak correlation. A value of 0 indicates that the variables have no linear relationship.

As shown in Table 4.9, Pearson correlation coefficients revealed that the five factors measuring NBE monetary policy, such as Reserve Requirement (RR), Liquidity Requirement (LR), Treasury Bond Purchase (TBP), Foreign Exchange Surrender Requirement (FESR), and Credit Cap Expansion, were all negatively related to commercial bank profitability within the range of -.363 to -.861, whereas the mediating variable Organizational Learning (OL) was positive.

Table 4.9: Correlation Analysis

		RR	LR	TBP	FESR	CCE	OL	BP
RR	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	211						
LR	Pearson Correlation	.309**	1					
	Sig. (2-tailed)	.000						
	N	211	211					
TBP	Pearson Correlation	.445**	.532**	1				
	Sig. (2-tailed)	.000	.000					
	N	211	211	211				
FESR	Pearson Correlation	.447**	.394**	.648**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	211	211	211	211			
CCE	Pearson Correlation	.409**	.380**	.687**	.617**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	211	211	211	211	211		
OL	Pearson Correlation	-.493**	-.347**	-.735**	-.700**	-.784**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	211	211	211	211	211	211	

BP	Pearson Correlation	-.493**	-.363**	-.779**	-.748**	-.861**	.935**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	211	211	211	211	211	211	211

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

Source: SPSS Correlation result output, 2024

Table 4.9 indicates a significant negative correlation between commercial bank profitability and all five NBE monetary policies (reserve requirement, liquidity requirement, treasury bond purchase, foreign exchange surrender requirement, and credit cap expansion) and a significant positive correlation with organizational learning ($p < 0.01$). As a result, we can conclude that bank profitability was statistically significantly negatively correlated with all five NBE monetary policies and positively correlated with organizational learning.

Moreover, credit cap expansion exhibited a stronger negative and statistically significant relationship with bank profitability ($r = -.861$) than the other NBE monetary policy dimensions. Following to credit cap expansion, Treasury bond purchase and foreign exchange surrender requirement had also strong negative correlation with $r = -.779$, $r = -.748$ to bank profitability respectively. Reserve requirement and Liquidity requirement had a moderate negative correlation with bank profitability ($r = -.493$) and ($r = -.363$) respectively. However, organizational learning had the strongest positive and statistically significant correlation with bank profitability ($r = .935$).

4.6.2. Regression Analysis

The regression analysis was used to determine the extent to which the independent variable explains the dependent variable and the mediation variable mediates the relationship between the two. It also helps to determine how much each independent variable contributes to the dependent variable. As a result, the researcher performed a regression analysis involving NBE monetary policy, organizational learning as a mediator, and bank profitability. The regression analysis results are shown below. To confirm or reject the hypothesis, the researcher tests the mediating effect of organizational learning on the relationship between the NBE monetary policy and bank profitability.

To conduct mediation analysis, the researcher used a mediation analysis framework outlined by (Baron & Kenny (1986), which included the following sequential steps;

1. Determine the total effect between independent and dependent variables (X and Y)

2. Find the direct effect of the independent variables (X) on the mediation variable (M).
3. Determine the direct effect of independent variables (X) and mediation (M) on dependent variables (Y).
4. Determine the effect of mediation (M) on dependent variables(Y).
5. Test indirect effect for statistical significance.

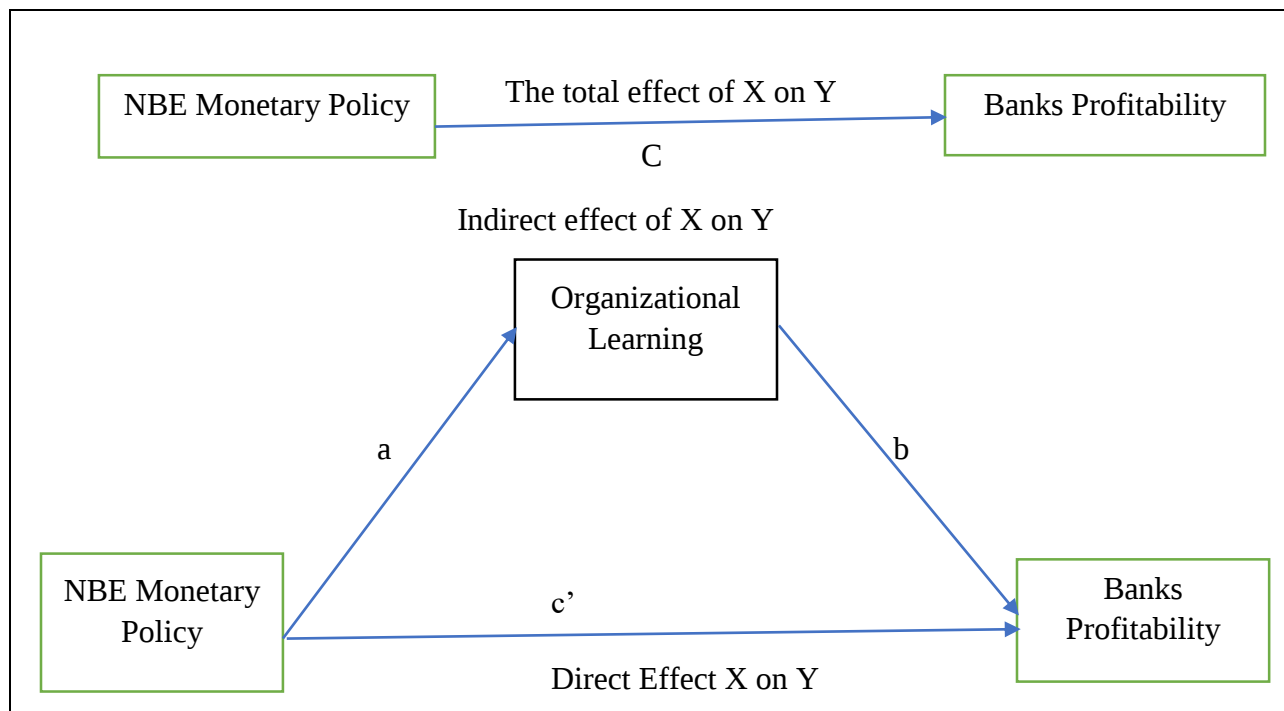


Figure 4.3 the mediation model of organizational learning

This model is based on a three-variable system with two causal paths that lead to the outcome variable: the independent variables' direct impact (Path c) and the mediator's impact (Path b) the path that connect the independent variable and the mediator (Baron & Kenny, 1986).

4.6.2.1. Regression analysis between dependent and independent variables

As illustrated in the figure above, the first step is to assess the overall impact of NBE monetary policy dimensions (reserve requirement, liquidity requirement, Treasury bond purchase, foreign exchange surrender requirement, and credit cap expansion) on commercial bank profitability.

The coefficient of determination (R^2) was used to evaluate the model's ability to accurately predict changes in bank profitability based on independent variables. R^2 represents the percentage of variance in bank profitability that can be explained by the model. It ranges between 0 and 1, with

higher values indicating a better fit. A low R^2 value indicates that the independent variables do not adequately explain the changes in bank profitability (Gujarati & Porter, 2009). To analyze the regression model, the data from SPSS was summarized as follows:

Table 4.10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.925 ^a	.856	.852	.532	.856	242.783	5	205	.000	
2	.966 ^b	.933	.931	.364	.077	234.423	1	204	.000	2.156

a. Predictors: (Constant), CCE, LR, FESR, TBP, RR

b. Predictors: (Constant), CCE, LR, FESR, TBP, RR, OL

c. Dependent Variable: BP

Source: SPSS result output, 2024

Table 4.10 demonstrates that the R square is an important factor in the model summary. The term R refers to the strength of the relationship between the forecast and the results of this research study. The findings indicate that bank profitability is highly dependent on NBE monetary policy. R^2 is the coefficient of determination between the two variables, indicating the percentage of total variance of the dependent variable described by the independent variable.

As shown in the table, the R square for the first model (the direct effect of NBE monetary policy and bank profitability) with the exclusion of the mediator variable is 0.856, or 85.6%. In the second model (the indirect effect of NBE monetary policy and organizational learning on bank profitability) with the inclusion or control of the mediator organizational learning is 0.933, or 93.1%. A high R-square value showed that the model could accurately predict outcomes (Gujarati & Porter, 2009). The higher R-square is acceptable given that there is no inaccurate interconnection in the model and there is no multi-collinearity among the predictor variables (Ozili, 2022). According to the above result implies that NBE monetary policy as dependent variables and organizational learning as a mediating variable explain 93.1% of the variation in bank profitability. The remaining 6.9% variance is described by the stochastic error term (e), implying that 6.9% of (EC) changes are explained by factors not included in the model.

Table 4.11: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	343.701	5	68.740	242.783	.000 ^b
	Residual	58.043	205	.283		
	Total	401.744	210			
2	Regression	374.737	6	62.456	471.760	.000 ^c
	Residual	27.007	204	.132		
	Total	401.744	210			

a. Dependent Variable: BP

b. Predictors: (Constant), CCE, RR, LR, FESR, TBP

c. Predictors: (Constant), CCE, RR, LR, FESR, TBP, OL

Source: SPSS ANOVA result output, 2024

Furthermore, the analysis of variance (ANOVA) results in Table 4.11 revealed the model's statistical significance. The F ratio is significant at .000 levels ($p < 0.05$), indicating the model's significance. This demonstrates that the variation explained by the model is not due to chance.

The first step in analyzing mediation analysis is to determine the statistical significance of the independent variable's impact on the dependent variables. If the effect is insignificant, we don't do mediation analysis because it is the first necessary condition for mediation (Baron & Kenny, 1986). According to Table 4.12, all independent variables except Liquidity Requirement meet this criterion, exhibiting statistically significant effects at the 0.05 p-value level.

Table 4.12: Coefficients of regression: total effect

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.912	.142		48,564	.000
	RR	-.111	.046	-.075	-2.432	.016
	LR	.123	.036	.108	3.418	.001
	TBP	-.310	.047	-.280	-6.540	.000
	FESR	-.245	.036	-.253	-6.759	.000
	CCE	-.528	.039	-.523	-13.565	.000

a. Dependent Variable: BP

Source: SPSS result output, 2024

The table above shows the overall impact of NBE monetary policy on bank profitability. Except for liquidity requirements, NBE monetary policy is negatively associated with bank profitability. The coefficient represents the average change in the dependent variable resulting from a one-unit change in the independent variable. The unstandardized beta coefficients (β) represent each factor's unique contribution to the model. A high beta value (β) and small p-value (0.05) indicate that the predictor variable contributes significantly to the model (George et al., 2003). As a result, the standardized beta coefficient can be used to calculate the strength of each independent (predictor) variable's influence on the criterion.

On the other hand, small beta (β) coefficient and a high p-value (greater than 0.05) indicate that the predictor variable has little or no significant impact on the dependent variable (George et al., 2003). This means that changing that predictor variable is unlikely to produce a significant change in the outcome.

Credit cap expansion is the most significant NBE monetary policy in predicting bank profitability ($\beta = -0.523$), followed by Treasury bond purchases ($\beta = -0.280$), foreign exchange surrender requirements ($\beta = -0.253$), and reserve requirements ($\beta = -0.075$). These variables are significant predictors of bank profitability. Surprisingly, the liquidity requirement has a positive and significant effect on commercial bank profitability ($\beta = .108$).

Furthermore, the table shows that the significance levels of NBE monetary policy (reserve requirement, liquidity requirement significance, Treasury bond purchase, foreign exchange surrender requirement, and credit cap expansion) are less than 0.05. This implies that there is a statistically significant relationship with bank profitability.

4.6.2.2. Regression analysis between dependent and mediator variables

The second step in mediation analysis is to determine whether the independent variable (X) truly influences the mediator (M). If there is no connection between X and M, M loses its role as a mediator and becomes just another variable that may influence the dependent variable (Y). For mediation to be valid, X must have a statistically significant effect on M (Baron & Kenny, 1986). The results in Table 4.13 show that the NBE's monetary policy instruments, such as reserve requirements, liquidity requirements, treasury bond purchases, foreign exchange surrender

requirements, and credit cap expansions, have a statistically significant impact on organizational learning. This finding meets the second criterion for conducting a mediation analysis.

Table 4.13:

Coefficients of regression: The effect of the independent variables on the mediator variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.530	.177		36.965	.000
	RR	-.156	.057	-.113	-2.741	.007
	LR	.103	.045	.098	2.314	.022
	TBP	-.293	.059	-.287	-4.983	.000
	FESR	-.209	.045	-.235	-4.659	.000
	CCE	-.402	.048	-.433	-8.327	.000

a. Dependent Variable: OL

Source: SPSS result output, 2024

4.6.2.3. Regression analysis between mediator and independent variables

In mediation regression analysis, the third step determines whether the middle variable (M) influences the final outcome (Y). If this influence is not statistically significant, it indicates that mediation is unlikely to occur (Fritz & MacKinnon, 2007). Table 4.14 shows a statistically significant relationship between organizational learning and bank profitability, which meets the mediation analysis condition.

Table 4.14: The effect of the mediator variables on the dependent variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.005	.102		-.047	.963
	OL	1.016	.027	.935	38.195	.000

a. Dependent Variable: BP

Source: SPSS result output, 2024

4.6.2.4. Regression analysis between independent and mediating variable on dependent variables

In the final step of mediation analysis, the researcher calculate the indirect effect. Essentially, the last step involves figuring out how much the independent variable affects the dependent variable indirectly, through the mediator. In other words, we figure out how much of the connection between the two main variables can be explained by considering the mediator variable. This indirect effect is often represented in the "ab" path in Figure 4.3. The table below depicts the indirect effect of monetary policy on commercial bank profitability when organizational learning is controlled, as computed by multiple regression using Hayes SPSS Process Macro. Process Macro, created by Hayes (2013), is a software tool that works with SPSS and SAS. It is a bootstrapping technique that enables researchers to investigate how one or more variables may mediate or moderate the relationship between an independent and dependent variable. In other words, Process Macro allows us to understand how a mediating variable explains the effect of the independent variable on the dependent variable, as well as how a moderating variable influences the strength or direction of the effect.

Table 4.15: Coefficients of regression: The indirect effect

constant	Coeff	BootMean	BootSE	BootLLCI	BootULCI
RR	-.020	-.019	.032	-.082	.045
LR	.062	.063	.027	.012	.116
TBP	-.137	-.138	.035	-.206	-.070
FESR	-.121	-.122	.024	-.167	-.075
CCE	-.291	-.291	.034	-.357	-.225
OL	.589	.589	.043	.506	.676
BP					

Source: Hayes SPSS Process Macro result output, 2024

Full mediation occurs when the relationship between the independent variable (X) and the dependent variable (Y) is completely eliminated after accounting for the mediating variable (M). In other words, after accounting for the influence of M, the direct effect of X on Y is statistically insignificant. This indicates that M fully explains the relationship between X and Y. Partial

mediation occurs when the relationship between X and Y weakens but remains statistically significant after accounting for the mediating variable (M). M explains a portion of the original relationship between X and Y, but X continues to have a direct effect on Y. The strength of the mediation effect can be measured by the coefficient that represents X's direct effect on Y.

Based on above table 4.12, liquidity requirements, Treasury bond purchases, foreign exchange surrender requirements, and credit cap expansions all have a significant effect on bank profitability, but their coefficients are reduced by the indirect effect of organizational learning, indicating partial mediation in the table 4.15. On the other hand, the one NBE monetary policy dimension such as reserve requirement (RR) its effect on bank profitability is insignificant in the indirect effect so we can say that there is a full mediation on the relationship between reserve requirement and commercial bank profitability.

Non-parametric bootstrapping is used to investigate the indirect effects. If the null value of 0 is between the 95% confidence interval's lower and upper bounds, the population indirect effect is zero. If 0 lies outside the confidence interval, the indirect effect is assumed to be nonzero. The indirect effect is statistically significant, as shown in the table above, because 0 is outside the 95% confidence interval's lower and upper bounds.

4.6.3 Testing Indirect Effects with Sobel Test for its Statistically Significance

The Sobel test was proposed by Sobel, (1982). The Sobel test determines whether the presence of a middle variable (mediator) in a study significantly reduces the relationship between the initial variable (independent variable) and the outcome. The Sobel test, which statistically assesses this weakening effect, helps to determine whether the mediator has a significant effect. If the statistical test yields a significant result, it indicates that some mediation is taking place, whether fully or partially (Leah, 2017).

The Sobel test statistic helps assess whether a mediation effect is statistically significant. It calculates a Z score which is then compared to critical values. If the Z score falls outside ± 1.96 given a two-tailed alpha of .05, and outside ± 2.58 given a two-tailed alpha of .01 (Preacher & Hayes, 2004).

From the below Table 4.13: displays the results of the Sobel test as well as two additional tests: Aroian and Goodman tests, the test statistics of Liquidity Requirement (LR) core (2.264) fall

outside the critical values of ± 1.96 , indicate a statistically significant result at alpha .05. The test statistics for Reserve Requirement (RR), Treasury bond purchases (TBP), foreign exchange surrender requirements (FESR), and credit cap expansions (CCE) are -2.695, -4.729, -4.4490, and -7.368, respectively, which fall outside the critical values of ± 2.58 , indicating a statistically significant result at alpha 0.01.

Table 4.16: Sobel test for indirect effect

Variable	Input:	Test statistic:	Std. Error:	p-value:
RR	a	Sobel test:	-2.69515103	0.03409234
	b	Aroian test	-2.68972797	0.03416108
	s _a	Goodman test:	-2.70060702	0.03402346
	s _b			
LR	a	Sobel test:	2.26433344	0.02679243
	b	Aroian test	2.2597356	0.02684695
	s _a	Goodman test:	2.26895946	0.02673781
	s _b			
TBP	a	Sobel test:	-4.72929446	0.03649107
	b	Aroian test	-4.72039349	0.03655988
	s _a	Goodman test:	-4.73824596	0.03642213
	s _b			
FESR	a	Sobel test:	-4.44900962	0.0276693
	b	Aroian test	-4.44053759	0.02772209
	s _a	Goodman test:	-4.45753032	0.02761641
	s _b			
CCE	a	Sobel test:	-7.36821375	0.03213506
	b	Aroian test	-7.35637309	0.03218679
	s _a	Goodman test:	-7.38011177	0.03208325
	s _b			

Source: Online Sobel calculator result output, 2024

Where:

a = raw (unstandardized) regression coefficient for the association between IV and mediator.

s_a = standard error of a .

b = raw coefficient for the association between the mediator and the DV (when the IV is

also a predictor of the DV).

s_b = standard error of b .

The researcher used the Sobel test and the Bootstrapping method to test the statistical significance of the indirect effect, and both results showed that organizational learning statistically significantly mediates the relationship between NBE monetary policy and commercial bank profitability.

4.7. Hypothesis Testing

By analyzing both the coefficients and the corresponding p-values, researchers can determine whether to accept or reject the hypotheses developed about the relationships between the variables in the regression model. As a result, the hypotheses were tested in the subsequent section.

Table 4.17: Summary of the overall outcome of the research hypothesis

Items	Statement	Regression coefficients	P-value	Result
Reserve Requirement	H1: Reserve requirements significantly and negatively influence the profitability of commercial banks.	-.075	.016	Null hypothesis rejected
Liquidity Requirement	H1: There is a negative relationship between liquidity requirements and the profitability of commercial banks in Ethiopia.	.108	.001	Fail to reject the null hypothesis
Treasury Bond Purchase	H1: Mandatory purchase of treasury bonds will decrease the profitability of commercial banks in Ethiopia.	-.280	.000	Null hypothesis rejected
Foreign Exchange Surrender Requirement	H1: Foreign exchange surrender requirement negatively impacts the profitability of commercial banks in Ethiopia	-.253	.000	Null hypothesis rejected
Caps on credit expansion	H1: Credit caps on credit expansion negatively impact the profitability of commercial banks in Ethiopia	-.523	.000	Null hypothesis rejected
Organizational Learning	H1: Organizational learning mediates the relationship between National Bank monetary policy and the profitability of commercial banks in Ethiopia.	.542	.000	Null hypothesis rejected

Source: Own survey, computed in SPSS, 2024

4.8. Interpretation and Discussion

The study aimed to analyze the mediating effect of organization learning on the relationship between NBE monetary policy and banks' profitability in the seventeen commercial banks. To address the study objective this chapter employed descriptive and inferential statistics to analyze the data.

Building on previous research, Hoque et al. (2020) investigated the relationship between monetary policy and bank profits in Bangladesh. Their findings revealed that increasing the cash reserve ratio, a key component of monetary policy, resulted in a statistically significant decrease in bank profitability. Similarly, Atlaw (2017) investigated the impact of reserve requirements on commercial bank performance in Ethiopia using time series data from thirteen commercial banks established before the 2010 G.C. The result revealed that reserve requirements lower bank profitability and lending capacity. Mihret, (2020) identified the effect of reserve requirements on commercial bank performance in Ethiopia, focusing on profitability, lending capacity, and cost intermediation. The results of the panel regression model showed that reserve requirements have a negative and statistically significant effect on commercial bank performance. All of these findings are consistent with the regression data analysis results presented above, with standardized coefficients before mediation not included $-.075$ being statistically significant at the 0.05 level of confidence interval. The impact of liquidity requirement on bank profitability is positive, with the coefficient of $.108$ statistically significant due to a p-value of $.001$, which is less than 0.05 which is consistent with (Deneke & Gujral, 2022).

The results of correlation and regression analysis show that reserve requirement, Treasury bond purchase, foreign exchange surrender requirement, and credit cap expansion have a negative impact on commercial bank profitability, whereas the liquidity requirement have a positive impact on commercial bank profitability. The analysis also revealed that organizational learning partially mediates the relationship between NBE monetary policy and banks' profitability, with statistical significance at the $p\text{-value} < 0.05$ level.

Table 4.9 indicates a significant negative correlation ($p\text{-value} < 0.01$) between treasury bond purchases and bank profitability, consistent with (Yesuf, 2016) findings. The purchase of treasury bonds carries almost no risk but yields a lower return. This means that banks must strike

a balance between riskier, higher-paying loans and safer, lower-yielding government bonds. This is because purchasing government bonds yields a lower profit margin than engaging in loans and advances because it prioritizes safety over maximum returns. Consequently, to balance risk, banks must strategically manage their portfolios.

The regression analysis of Table 4.12 of this study, unstandardized coefficients of foreign exchange surrender requirements on commercial banks, was -.253. This implies that the average increase in a unit's foreign exchange surrender requirements reduces bank profitability by 0.253. This result supported by Zelelew (2023) study sought to assess the impact of Ethiopia's central bank's foreign exchange surrender requirements on commercial banks. The study, which used exploratory and descriptive research designs, the findings revealed that the surrender requirement reduces forex mobilization capacity, harms customer relationships, and results in financial losses for commercial banks.

Table 4.12 shows that credit cap expansion leads to a statistically significant decrease in commercial bank profitability at p-value <0.01 level. This decline can be attributed to the limitation banks face in extending loans. When credit caps are imposed, banks have less capital available to lend to borrowers. This restricted lending capacity directly translates into lower profits for the banks. This finding aligns with the research of TIZAZU (2020), Kebede (2014), and Kebede (2014) who also observed a negative impact of credit caps on bank profitability.

According to Table 4.15, the impact of independent variables such as reserve requirements, liquidity requirement, Treasury bond purchases, foreign exchange surrender requirements, and credit cap expansion on bank profitability has decreased due to the introduction of the mediating effect of organizational learning. The statistical significance of the mediating (indirect effect) was checked using the Sobel test and the Bootstrap Method in Hayes SPSS Process Macro. The results show that organizational learning partially mediates the relationship between NBE monetary policy and bank profitability.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS & RECOMMENDATIONS

5.1 Summary of Findings

The main objective of the study is to investigate the impact of NBE monetary policy (reserve requirement, liquidity requirement, Treasury bond purchase, foreign exchange surrender requirement, and credit cap expansion) on banks profitability mediating organizational learning: the case of seventeen commercial banks of Ethiopia. As a result, this paper was analyzed using 211 questionnaires collected and completed by the participants in the study.

The researcher used descriptive analysis (mean, standard deviation, and percentages) as well as inferential analysis to obtain respondents' perceptions of the mediating effect of organizational learning on the relationship between NBE monetary policy and the profitability of Ethiopian commercial banks. The summaries of the main findings and core points from the analysis are presented below:

Descriptive analysis on NBE monetary policy dimensions, as well as the mediating effect of organizational learning, revealed that the mean score for organizational learning measures was relatively high (3.60). This indicates that banks' ability to adapt and learn from the NBE's policies plays a crucial role in their overall performance. Following organizational learning, the Foreign Exchange Surrender Requirement (FESR) emerged as the second most impactful (mean score of 3.36). The FESR mandates banks to surrender a portion of their foreign exchange earnings to the central bank, influencing the availability of foreign currency within the banks. Next in line were the Reserve Requirement (RR) (mean score of 3.14), Treasury Bond Purchase (TBP) (mean score of 3.09) and Liquidity Requirement (LR) (mean score of 3.03). The LR specifies the minimum amount of liquid assets that banks must hold, affecting their lending capacity. TBPs involve purchasing treasury bonds from the NBE, which affects the amount of money available for lending. Credit Cap Expansion (CCE) (mean score of 2.85) had slightly lower average scores. CCE refers to the NBE raising the limit on how much banks can lend, whereas RR specifies the minimum amount of reserves that banks must maintain with the central bank. Finally, the study discovered

the highest mean score (3.65) for measures of bank profitability. This suggests that most respondents agreed that the NBE's monetary policies have an impact on bank profitability.

As per inferential statistics result, Pearson coefficient correlation displays that the five factors measuring NBE monetary policy (reserve requirement, liquidity requirement, Treasury bond purchase, foreign exchange surrender requirement, and credit cap expansion) were all negatively related with bank profitability but the mediating variable organizational learning was positively related with banks profitability. Significance levels of these variables were 0.000, which are less than 0.05.

The multiple regression analysis results show that independent variables NBE monetary policy and mediating variable explain 93.1% of the variation in commercial bank profitability (R square is 0.933 and adjusted R square is 0.931). Furthermore, the significance value of F statistics was.000, which is less than $p < 0.05$, indicating the model is significant. Credit cap expansion played a significant role among NBE monetary policy in predicting commercial bank profitability, with a beta value of -0.523. The other four NBE monetary policy dimension, in their descending order of contribution to bank profitability as shown from standardized coefficients, are Treasury bond purchase ($B = -.280$), foreign exchange surrender requirement ($B = -.253$), reserve requirement ($B = -.075$), and liquidity requirement ($B = .108$). However, the impact of liquidity requirement was positive and statistically significant.

The introduction of organizational learning as a mediating factor has reduced the direct influence of monetary policy tools of the National Bank of Ethiopia (NBE) on bank profitability. In other words, while the NBE's policies can have a direct impact on bank profits, the indirect effect has become somewhat weaker as banks have learned to adapt and potentially mitigate some of the consequences of these policies. Based on the results of the Sobel test and the Bootstrap Method, organizational learning has a statistically significant mediating effect (indirect influence). As a result, organizational learning plays a partial mediating role in the relationship between NBE monetary policies and bank profitability.

5.2 Conclusion

The study's goal was to look into how NBE monetary policy (reserve requirement, liquidity requirement, Treasury bond purchase, foreign exchange surrender requirement, and credit cap

expansion) affect bank profitability while mediating organizational learning: the case of seventeen Ethiopian commercial banks. Based on the findings, reserve requirements have a negative impact on commercial banking profitability. An increase in the holding amount reserve on NBE restricts commercial banks' ability to lend to customers while also raising their funding costs. The liquidity requirements have a positive impact on bank profitability. Banks that keep at least 15% of their net current liabilities in reserve to meet their obligations help them manage liquidity risk more effectively and improve customer satisfaction and loyalty by increasing customer confidence.

Treasure bond purchase has a negative impact on commercial bank profitability. The mandatory of such purchasing treasure bonds limits banks' ability to invest in other profitable ventures like corporate bonds or loans ultimately lowering the banks' profit margins. Foreign exchange surrender requirements, which require commercial banks to surrender their clients' forex generation to the central bank, have a negative impact on commercial banks because it reduces the generation of service charges associated with these forex transactions. The expansion of credit caps is the most significant independent variable that negatively affects bank profitability statistically. This implies that commercial banks will find it more difficult to pay depositor interest and less able to lend their assets at the maximum level if NBE places more credit caps, which will ultimately hurt their profitability.

The mediating role of organizational learning the bank's ability of banks to learn and adapt can mitigate the negative effects of central bank policies like reserve requirements, bond purchases, foreign exchange rules, and credit caps. This is because, while these policies still have an impact, their negative impact on profitability is mitigated when a bank exhibits strong learning capabilities. Simply put, banks that can learn and adjust their strategies can mitigate the effects of these policies while also benefiting from monetary policy changes.

5.3 Recommendations

The researcher has made the following recommendations based on the findings.

For National Bank of Ethiopia (NBE)

- NBE should consider the impacts on performance of commercial banks when revise the monetary policy measures such as reserve requirements, bond purchases, foreign exchange rules, and credit caps.

- Reserve requirements negatively impact commercial bank profitability. As a result, it is proposed that the National Bank of Ethiopia establish minimum reserve requirements that are proportionate to banks' performance and economic condition in order to improve commercial banks' financial performance and economic growth by lowering reserve requirements, allowing commercial banks to lend more to investors and the general public.
- The NBE should reduce the amount of foreign exchange surrendered by commercial banks due to their inability to meet customer demands, which would result in lower revenue from associated forex transactions.
- Requiring commercial banks to purchase treasury bonds limits their ability to invest in more profitable ventures. Therefore, it is recommended to reduce the percentage of treasury bonds purchased.
- The NBE should reconsider credit expansion caps for commercial banks, which have a significant negative impact on profitability.

For Commercial Banks of Ethiopia

- Commercial banks should maintain liquidity in order to increase their profitability and contribute to a country's development while fulfilling customer obligations. This helps manage liquidity risk and improve customer satisfaction by boosting confidence.
- To curtail the negative impact of reserve requirements, bond purchases, foreign exchange rules, and credit limits on bank profits, banks should implement organizational learning through diversify their revenue streams and expand beyond lending. This can be accomplished by implementing new or increased service fees for existing services to compensate for the effects of loan restrictions. To earn commissions and fees, wealth management services are expanding their offerings to include investment products and financial planning. Investing in user-friendly digital banking platforms to attract new customers, streamline operations, and provide competitive online financial products that earn money through fees. Last but not least, banks must prioritize their loan portfolios for customers who generate high-margin profits or provide additional benefits such as foreign currency.
- Commercial banks should encourage organizational learning to capitalize on monetary policy changes and predict their impact on markets. Organizational learning promotes the

development of management agility and strong leadership, allowing leaders to stay current with changing market conditions and adjust their strategies accordingly.

5.4. Future Research Directions

The sample size for this study was limited to seventeen commercial banks in Ethiopia that opened before 2020, but there are now thirty-one banks in Ethiopia. In this regard, future research may conduct industry-wide or nationwide studies by increasing the sample size to broaden and apply the conclusions and recommendations.

Furthermore, the study used primary data to examine new NBE monetary policy measures such as foreign exchange rules and credit caps; in the future, other researchers may use time series secondary data.

Other researchers as a framework for future research; it is preferable to include additional variables influencing commercial banks, such as interest rates, open market operations, bank size and so on.

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APPENDIXES A

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF MANAGEMENT

Dear Respondents,

I am conducting a research study as part of my Master's degree in International Business, focusing on the title "The Mediating Effect of Organizational Learning on the Relationship between NBE Monetary Policy and Selected Commercial Banks of Ethiopia Profitability."

The purpose of this questionnaire is to gather your insights and opinions on this topic. Your responses will be completely confidential and will not be used to identify you individually. By participating in this survey, you will play a vital role in shaping the findings of this research. Your honest and thoughtful responses will be essential in understanding the complex relationship between NBE monetary policy, organizational learning, and bank profitability in Ethiopia.

Please take a few minutes to complete the questionnaire to the best of your ability. There is no need to write your name.

Thank you very much for your time and cooperation!

Sincerely,
Hailemeskel Wegayehu

Phone Number: +251947887429

Email: hailemeske29@gmail.com

General Instructions: Please Put (ü) mark in the box provided next to each choice

Part-I: Demographic Information of Respondents

1. Gender: Male ☐ Female ☐
2. Educational background A) First Degree ☐ B) Second Degree ☐ C) PHD ☐
3. How long have you been employed in the banking industry?
 A) Less than 10 years ☐ B) 10 years – 15 years ☐ C) 15 years – 20 years ☐
 D) Above 20 years ☐

Part-II: Question related to NBE Monetary Policy

Please fill out the questionnaire with the following degrees of agreement:

Strongly Disagree= 1 Disagree= 2
 Neutral= 3 Agree= 4 and
 Strongly Agree=5

1) Reserve Requirement (RR)

S.NO	Item	1	2	3	4	5
1	The Reserve Requirement (RR) significantly limits commercial banks' capacity to lend to customers.					
2	Reserve Requirement (RR) increases the cost of funds for banks.					
3	RR effective in achieving its intended purpose (e.g., managing inflation, maintaining financial stability).					
4	The current level of the RR is appropriate for the current economic situation.					
5	Commercial banks are able to effectively offset the profitability impact of the reserve requirement by adjusting their pricing strategies.					
6	Requiring banks to hold a certain amount of reserves reduces the risk of bank runs by ensuring banks have enough cash on hand to meet customer withdrawals, even in times of crisis?					
7	Overall, RR adversely affects commercial bank profitability.					

2) Liquidity Requirements (LR)

S.NO	Item	1	2	3	4	5
1	Liquidity requirements about how much cash banks need to hold back shrink the pool of money available for loans.					
2	Increased liquidity requirements will likely force banks to borrow funds at a higher cost, which could reduce their profitability.					
3	Liquidity requirement helps banks manage their liquidity risk more effectively.					
4	The liquidity requirement improves customer satisfaction and loyalty to banks by increasing customer confidence in their ability to access their funds when needed					
5	Enforcing liquidity requirements, which make sure banks have readily available funds, creates a stable financial system, ultimately driving economic growth.					
6	LR has a negative impact on the profitability of commercial banks					

3) Treasury Bond Purchases (TBP)

S.NO	Item	1	2	3	4	5
1	The mandatory treasury bond purchase requirement (20% of loans and advances) has a negative impact on banks' ability to lend to customers.					
2	The TBP requirement has limited banks' ability to invest in other profitable ventures.					
3	The NBE's mandatory bond purchase requirement has made it more difficult for banks to interact with and meet the needs of its borrowers					
4	The TBP requirement has led to a lower the banks' profit margins.					
5	Banks could potentially earn higher returns by investing in alternative assets like corporate bonds or loans instead of holding TBP.					
6	The TBP requirement gives the bank the option to invest in secure and promising government bonds.					

4) Foreign Exchange Surrender Requirement (FESR)

Survey questionnaire developed as a source from Yonas Z. (June 2023).

S.NO	Item	1	2	3	4	5
1	The FSR has limited banks' ability to engage in foreign exchange transactions with their clients, reducing the generation of service charges associated with these transactions.					
2	The FESR has increased banks' exposure to foreign exchange rate fluctuations.					
3	The FESR has had a negative impact on banks' ability to provide foreign exchange services to their customers.					
4	The FESR has forced banks to become more efficient in their use of foreign exchange.					
5	Requiring banks to surrender their foreign currency to the NBE contributes to balancing the balance of payments.					

5) Caps on Credit Expansion(CCE)

S.NO	Item	1	2	3	4	5
1	CCE has led to a decrease in banks' net interest income.					
2	CCE reduces the profitability of banks by lowering their interest income and increasing their funding costs.					
3	Caps on credit expansion make it more difficult for banks to attract and retain customers.					
4	CCE has forced banks to find alternative sources of income to maintain profitability.					
5	The CCE has been effective in achieving its intended goals (e.g., reducing inflation)?					

Part-III: Question related to Organizational Learning

Organizational Learning

S.NO	Item	1	2	3	4	5
1	Effectively utilizing organizational learning allows banks to capitalize on opportunities arising from monetary policy shifts.					
2	A higher level of organizational learning within a bank is positively related to profitability.					
3	By fostering continual learning and growth, as well as acquiring, storing, and transferring individual knowledge to organizational knowledge among employees, it reduces the negative impacts of monetary policy changes on profitability.					
4	Bank management's learning agility and decision-making abilities are positively correlated with income stream diversification, which reduces banks' exposure to monetary policy shifts.					
5	Management competency and portfolio management reduce the impact of monetary policy on banks profitability.					
6	Bank's learning and adaptation capabilities influence its ability to respond effectively to changes in monetary policy					
7	My bank encourages a culture of learning and adaptation to changing market conditions.					

Part-IV: Question related to Bank Profitability***Bank Profitability***

S.NO	Item	1	2	3	4	5
1	The banks' profitability in terms of net interest income generated from credit products is being negatively affected by the recent NBE monetary policy.					
2	The current new NBE Monetary Policy reduces commercial banks' ROA because banks are unable to use their assets to their full potential for profit.					
3	The current monetary policy will likely reduce the profitability of commercial banks, leading to lower returns for shareholders (Return on Equity).					
4	Diversifying revenue streams other than net interest income can help commercial banks mitigate the negative impact of monetary policy changes on their profitability.					
5	Overall, the incremental rate of commercial banks profit is decreasing because of the monetary policy set by NBE.					