



**NEAR EAST UNIVERSITY**  
**INSTITUTE OF GRADUATE STUDIES**  
**DEPARTMENT OF BUSINESS ADMINISTRATION**

**THE EFFECTS OF BANKING PERFORMANCE ON THE ECONOMIC  
GROWTH OF CAMEROON**

**MBA THESIS**

**PETER FUH**

**Nicosia**

**January, 2023**

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**MASTER THESIS**

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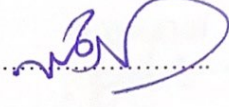

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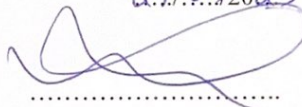
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**January 2023**

### Approval

We certify that we have read the thesis submitted by PETER FUH titled “**the effects of banking performance on the economic growth of Cameroon**” and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Educational Sciences.

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**Declaration**

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

PETER FUH

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### **Acknowledgments**

Special thanks to my supervisor Prof. Dr. Ala Fathi Assi for her endless efforts throughout in correcting and criticisms, which led to the realization of this project.

My special thanks to the department of business administration and my lecturers who made it possible academically for me to attain my objectives.

Gratitude to my brother Augustine Ndi for his assistance financially and morally throughout my study process.

I also want to thank God almighty for granting me the health and will to undergo this study and come out successfully

## **Abstract**

### **The Effects Of Banking Performance On The Economic Growth Of Cameroon**

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**Masters Business Administration (MBA)**

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**January, 2023**

The importance of the banking sector to the economic growth and development of a country cannot be undermined. This is the rationale behind the researcher's investigation on the impact of bank performance on Cameroon's economic expansion. This study makes use of time series data spanning from 1972 to 2020; bank performance was measured with the use of the following proxies; profitability, bank capital to asset ratio, net interest margin and bank deposits, while economic growth was measured based on Gross Domestic Product (GDP). With the use of the VAR model the researcher arrived at the following conclusions; In Cameroon during this time, there was no long-term correlation between economic growth and bank performance; Bank deposits were shown to be statistically significant at 5% and to be negatively correlated with Cameroon's economic growth. Based on these conclusions, the researcher suggested that the government adopt strategies for economic growth that will raise GDP per capita levels. Lastly, the government should make sure that banks operate within the regulations governing banking institutions. This is done to provide guidance against fraud in the financial industry.

**Key words:** Profitability, Bank Capital to Asset Ratio, Net Interest Margin, Bank Deposit, Economic Growth

## Özet

### Bankacılık Performansının Kamerun Ekonomik Büyümesine Etkileri

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Yüksek Lisans İşletme (MBA)

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Ocak, 2023

Bir ülkenin ekonomik büyüme ve kalkınmasında bankacılık sektörünün önemi göz ardı edilemez. Bu, araştırmacının banka performansının Kamerun'un ekonomik büyümesi üzerindeki etkisine ilişkin araştırmasının arkasındaki mantıktır. Bu çalışmada 1972'den 2020'ye uzanan zaman serisi verileri kullanılmıştır; banka performansı aşağıdaki proxy'ler kullanılarak ölçülmüştür; karlılık, banka sermayesinin aktif oranı, net faiz marjı ve banka mevduatı, ekonomik büyüme ise Gayri Safi Yurtiçi Hasıla (GSYİH) üzerinden ölçülmüştür. Araştırmacı, VAR modelini kullanarak aşağıdaki sonuçlara varmıştır; Kamerun'da bu süre zarfında ekonomik büyüme ile banka performansı arasında uzun vadeli bir ilişki yoktu; Banka mevduatlarının %5 ile istatistiksel olarak anlamlı olduğu ve Kamerun'un ekonomik büyümesi ile negatif korelasyon gösterdiği gösterildi. Araştırmacı, bu sonuçlara dayanarak, hükümetin ekonomik büyüme için kişi başına düşen GSYİH düzeylerini artıracak stratejiler benimsemesini önerdi. Son olarak, hükümet, bankaların bankacılık kurumlarını yöneten düzenlemeler çerçevesinde faaliyet gösterdiğinden emin olmalıdır. Bu, finans sektöründe dolandırıcılığa karşı rehberlik sağlamak için yapılır.

**Anahtar kelimeler:** Karlılık, Banka Sermayesinin Aktif Oranı, Net Faiz Marjı, Banka Mevduatı, Ekonomik Büyüme

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## List of Abbreviations

GDP	gross domestic product
CAR	capital asset ratio
CEE	central and eastern European
ROA	return on assets
ROE	return on equity
MARS	multivariate adaptive regression splines
GFCF	gross domestic fixed capital formation
LATA	liquid assets to total assets
TLTD	total loans to total deposits
ATM	automated teller machine
ARDL	autoregressive distributed lag
CEMAC	economic and monetary authority of central African states
NFC	National financial credit
BEAC	bank of central African states
CCC	community credit company
SCB	Société Camerounaise de banque
BICIC	banque international pour le commerce et l'industrie du Cameroun
SGBC	Société generale des banques du Cameroun
BIAO	banque internationale pour l'Afrique occidentale
VAR.	vector autoregressive cointegration
ADF	augmented dickey fuller



## CHAPTER I

### Introduction

Economic growth and development are greatly influenced by bank performance, particularly in emerging nations. One of the main forces driving Cameroon's economic expansion has been identified as the banking sector. The analysis of how bank performance affects economic growth is crucial because it offers helpful information for financial analysts and policymakers to establish plans that support long-term economic growth. The results of various research looking at the connection between bank performance and economic development in Cameroon have been conflicting. While some studies show a beneficial association between bank performance and economic expansion, others point to a tenuous or even antagonistic connection. For instance, whereas Fokam et al. (2018) demonstrate a poor correlation between bank performance and economic expansion, Fomba et al. (2019) discovered a favorable influence of bank performance on economic growth. Notwithstanding the conflicting data, it is critical to continue researching the link between bank performance and economic growth in order to get further knowledge that will improve the efficiency of policies meant to support sustainable economic development in Cameroon.

#### 1. Background of the Study

The effects of the banking industry on economic progress of a nation has been studied by a number of academics. One standout researcher on this subject matter is Schumpeter (1911). Schumpeter stressed on the importance of financial intermediaries and their role in innovation and growth. The banking industry is a vital significant indicator that supports the economic growth and development of any particular country, as can be observed from Schumpeter's works. (Islam, Ruhul , & Sazib, 2019). It is through this sector that trade is being facilitated through credit extension and deposits. Additionally, in order to support investments and encourage economic growth, a nation's financial system is crucial for its economic improvement since it may reallocate money from surplus to deficit areas. (Abusharbeh, 2017).

According to Levine (1997), financial development which incorporates the development of the banking system a country plays a vital role in mobilizing and subsequently efficiently allocating capital to stimulate economic activities in the country which include the acquisition and supply of commodities and services.

Giovannini et al. (2013) had a similar perspective, viewing financial development as a tool to aid businesses in improving their capacity for risk management, promotion of innovative activities and reduce the cost of information in circulation thereby helping in the efficient allocation of financial resources into income generating activities that can push the economy to sustainable economic growth. Furthermore, Aghion et al. (1999) presented the argument that countries that have neglected the development of her financial markets or countries whose financial systems were underdeveloped were characterized by slow economic growth and development. This results from the lack of channels where savings can be connected to investment schemes, thus preventing liquid cash from reaching investors in time for effective investment decision making. In some cases, the absence of these key players to economic growth contribute to economic recession experienced by some of these countries, most especially the third world countries. It should be highlighted that the evolution of financial systems does not always follow a smooth course. This is due to the possibility that the financial system will not support growth during times of economic uncertainty, such as financial crises or political unrest. Prochniak and Wasiak (2017); Loayza and Ranciere (2006). Taking into account the function that the banking industry plays in a nation's economic growth, the performance of banks in financial terms can be measured in terms of bank profitability and financial stability. When banks experience an increase in profitability, this indicates a corresponding increase in bank performance. The performance of the bank can also be examined in accordance to bank solvency. The bank's capacity to pay its debts is indicated by this. When the solvency position of a bank is good, it shows that the bank is performing strongly and can attract more investment and development possibilities from investors. One regulatory organ that has controlled the activities of banking institutions is the government through her fiscal monetary policy discharge via the central bank (Hamza, 2014).

From the above literature, it can be seen that most of the published researched have laid emphasis on presenting the correlation between growth and financial development, and a lot of research has not been executed on the impact on which the performance of the banking system has on economic growth separately. Rather, these works have incorporated these key indicators as part of financial development as a whole. One of the most significant conclusions from studies on banking performance is that there is a link between the banking system and economic expansion, with bank development assessed by the ratios of credit to GDP, money supply to GDP, and



deposits to GDP. Beck and Levine (2004), Abubakar and Gani (2013), Dawson (2008). Additionally, it was determined that there exists a favorable correlation between bank performance and economic growth (Al-Khulaifi et al. 1999; Cole et al. 2008). With the help of variables like profitability, bank capital-to-asset ratio, net interest margin, bank deposit, return on asset, return on equity, and finally GDP, this study aims to investigate how the performance of Cameroon's banks affects the growth of the economy of the nation. The central bank (BEAC) and the commercial banks make up Cameroon's banking system. Commercial banks' operations within the country's borders are under the authority of Cameroon's central bank. For the sake of this study, the researcher's attention will be drawn more to the activities of commercial banks in Cameroon.

### **1.1 Research Objectives**

The primary research objective (the study's goal) and the specific research objectives are listed below.

#### **1.1.2 Main Research Objective**

Examining the impact of banks performance on Cameroon's economic expansion is the primary research goal of this study.

##### **1.1.2.1 Specific Research Objectives**

- To investigate the effect of bank capital to asset ratio on the economic growth of Cameroon.
- To evaluate the effect of bank profitability on the growth of the economy of Cameroon.
- To verify the effects of net interest margin on Cameroon's economic development
- To analyze the repercussions of bank deposit on the growth of the economy of Cameroon.
- To evaluate the effect of return on asset and return on investment on Cameroon's economic development

## **1.2 Statement of the Research Problem**

The banking industry, which is active in the economies of all nations, whether developed or developing, can be regarded as one of the most significant sectors in financial systems, (Almahadin et al., 2020). The financial sector in Cameroon is being conquered by banking transactions and it plays an important part to economic growth in the country. This sector through saving accounts collects idle cash from households and redirects these finances to investors in the form of loans for investments which in turn boost economic activities and growth in the country.

In Cameroon, the operations of commercial banks have made certain the availability of financial resources ready for investors to make use of and spur the economy to growth. Despite this, the economic growth of Cameroon is still slow. One reason is because of the fact that investors feel reluctant to collect loans from banks for investment purposes due to the high interest rates charged by these banks. This slows down the business climate of the country and intern inhibits economic growth in the country. In order to best articulate this problem, the following research problems were formulated.

The connection between banks and economic expansion has been the focus of debate for a long time. There has been substantial expansion and change in the banking sector in Cameroon recently, although it is unclear how much of a positive impact this growth has had on the nation's overall economic progress. The goal of this study is to evaluate the performance of Cameroon's banks and how that performance affects the nation's economic development. The study will evaluate the effects of several indicators on economic growth, including bank capitalization, liquidity, and loan portfolios.

In addition to informing policy choices targeted at enhancing bank performance and promoting economic growth, this research seeks to offer insightful information about how the sector of banking contributes to economic growth in Cameroon.

## **1.3 Research Questions**

The main research question and the specific research questions are the two categories into which the research questions are structured.

### **1.3.1 Main Research Question**

The primary research question is, what is the repercussion of bank performance on the economic expansion of Cameroon?

#### **1.3.1.2 Specific Research Questions**

The specific research questions include the following;

- What effects does bank capital to asset ratio have on the economic development of Cameroon?
- How does bank profitability affect Cameroon's economic development?
- To what extent does net interest margin affect the economic development of Cameroon?
- What repercussions does bank deposit have on Cameroon's economic growth?
- How does return on investment (ROA and ROE) affect the economic development of Cameroon?
- 

### **1.4 Research Hypothesis**

The research hypotheses are stated in the null form;

H<sub>0</sub>: Bank profitability has no significant effect on the economic growth of Cameroon.

H<sub>0</sub>: Bank capital to asset ratio has no significant effect on the economic growth of Cameroon.

H<sub>0</sub>: Net interest rate margin does not affect the economic growth of Cameroon.

H<sub>0</sub>: Return on asset and return on investment has no significant effect on the economic growth of Cameroon.

### **1.5 Innovation of the Research**

As innovation, this research seeks to add to existing literature on the relationship between bank performance and economic growth. Very few studies have been conducted in this context specifically using Cameroon as a cases study. This research will be among the first works to be conducted in Cameroon using bank deposits as a measure of bank performance to evaluate the effect of bank performance

on the economic growth of Cameroon. The findings and recommendations of this research will provide the government of Cameroon with possible ways through which economic growth can be increased.

### **1.6 Limitations of the Study**

As part of the limitation for this study, access to information was an issue, considering that very few research has been conducted on the impact of bank performance on economic growth in Cameroon using bank deposit as a yard stick to measure bank performance. Furthermore, the researcher had financial limitations as this affected the rate at which the researcher had access to information. Some articles online needed to be purchased, this was a bid challenging to the researcher.

Another limitation in this study is the time frame, the researcher has to work within datelines in order to have access to data needed for the study, and furthermore the time frame was too small for the researcher. This posed a serious challenge to the researcher. Data collection was a serious limitation to the researcher, access to world development statistics for Cameroon was a bid challenging. Also getting data from the ministry of finance, ministry of economy and the ministry of small and medium size enterprises in Cameroon was difficult because of administrative bottlenecks couple with the fact that some workers of this institution demanded financial incentives in order to provide the information needed by the researcher. This problem made the researcher to rely more on data from the world development indicators that was accessed online and without any cost attached to.

The small sample size of banks employed in the study is another drawback. The results may not be as generalizable as they may be because Cameroon has fewer banks than other nations. Furthermore, because the study concentrates on the banking industry, it ignores the influence of other financial institutions that can also have an impact on economic growth, such as unofficial lending sources.

Finally, this study does not look at other potential variables that can affect the association between bank performance and economic growth in Cameroon. For instance, the study does not consider how government regulations, policies, and other macroeconomic issues may affect the banking industry and economic expansion.

## **CHAPTER II**

### **Literature Review**

#### **2.1 Introduction**

There are three sections in this chapter which constitutes; conceptual literature, where concepts relating to bank performance and economic growth are being reviewed, followed by theoretical literature, where theories relating to bank performance and economic growth are being reviewed by the researcher. This section continues with empirical literature, here the research reviewed the works of other author on the main issue that is being discussed. This chapter ends with knowledge gap and the contribution of the researcher to knowledge.

#### **2.2 Conceptual Literature Reviews**

In this section, the research reviews the following concepts and their relationship with economic growth.

##### **2.2.1 The Concept of Economic Growth**

Increases in a nation's output of services and products are referred to as economic growth. Economic growth occurs when people and resources are being rearranged in ways that are more productive. It should be noted that economic growth statistics do not address how these products and services are generated; rather, they focus on the quantity and quality of goods and services produced by a nation over the course of a year. Muringani (2021).

Economic growth however can be achieved in any of the following ways;

**Production increase:** Increasing the amount of goods and services produced can lead to economic growth. This can be accomplished by making investments in new technology, enhancing infrastructure, and hiring more people.

**Quality improvement:** Improving the quality of the services and products produced is one way the economy can thrive. This can be accomplished by making investments in R&D, enhancing training and education programs, and utilizing automation more frequently. **Increase in demand:** Increasing the desire for products and services is another way to boost the economy. Expanding the population, boosting consumer confidence, and increasing government investment can all help with this.

**Market expansion:** Market expansion is a means of achieving economic growth. Increasing exports, expanding into new markets, and enhancing trade infrastructure are all ways to do this.

**Investment growth:** Investment growth is a key component of economic expansion. This can be accomplished through luring in outside capital, raising public infrastructure spending, and enhancing the business climate.

**Technological progress:** Economic growth is possible with the help of new technologies. This can be accomplished through increasing the use of automation, enhancing research and development, and investing in new technologies.

**Entrepreneurship:** Business success can lead to economic expansion. This can be accomplished through supporting small enterprises, offering rewards for creativity, and expanding financial access.

Economic growth is a crucial component of economic development and is essential for advancing Cameroon's sustainable economic growth. A rise in the actual production of products and services inside a nation during a given time period is referred to as economic growth. The Gross Domestic Product (GDP) or Gross National Product (GNP) per capita is typically used to measure it. Since Cameroon is working to boost its economy and lower poverty rates, the idea of economic growth is extremely important to the nation. Over the past few decades, Cameroon has seen unequal economic growth. The average yearly growth rate for the nation from 1990 and 2018 was 4.5%, per the World Bank (2020). This growth rate was marked by swings and slow growth stretches. For instance, the COVID-19 pandemic's effects were mostly to blame for the growth rate dropping to 3.5% in 2018. However, Cameroon's economy has recently begun to show indications of growth, particularly in areas like infrastructure development, tourism, and agriculture.

Economic growth, according to a research by the International Monetary Fund (IMF), is crucial for raising living standards, decreasing poverty, and fostering economic development (IMF, 2016). The World Bank also points out that economic expansion generates business possibilities, jobs, and higher incomes, resulting in more wealth for people individually and for society at large (World Bank, 2020). However, economic growth can also have unfavorable outcomes, such as a rise in income disparity, deterioration of the environment, and resource depletion. This emphasizes how crucial it is for economic practices and policies to take sustainability and inclusive growth into account.

There are various ways through which economic growth can be measured, this includes inflation and other adjustments for financial service Xu et al, (2021). According to Nasir et al (2021), other determinants of economic growth include foreign investment, population growth, corruption and government spending. GDP as a proxy will be used to measure economic growth in this study.

The lack of investment is one of the issues preventing Cameroon's economy from growing. The Cameroonian government has been working to enhance the business environment, notably by putting measures into place that will lessen red tape, increase access to capital, and foster a more stable economic climate. However, there is still opportunity for development, and the nation needs to take additional steps to encourage entrepreneurship and draw in international investment. The inadequate infrastructure in Cameroon is another element that hinders economic expansion. The nation lacks an extensive road network, an adequate power supply, and other crucial infrastructure like telecommunications and water supply. By lowering operating costs and raising productivity, improving the infrastructure will have a big impact on the economy of the nation.

In order to achieve sustainable economic growth, Cameroon must concentrate on strengthening the investment climate and infrastructure. Economic growth is a crucial component of the country's economic development. According to the World Bank (2020), in order to achieve sustainable economic growth, Cameroon should concentrate on enhancing the business climate, increasing investments in human capital, and tackling structural issues including corruption and poor governance.

### **2.2.1.1 Forms and Types of Economic Growth**

**Structural Economic Growth:** Structural economic growth is the expansion that results from a change in the economic structure as resources are transferred from low- to high-productivity sectors. In nations like China and India, where the industrial and services sectors have grown quickly over the past few decades, this type of growth has been noted (Piketty, 2014). Economic growth has been shown to benefit from infrastructure investment. Research conducted by the Organization for Economic Co-operation and Development (OECD) indicates a long-term 1.5% rise in GDP might result from a 1% increase in infrastructure investment as a percentage of GDP (OECD, 2014). Having a highly skilled workforce is crucial for long-term economic expansion. According to a World Bank study, a 1% increase in the percentage of people having

postsecondary education can result in a 0.6% rise in GDP per person (World Bank, 2018). In general, policies and investments that support infrastructural development, trade liberalization, technical innovation, and entrepreneurship are necessary for structural economic growth.

**Productivity-driven Economic Growth:** This is growth that results from increases in labor and capital productivity. This type of growth has been seen in nations like the United States and Japan where technological advancements have significantly increased production (Solow, 1957). Productivity growth is a major factor in economic growth and development, according to a research from the Organization for Economic Co-operation and Development (OECD). According to the research, "productivity growth is the key driver of growing living standards and long-term economic growth, and it is crucial for preserving and enhancing competitiveness in the global economy" (OECD, 2019). In its "Global Economic Prospects" report, the World Bank also acknowledges the significance of productivity-driven economic growth. According to the research, productivity increases are crucial for increasing long-term living standards, fostering sustainable economic growth, and increasing potential output (World Bank, 2020). Productivity increase was shown to have a large beneficial influence on economic growth in the euro area, according to a study by the European Central Bank. According to the study, productivity is a significant factor in determining economic growth and contributes significantly to GDP growth in advanced economies (ECB, 2019). The significance of productivity-driven economic growth is also emphasized in a study that was published in the *Journal of Economic Perspectives*. According to the study, "Policies that foster innovation and technical progress are crucial for sustaining productivity growth." Productivity growth is the "engine of long-run economic growth" (Jorgenson and Vu, 2016).

**Human Capital Investment:** Human capital investments, such as those made in education and training, which raise employee productivity, are known as "human capital-driven economic growth." This type of growth has been seen in nations like Singapore and Finland, where substantial increases in productivity have resulted from high levels of investment in education and training (Lucas, 1988). According to Bönald and Scarpetta (1999), "Investing in human capital is crucial to ensure long-term economic growth and competitiveness." Investment in human capital is essential to an organization's performance and competitiveness since it increases output, profits, innovation, and employee satisfaction.



**Long-term Economic Growth:** Continual gains in economic output over a protracted period of time are the hallmarks of long-term economic growth. It is fueled by things like technical advancement, capital accumulation, and advancements in infrastructure and education. (2014) Mankiw

**Short-term economic growth:** Economic production variations over shorter time frames, usually measured in quarters or years, are referred to as short-term growth. Changes in consumer spending, governmental regulations, and world economic situations can all have an impact on it. (2013) Krugman & Wells.

**Inclusive economic growth:** Growth that is inclusive places a strong emphasis on the value of distribution and equity in the economy. It aims to make sure that the advantages of growth are distributed more evenly throughout society, with a focus on lowering inequality and poverty. 2017 World Bank

**Sustainable economic growth:** Economic development that promotes social responsibility and environmental sustainability is known as sustainable economic growth. It acknowledges that consideration of the effects of economic activities on natural resources and human well-being is necessary for long-term growth. (UNDP, 2016)

### **2.2.2 Bank Performance in Cameroon**

Cameroon's banking sector contributes significantly to the nation's financial system by providing a range of services to clients of various sizes. This overview will cover the background and growth of the banking industry in Cameroon, as well as the key players, regulatory structure, and current developments.

Colonial banks were set up in the early 20th century to fund trade and business in the nation; this is when the modern banking industry in Cameroon first emerged. These banks served the requirements of European settlers and their enterprises and were predominately owned by foreigners. In order to meet the demands of the newly independent nation, Cameroon, the government began taking efforts to create a national banking system in 1960. The Union Bank of Cameroon and Banque Commerciale du Cameroun (BCC), as well as others, were created after the Banque Commerciale du Cameroun (BCC), the nation's first commercial bank, in 1965. (UBC).

In the years that followed, Cameroon's banking industry expanded quickly as a result of regulations the government put in place to support its growth. The Central

African Economic and Monetary Community (CEMAC), which includes Cameroon, has six members, and its central bank was formed by the government in 1972 as the Bank of Central African States (BEAC). The BEAC and the Ministry of Finance oversee the banking industry in Cameroon. The BEAC is in charge of formulating and enforcing monetary policy as well as overseeing the operations of commercial banks and guaranteeing the stability of the financial system. The Commission Bancaire de l'Afrique Centrale (COBAC), which is in charge of overseeing and regulating the operations of commercial banks and other financial institutions in the CEMAC region, in addition to the BEAC, regulates the banking industry.

Due to the COVID-19 pandemic's effects and the country's economic recession, Cameroon's banking industry has recently encountered difficulties. The establishment of a dedicated fund to aid businesses impacted by the pandemic is only one measure the government has done to address these issues. In order to match up the rising desire for online banking services, the banking industry has also undergone a transition toward digital banking, with many banks releasing mobile banking apps and other digital services.

In the realm of finance, the term "bank performance" relates to the assessment of a bank's efficacy and efficiency in attaining its aims and objectives. Profitability, asset quality, liquidity, capital sufficiency, and operational effectiveness are just a few of the measurements and indications of a bank's performance.

One of the most crucial actions of bank performance is profitability, which relates to a bank's capacity to make money from its operations. Profitability is a key consideration when assessing a bank's stability and financial health, claim Berger and DeYoung (1997). Furthermore, a bank's ability to make money for its shareholders and invest back into its business to enhance its services can be judged by how profitable it is.

Another indicator of bank efficiency is asset quality, which relates to the caliber of a bank's loan portfolio. A key indicator of a bank's credit risk is asset quality and likelihood of loan default, claimed Al-Tamimi and Al-Mazrooei in 2007. Since bad debt losses can have a detrimental effect on a bank's financial performance, banks with excellent asset quality are less likely to experience them.

Another important indicator of bank performance is liquidity, which refers to the ability of a bank to meet its immediate obligations. According to Fama (1985), liquidity is a crucial consideration when assessing a bank's financial soundness and

stability. Furthermore, banks with strong liquidity are better equipped to handle unforeseen financial outflows and fulfill the withdrawal requests of their customers.

Another indicator of financial performance of commercial banks is capital adequacy, which refers to a bank's capacity to withstand losses from unforeseen circumstances. According to Allen and Santomero (1997), a bank's capital adequacy is a crucial consideration when assessing its resilience to shocks and unfavorable economic conditions. As a result, banks with higher capital adequacy ratios have a higher chance of surviving financial crises and continuing to operate.

The ability of a bank to successfully manage its resources and provide its services is measured by operational efficiency, which is the ultimate criterion for evaluating bank performance. Operational effectiveness is a crucial consideration when assessing a bank's competitiveness and capacity to satisfy the needs of its clients, according to Hadad and Williamson (2004). As a result, banks with great operational efficiency are more likely to draw in new clients and keep existing ones, which can help them perform financially.

Financial experts use a variety of measurements and indicators to assess bank performance, which is a crucial topic. These include profitability, asset quality, liquidity, capital sufficiency, and operational effectiveness. For a bank to be financially stable, competitive, and able to satisfy the needs of its clients, it must operate successfully and efficiently.

The banking industry in Cameroon has grown and improved according to the World Bank, considerably in recent years. In 2017, the nation's banking industry's total assets surpassed CFAF 7.9 trillion, a rise of 7.5% from the year before. Additionally, throughout that time, deposits increased by 5.5% and loans increased by 6.7% in the nation's banking sector.

According to the World Bank, the country's banking system has regularly outperformed the average in Africa in terms of return on equity, with an average of 16.6% in 2017. This demonstrates the effectiveness and profitability of Cameroon's banks, who have managed to keep their asset quality high while growing their operations and services. The Central African Economic and Monetary Community (CEMAC), according to the World Bank, has been carrying out reforms targeted at bolstering the financial sector in Cameroon and other member nations. These changes include boosting financial inclusion, strengthening bank supervision, and improving the regulatory environment.

### **2.2.2.1 The Financial Sector in Cameroon**

There are over 26 million people living in Cameroon, a nation in Central Africa. The Bank of Central African States (BEAC), which is in charge of monitoring the monetary policies of the six nations that make up the Economic and Monetary Community of Central Africa (CEMAC), including Cameroon, regulates the financial sector within the country. The financial industry in Cameroon is made up of a number of institutions that provide both individuals and businesses with a range of financial services. Commercial banks, microfinance organizations, insurance firms, and pension funds are a few of the sector's major players.

Cameroon's financial industry is still developing. Small and medium-sized businesses in Cameroon have limited access to finance, and the country's financial sector is relatively underdeveloped (SMEs). Only 17% of adults in Cameroon have an account with a recognized financial institution, while 83% do not, according to the Global Findex World Bank data base.

The World Bank reports that Cameroon's financial sector has made great strides recently, with better financial infrastructure and more access to financial services. The nation has worked to make its regulatory system stronger in order to guarantee financial stability and safeguard consumers.

Six major banks, including Afriland First Bank, Société Générale Cameroun, and Ecobank Cameroon, control the country's banking industry. Over 70% of the sector's total assets are held by these banks. As of 2019, there were 26 insurance companies operating in Cameroon, indicating that the insurance sector is also expanding. In order to provide financial services to underserved populations, like smallholder farmers and microentrepreneurs, microfinance institutions (MFIs) are essential. In Cameroon as of 2019, there were 543 MFIs working and providing services to about 2.3 million consumers. AXA Cameroon, Allianz Cameroon, and Chanas Assurance are just a handful of the dominant companies in the country's relatively modest but expanding insurance market. The industry has had rapid expansion in recent years, and in 2020, gross written premiums are expected to rise by 12.7%.

Overall, a growing middle class, easier access to financial services, and government initiatives to encourage financial inclusion and stability are paving the way for the financial industry in Cameroon to continue growing and developing. The government of Cameroon has taken initiatives to enhance the financial sector and promote financial inclusion. In order to improve access to financial services for all

Cameroonians, it introduced the National Financial Inclusion Strategy in 2010. A credit bureau was established in 2016 as part of a number of other legal and regulatory reforms that the government has implemented.

### **2.2.2.1.2 Measure of Bank Performance**

Return on Equity (ROE): A financial ratio known as return on equity (ROE) calculates how much profit a company makes for each share of equity held by shareholders. It is derived by dividing shareholder equity by net income. ROE is an important metric for investors as it helps them evaluate a company's profitability and efficiency in using shareholder funds.

Many research have looked at the connection between ROE and a company's financial performance. For instance, a study by R. Amit and H. Livne in the Journal of Accounting and Economics found that ROE is positively related to a company's market value, cash flows, and future profitability. Similarly, a greater ROE is linked to better financial performance and higher stock returns, according to a study by M. Prakash published in the International Journal of Management and Business Research.

ROE can also be used to compare a company's performance to its industry peers. A study by D. Kauffman and J. Kreitner in the Journal of Financial Planning revealed that associations with higher ROE usually fare better than their industry peers in terms of revenue growth, profitability, and stock returns. In summary, ROE is a key financial ratio that can provide valuable insights into a company's profitability and efficiency in using shareholder funds. Its relationship with a company's financial performance has been extensively studied and documented in academic research.

This ratio measures the profit earned by a bank compared to the shareholder's equity invested in the bank. It is calculated as follows:  $ROE = (\text{Net Income} / \text{Shareholders Equity}) \times 100\%$ . A higher ROE indicates better bank performance as it signifies a greater return on investment for shareholders.

Efficiency Ratio: This ratio measures a bank's ability to manage its expenses and generate revenue. It is calculated as follows:  $\text{Efficiency Ratio} = (\text{Non-Interest Expenses} / \text{Net Interest Income} + \text{Non-Interest Income}) \times 100\%$ . A lower efficiency ratio indicates better bank performance as it means the bank is able to generate more revenue while keeping its expenses in check.

Efficiency ratio is a financial metric used to measure how effectively a company uses its resources to generate revenue. It is calculated by dividing the company's operating

expenses by its revenue. The resulting ratio displays the proportion of revenue going toward operating costs. A lower efficiency ratio indicates better performance as it means the company is generating more revenue for every dollar spent on operating expenses.

According to a study by KPMG, the efficiency ratio is a crucial measure of a bank's performance. Banks with lower efficiency ratios have been found to be more profitable and efficient in managing costs. In contrast, banks with higher efficiency ratios have been found to have higher operating costs, leading to lower profitability.

A report by McKinsey & Company suggests that companies can improve their efficiency ratios by implementing cost-reduction initiatives, automating processes, and outsourcing non-core functions. These measures can help companies free up resources to focus on revenue-generating activities, resulting in a lower efficiency ratio and improved profitability.

In summary, the efficiency ratio is an important financial metric that can help companies measure their operational efficiency and profitability. Lower efficiency ratios indicate better performance, and companies can improve their efficiency ratios by implementing cost-reduction initiatives and optimizing their processes.

**Net Interest Margin (NIM):** This ratio calculates the difference between an institution's interest earnings and its interest costs. It is calculated as follows:  $NIM = (\text{Net Interest Income} / \text{Total Assets}) \times 100\%$ . A higher NIM indicates better bank performance as it means the bank is able to generate more income from its assets. Net Interest Margin (NIM) is a metric used to measure the profitability of a financial institution. It represents the difference between the interest income earned by a bank or other financial institution and the interest paid out to its depositors or creditors. In other words, it is the net revenue generated by the institution's interest-earning assets after deducting the interest expenses paid on its interest-bearing liabilities.

According to the Federal Reserve Bank of St. Louis, "Net interest margin (NIM) is a profitability ratio that measures how much money a bank makes on its loans, after deducting the interest paid to its depositors." NIM is an important metric for financial institutions, as it reflects their ability to generate income from their core business of lending and investing. A higher NIM indicates that the institution is more efficient in earning interest income on its assets, which leads to higher profits. Conversely, a lower NIM suggests that the institution may be facing challenges in generating interest income and controlling interest expenses.

In a study conducted by the Bank for International Settlements (BIS), it was found that "banks with higher NIMs have better credit quality, are better capitalised, and have higher earnings growth." This highlights the importance of NIM as a key performance indicator for financial institutions. Net Interest Margin (NIM) is a crucial metric for financial institutions, as it reflects their ability to generate income from their core business of lending and investing. A higher NIM indicates greater efficiency in earning interest income on assets, which leads to higher profits and better overall performance.

**Bank Capital Asset ratio:** The Bank Capital Asset Ratio (CAR) is a key measure of a bank's financial health and stability. It represents the proportion of a bank's capital to its total risk-weighted assets. A higher CAR indicates a stronger financial position and ability to absorb potential losses. The minimum CAR required by regulators varies across jurisdictions and is typically set to ensure banks can withstand adverse economic conditions.

According to the Basel III framework (2011), the minimum CAR for banks is 8%, but many jurisdictions require a higher ratio. For example, the European Union's Capital Requirements Regulation (CRR) requires banks to maintain a minimum CAR of 10.5%. Additionally, some individual countries have set even higher requirements. For instance, Canada's Office of the Superintendent of Financial Institutions (OSFI) requires banks to maintain a minimum CAR of 9% and a total capital ratio of 12%. There are several reasons why a bank's CAR might be important to investors, regulators, and other stakeholders. A higher CAR can indicate that a bank is better positioned to weather economic downturns and maintain lending activities. It can also be an indicator of the bank's ability to absorb losses and maintain solvency. On the other hand, a lower CAR can be a sign of financial weakness and an increased likelihood of default or insolvency.

Overall, the Bank Capital Asset Ratio is a critical metric for measuring a bank's financial health and ability to withstand economic shocks. Regulators and other stakeholders closely monitor the CAR to ensure that banks are maintaining sufficient capital levels and protecting themselves and their customers from potential risks.

**Profitability ratio:** Profitability ratios are financial metrics that measure a company's ability to generate profits. There are several profitability ratios that companies can use to evaluate their financial performance, including the gross profit margin, net profit margin, return on assets, and return on equity.

The gross profit margin is a profitability ratio that measures the percentage of revenue that remains after deducting the cost of goods sold. It is calculated by dividing the gross profit by revenue and multiplying by 100. The higher the gross profit margin, the more profitable the company is. The net profit margin is a profitability ratio that measures the percentage of revenue that remains after all expenses, including taxes, have been deducted. The formula is derived by dividing net income by revenue and multiplying by 100. The higher the net profit margin, the more profitable the company is.

Return on assets (ROA) gauges how much a business makes from its assets. Divide net income by total assets, then multiply the result by 100 to find it. The corporation is more effective at earning profits from its assets the higher the ROA. The return on equity (ROE) metric measures how much a company generates from the capital that shareholders have invested. Divide shareholder equity by net income, and multiply the result by 100 to compute it. When the corporation's ROE is higher, it is more successful in generating profits for its stockholders.

Loan to Deposit Ratio (LDR): This ratio measures a bank's ability to lend money compared to the deposits it has. The formula is as follows:  $LDR = (\text{Total Loans} / \text{Total Deposits}) \times 100\%$ . A higher LDR indicates better bank performance as it means the bank is able to lend more money compared to the deposits it has, which can lead to higher profits. The Loan to Deposit Ratio (LDR) is a financial metric used by banks to determine the percentage of loans it has made in relation to the deposits it has received. This metric is used to determine the level of risk the bank is taking on, as well as its ability to meet its obligations.

The level of interest rates, the demand for loans, and the degree of market competition are just a few variables that might affect a bank's LDR. Some of the benefits of a high LDR include increased profits, greater efficiency, and improved risk management. However, a high LDR can also indicate a higher level of risk, which can lead to problems if the bank is unable to meet its obligations.

There are a number of studies and reports that have looked at the LDR in different contexts. For example, a study by the International Journal of Economics and Finance found that the LDR can be used as a predictor of bank failure, with higher ratios indicating a greater risk of default. Another study by the International Research Journal of Finance and Economics found that the LDR is a useful tool for evaluating the financial health of banks, particularly in emerging markets



The capital adequacy ratio (CAR) gauges a bank's capacity to withstand possible losses. The formula is as follows: CAR is equal to 100% of (Total Capital/Total Risk-Weighted Assets). Better bank performance is indicated by a higher CAR since it signifies the bank has a larger financial safety net to withstand future losses. Calculated by dividing a bank's capital by its risk-weighted assets, the capital adequacy ratio (CAR) is a gauge of a bank's capacity to withstand losses. A bank's ability to withstand possible losses from its lending and investment activities is assessed using the CAR. The minimum CAR requirement is set by regulatory authorities and varies across countries. For example, in the United States, the minimum CAR requirement for a well-capitalized bank is 10%, while in the European Union, it is 8%. The CAR is important for banks as it provides a measure of the bank's financial strength and ability to withstand potential losses. A high CAR indicates that a bank is well-capitalized and has a lower risk of insolvency.

According to the Basel Committee on Banking Supervision, "a sound capital adequacy framework should consider the risk profile of the bank, its risk management capabilities, and the economic and financial conditions in which it operates." The committee has developed a set of guidelines known as the Basel III framework to ensure that banks maintain adequate capital levels.

Bank Deposit ratio: The percentage of bank deposits that a bank holds as reserves is measured by the bank deposit ratio, a financial indicator. The reserve ratio is computed by dividing the bank's total deposits by its reserves. The Federal Reserve Bank of St. Louis reports that as of December 2020, the country's bank deposit ratio was 10.5%. This means that U.S. banks held 10.5 cents in reserves for every dollar of deposits they held.

The bank deposit ratio is an important measure of a bank's financial strength and ability to withstand financial shocks. A higher ratio indicates that a bank is holding more reserves and is better able to weather economic downturns.

However, a very high bank deposit ratio may also indicate that a bank is being overly cautious with its reserves and may not be taking on enough risk to generate sufficient returns for its shareholders.

The researcher made use of the following financial indicators in this study; profitability, bank deposit ratio, bank capital to asset ratio, Net Interest Margin (NIM).

### **2.2.3 The Correlation between Economic Growth and Bank Profitability**

The relationship between economic expansion and bank profitability is well-established. This connection reflects how important banks are to the economy and how their performance is directly impacted by the state of the entire economy.

This link has been the subject of numerous investigations, and the findings have generally been consistent. For instance, the Federal Reserve Bank of St. Louis found a strong correlation between bank profitability and US economic growth between 1984 and 2010. Another study by the Bank of Finland discovered that from 2000 to 2013, economic growth in European nations had a favorable effect on bank profitability.

Profitability is a significant aspect that is used as a benchmark to assess how well banks operate in the financial sector which indicates the returns that banks make from their expenditure within the years Walid et al, (2022). Furthermore, according to Doan, & Bui, (2021), liquidity in financial terms refers to how a bank is ready to convert asserts into physical cash to meet the customer's needs. It is crucial to the banking world by making sure that depositors gains help in stabilizing the financial systems of the nation which goes a long way to contribute to productivity and subsequently growth of the economy. Doan & Bui (2021). Bank profitability, according to Jreisat & Bawazir (2021), is the difference between liabilities expenses and profitable claims. Additionally, Jreisat & Bawazir (2021) assert that banks' profitability is influenced by variables like interest rates, tax rates and inflation to name a few. Increased banking activity and corresponding economic expansion are indicated by high prosperity. The size of the bank, total loans to assets, equity, total assets, and GDP expansion were shown to have a substantial correlational link with the profitability of Iraqi banks in a study by Jadah et al. (2020) to determine bank profitability in Iraqi banks. It was also demonstrated that factors such as unemployment, credit risk, interest rates, inflation and political unrest had a detrimental effect on banks profitability in Iraq. This is due to the extra effort banks make to design advertising programs, products, and services focused at winning consumers' loyalty. The cost of doing this typically lowers the profit margin of the majority of banking organizations. Does bank profitability boost economic growth? Ali et al. in 2022. Political leaders are particularly concerned as to how bank profitability affects a nation's economic development, they concluded after examining this subject. While agreeing that bank profitability may support both financial stability and economic progress, it can lead to a reduction in competition thus reducing economic growth. Intense competition in the loan market, according to

Papanikolaou (2019), may cut bank loan rates while boosting the probability that borrowers who are not qualified for loans would be approved, which may result in lower bank profitability. Contrarily, competition amongst banks contribute to economic growth in that, it makes it convenient for investors to have financial resources at their disposal for their investment purposes which in essence leads to an increase in the welfare of citizens and subsequently the standards of living hence economic growth. According to Yakubu & Bunyaminu (2022) In Sub-Saharan Africa, there is a poor association between international trade and bank profitability due to competition. Significant elements that impact the bank's profitability include variables like the bank's size. This analysis comes to the conclusion that inflation and GDP growth are favorable for bank profitability. Aziz (2020) contends that financial development complements bank profitability and so has a positive effect on a nation's economic growth by looking at the relationship between bank profitability and economic growth in Arab countries. The study by Mohamed et al. (2019), which uses return on equity and return on assets as variables to define profitability, evaluates the repercussions of economic growth on bank profitability is one of the few studies that have been done on this topic. On the other hand, there haven't been many studies done on this work on the repercussions of economic growth on bank profitability. The study discovered that economic expansion has a considerable effect on banks' profitability.

#### **2.2.4 Bank Capital to Asset Ratio Relationship with Economic Growth**

Many studies have demonstrated a strong correlation between the bank capital-to-asset ratio and economic expansion. The ability of a bank to withstand losses is shown by a larger bank capital to asset ratio, which lowers the probability of bank collapse and promotes the stability of the financial system. Long-term economic growth is aided by this stability.

Bank capital and assets refers to things owned by the bank which are of value and generate income to the bank. Banks with a lot of assets are more willing to extend credit to clients, which helps the economy flourish Gaukhar et al (2020). Furthermore, lack of access to credit and financial resources inhibits the innovative capabilities of companies thereby limiting their growth prospects Qi & Ongena (2020). The capital adequacy ratio (CAR) and bank profitability were found to be positively correlated in Dao & Nguyen's (2020) investigation of the factors influencing bank profitability in well-established banks in India, Russia, China, Brazil and South Africa. Tangangisalu

et al. (2021) and Puspitasari et al (2020) in a separate study, it was shown that the capital adequacy ratio (CAR) had no bearing on the profitability of Indonesian banks. According to Spatareanu et al. (2019), bank finance is crucial for British companies' capacity for innovation. This study discovered that the issue of bank stability during this period had a negative impact on firms' ability to innovate, hence impeding the nation's economic progress. This was because the global banking services and assets collapsed in 2008, causing the global financial crisis. According to a similar study by Khan et al. (2019), there exist a correlation between the volume of research and development activities carried out by various sectors in China and the funding sources they use, it was discovered that banks with stable capital and assets provided more financial resources to Chinese companies in the form of loans and investment. This ultimately aids in boosting economic growth and development. The small and medium size enterprise is crucial for economic development through a variety of ways. These include; lowering of poverty through job creation and the payment of taxes to the authorities for the provision of social amenities. The commercial activity and foreign direct investment activities in a country are the main drivers of economic growth in that nation (Adl.Nawzad, 2020). These economic activities can only be facilitated with the use of the financial services offered by the central, commercial and micro financial entities in the county. To facilitate this, most banks have to consider the capital structure of the institution. The availability of the capital and assets boast the lending capabilities of the bank thereby fostering economic growth and development Omar & Hasan, (2020). To sum up, since it is crucial to the growth and development of a nation's economy, it is impossible to overlook how bank assets and capital affect the performance of the financial sector of the banking industry.

### **2.2.5 The Correlation between Net Interest Margin and Economic Growth**

Prior to exploring the connection between NIM and economic expansion, it is important to know the concept of net interest margin and its determinants. The distinction between interest paid and interest received for assets owned by the bank is referred to as NIM. It is being determined by a wide range of factors namely; oil prices, exchange rates, bank financial ratio, market power risk and the asset of the bank Manurung et al (2020). It should be reminded that a decrease in a bank's NIM is one of the dreaded side effects of expansionary monetary policy and the flattening of the yield curve Chaudron et al (2020). When the interest margin of banks shrinks, it affects

the profitability of the bank which in turn affects the lending and borrowing activities of the banking institution. Since NIM is one of the key indicators of a quality bank, management in such a bank must put in a lot of effort to ensure that the net interest margin data are promising in order to advance the bank. Puspitasari et al (2021). Furthermore, according to earlier research, the loan deposit ratio and capital adequacy ratio are positively correlated with NIM. Conversely, operating cost (BOPO) was shown to be having a detrimental impact on a commercial bank's NIM. According to this study's findings, return on assets and net interest margin are positively correlated. Puspitasari and other (2021).

Federal Reserve Bank of St. Louis research discovered a connection between NIM and accelerating economic development. According to the study, "banks' net interest margins rise with economic expansion" (Chakraborty and Kwak, 2019). "Changes in interest rates and the yield curve have considerable impacts on the profitability of banks, which in turn can affect the overall level of economic activity," the Federal Reserve Bank of Kansas City concluded in another study (Ozsoy et al., 2017).

In a study conducted by Guo, & Gao (2020) to establish the connection between noninterest activity, net interest margin, and internet finance. The study's conclusions demonstrated a negative correlation between non-interest activities and net interest margin such as incentives being awarded, cross subsidization and resource structuring. In another research conducted by Hanzlík, & Teplý (2022) The study, which looked at the factors affecting net interest margin in US and European banks, discovered that the bank base financial market had a large impact on net interest margin. This study also demonstrates that, depending on the size of the bank, there were variable net interest margins among the different banks. Additionally, it was discovered that mortgage, real estate, and cooperative banks routinely record lower net interest margin margins than commercial banks and bank holdings. This research observes an inverse relationship between net interest margin and yield curve slope. Mohamma & Adnan (2022), affirm to this claim and postulate that market concentration and asset diversification had an effect on commercial banks' net interest margin. They go further to say that, the margins of commercial banks are impacted by financial institution expansion and development. The study found that micro financial institutions had a negative effect on the commercial banks' profit margins. The role of micro financial institutions is not extensively covered in this study since they are

different from traditional banking institutions. Additionally, a bank's net interest margin is equally influenced by internal and external factors, which is something that bank management should take very seriously. Thus, the bank's net interest margin supports economic growth by exerting significant influence over how resources are allocated, which in turn promotes economic growth. Ba, (2022). From the above literature, it can be said that, with profitability acting as the mediating variable, there is a positive correlation between net interest margin and economic growth. This is so because the bank's profitability, which in turn impacts how much money it can borrow and lend, is influenced by the net interest margin. At such, when a bank is highly profitable, it issues more loans to investors who invest in income generating activities thereby increasing the standards of living and subsequently the country's economic expansion.

#### **2.2.6 The Cross View between Bank Deposit and Economic Growth**

Bank deposits counts as one of the most important resources of a bank. It is from these deposits that banks are able to carry out banking transactions in the country. Thus, bank deposits enable the custody of savings and the availability of cash for investments which makes life very easier for people thereby contributing to the minimization of poverty and unequal distribution of income Dahiya & Kumar (2020). This is true as studies show that banks rely on house holds for funding through deposits while households rely on the experience of their friends, family members and trusted banks for investment advice (Hu, 2021). Many industries specific factors affect bank deposits. Among the elements affecting bank deposits are profitability, the size of the bank and liquidity. These factors have a positive relationship with bank deposits as opposed to other macro-economic factors such as inflation which turn to have an adverse impact on bank deposits Chu (2020). Other determinants of bank deposits include stock market power, depositors' demographic characteristics and the market power of the bank Lin, (2020). It should be noted that a bank with high deposit productivity will have the opportunity to collect more deposits from her customers as opposed to a less deposit productivity banks which attract very few deposits from depositors. One factor that account for this variation include the deposit rates and the number of branches that the bank has. To best understand the impact of bank deposits on banking activities, it is important to construct a consumer demand system of a bank. Thus, building on the existing work of Xiao (2020), it can be concluded that a bank

with increase productivity deposit has a consumer deposit demand that is shifted upwards. This implies that the bank can increase her deposits while maintaining fixed the interest rates it offers and other deposit services. Furthermore, the technological advancement of the bank equally increases her ability to reach out to customers and collect deposits. This increases the amount of capital available at the bank's dispersal for lending and investment purposes which in essences contributes to a rise in profitability of the banking institutions hence economic growth through her lending activities as well as investments Egan et al (2022). In a study carried out by Appiah-Otoo & Song (2022), to investigate financial growth nexus in the Ghanaian economy. It was determined that the ratio of bank deposits to GDP will eventually harm Ghana's ability to grow its economy. The paper goes on to say that decision-makers should support the financial industry by providing financing during COVID 19's financial difficulty times so as to make finances readily available to investors for their investment purpose. This therefore shows the value of bank deposits to economic expansion of a county through the financing of investment projects in the country. Empirical studies reveal that bank deposits count as one of the most important aspects of the value creation of banks and plays a crucial role in the availability credit that stimulate economic activities and subsequently economic growth Egan (2022). One way through which bank deposits relates to economic growth is through stock market booms. There is a decrease in bank deposits activities during stock market boom and when there is a contraction in the stock markets; households turn to save more hence increasing the number of deposits in the bank Lin (2020). Bank deposits and economic growth are positively correlated, to sum up. This is because with more deposits and relatively cheaper interest rates, investors and households are able to draw financial resources for investment purposes which contribute to economic growth.

## **2.3 Theoretical Literatures**

This study makes use of the fractional reserve theory of banking, growth theory, financial intermediation theory of banking, and classical growth theory.

### **2.3.1 The Classical Growth Theory**

Adam Smith and David Ricardo served as the classical growth theory's founder, thus most economists that share these views are called the new classical. The reason of this theory is to discuss factors that determine economic growth. This theory

postulates that surplus in production levels affect economic growth but not all activities of the economy can provide surplus production. According to Adam Smith (1776), there are two types of labor productivity: inefficient labor productivity and effective labor productivity. Smith also gave careful consideration to how the division of labor affected the growth of the economy. International trade has advantages, such as very low transaction and transportation costs, make the division of labor's contribution to economic progress clear. Following from the works of Adam Smith was David Ricardo who established the comparative advantage law. According to this theory, a nation should export those products for which it is advantageous relative to and should rather import goods which the country does not have a comparative advantage over.

The theory speaks about an economy's long-term expansion as a result of capital accumulation, population growth, and technical advancement. It states that by investing in capital goods and growing its labor force, an economy can expand its production capacity. On the other hand, technological advancement ultimately determines the rate of economic growth. According to this theory, as an economy expands, the pace of technical advancement slows, resulting in a reduction in the tempo of economic expansion.

The theory contends that a rise in the capital stock size causes the rate of economic expansion to increase. The rate of progress eventually reverts to its original state, which is governed by the rate of technical advancement, and this increase is only momentary.

The Classical Growth Theory proposes that an economy should prioritize technological advancement to get sustainable long-term growth, which has significant policy consequences. Investments in infrastructural development, education and training, and research and development can help achieve this. Overall, a significant corpus of economic research in this field has been influenced by the Classical Growth Theory, which continues to be a key conceptual framework for understanding long-term economic growth.

The major conclusion of the classical growth theory is that capital accumulation and technological advancement are what ultimately drive long-term economic expansion. This theory states that an increase in capital per worker causes an increase in productivity, which then causes a rise in economic growth. However, as capital per worker continues to rise, this effect becomes less significant. This theory has a number of practical implications, one of which is that governments can



encourage economic growth by boosting investments in both people and physical capital as well as in advancing technology through research and development. For instance, spending on infrastructure like roads and bridges, training and education initiatives, and financial assistance for R&D can all boost long-term economic growth. Researchers Robert J. Barro and Xavier Sala-i-martin's provides empirical support for the role that the accumulation of physical and human capital plays in promoting economic growth. They discover that countries with higher initial levels of physical and human capital typically have faster rates of economic growth over time in their article "Convergence." However, critics of the classical growth theory argue that it ignores crucial elements that might also affect economic growth, such as institutions, political stability, and social capital. Nevertheless, throughout the past few decades, the theory has significantly influenced how economists and policymakers think about and make decisions.

The reason for the inclusion of this theory to this study is because of its attribution to the concept of economic expansion. Most economic growth studies have to draw from this theory before adding their contributions.

### **2.3.2 The Growth Theory by John Maynard Keynes**

This theory holds that the majority of economic crises and unemployment that occurred over numerous countries in the late 20th century occurred in those years and demonstrated the ability of most economies to self-regulate through the invisible hand. Due to the unconvincing arguments of the invisible hand, Maynard Keynes introduced a new economic theory named; "the general theory of employment, interest and money". According to this theory, the economy requires government influence to balance output leading to a rise in total demand which subsequently results to a rise in economic growth. This presented to role the government plays in managing the economy through monetary circulation and credit financing policies.

The role of government in fostering economic growth was another crucial component of Keynes' growth theory. Keynes thought that in order to spur investment and boost economic activity during economic downturns, government involvement was required. In contrast, traditional economics held that the economy would spontaneously return to full employment absent any intervention from the state. In his book "The General Theory of Employment, Interest, and Money, Keynes stated that understanding the concepts of inflation and deflation is the foundation for any

successful economic policy. This means that the state must have sufficient control over the banking system and the supply of money if it is to provide for adjustment to changing conditions." p. 306; Keynes, 1936. In general, Keynes' Growth Theory questioned the conventional wisdom that the economy would eventually return to full employment by emphasizing the necessity of investment and government action in encouraging economic growth.

Supporting this argument, Chick (1986) stated that for a nation to experience economic growth, a well-functioning and developed financial system must be in place to provide credit services to the masses in order to boost their economic activities. According to Loubaki, (2017), when using the monetary policies to stimulate economic growth and development, when a certain point is not reached, fiscal measures start to harm economic growth and development. Loubaki, (2017), goes further to state that Inverse correlation exists between fiscal policy and economic growth when the threshold has been crossed. According to Lindert (2004), the growth of a government in a developing country does not inhibit economic growth and development. This is because as the government becomes larger, policy makers become more responsible and apply taxation policies so as to lessen the chance of distortion. Lindert (2004) goes further to state that some policies reduce employment by replacing less productive workers with efficient worker. By doing this, there is a high-level productivity in the economy hence having a correlation on the growth of the economy. This theory relates to the interest of this research as it addresses the issue of growth which in this study refers to economic growth captured through GDP.

Keynes' growth theory has practical applications that are especially important during economic downturns like recessions and depressions. Keynes felt that during these challenging times, government spending and investment may be extremely important in fostering economic growth and generating jobs. Keynes maintained that governments can boost consumer spending, investment, and employment by injecting money into the economy through public works projects, social welfare programs, or other types of government expenditure, resulting to higher levels of economic development and prosperity.

In general, Keynesian economics has significantly influenced economic policy and altered how governments react to economic difficulties. Keynes himself pointed out, "Political philosophers and economists have more influence than is typically

realized, whether their theories are correct or incorrect. True, there isn't much else that governs the world " (Keynes, 1936, p. 383).

### **2.3.3 The Fractional Reserve Theory of Banking**

This theory holds that banks produce money by expanding a large number of deposits, and each bank is viewed as a financial intermediary. Furthermore, Gurley and Shaw (1955) in their arguments claimed that the capacity to operate as financial intermediaries and produce financial claims was shared by banks and other non-financial organizations, which was their only similarity. The banking system is built on the fundamental notion known as the "fractional reserve theory," which holds that banks are only required to maintain a portion of their deposits in cash as reserves. Loans and investments can be made using the remaining deposits. By offering loans that are only partially secured by their deposit base, banks are said to play a significant role in the production of money. As a result, a bank that accepts a customer's deposit may lend some or all of that deposit to another customer.

The foundation of banking's fractional reserve theory is the idea that depositors won't withdraw their entire balance all at once. If the need for cash rises, banks can still satiate it by borrowing money from other banks or selling assets. With this technique, a tiny deposit can result in the establishment of multiple loans for many times that amount. This approach is, however, equally susceptible to bank runs, in which customers lose faith in the bank and demand their savings immediately. Bank failures and a financial crisis may result from the bank's inability to supply this demand if sufficient reserves are not available.

However, this assertion was challenged by other contemporary authors in their era. For example, Guttentag and Lindsay (1968) who supported the financial reserve theory referenced the work of Phillips (1920). Phillips contends that not all statements that apply to the whole financial sector apply equally to any individual bank, which is just one of the many components of the aggregate. Another researcher that supported this view is Crick (1927). He said in his presentation that although while each bank serves as a financial middleman, more finances are actually created in the economy as a whole. According to Hayek (1929), an advocate of the fractional reserve theory, a reserve of 10% will cause every bank to be induced to lend out 90% of any deposits made, which will in turn cause an increase in deposits with other banks and result in numerous deposits in the banking sector. Keynes (1930), supported the financial

reserve theory and as contribution to this theory he suggested the idea of creating money. According to him, any improvements on the deposits of the bank was seen as the creation of deposits. According to Samuelson (1948), the first thing for banks to do is to gather funds before they can be able to extend credit or bank loans to customers. To conclude, he stated that when operating as an aggregate, the banking system turn to create a lot of money. He further instituted the concept of 'chain deposit creation'. This concept proposed the idea of inter-bank transactions where banks can loan and lend money from one another.

To sum up, this theory contends that a single bank cannot generate multiple deposits in a situation or economy where there are numerous banks. To further explain this, an individual bank may not even be able to know in such a system the role it plays in multiple deposit creation. This theory proposes that bank should have a cash reserve so as to facilitate her credit creation activities ranging from collecting deposits to issuing out loans to customers at rates generally accepted by the banking industry. According to Werner (2014), one way a bank can increase its reserve is by securing new deposits from the customers of different banks. Werner went further to conclude that money creation is indeed the function new loans and not bank reserve ratio and cash deposits as previously stated by other researchers. He also introduces the concept of 'window guidance' which is an informal policy instrument that rely on the free will of the financial institution ensure that extending credit and the process of allocating lending activities should be in line with the principles of the financial institution. According to Li, (2021), the government should increase the number of reserves for all the banking institution. This should be done in order for the government to best prepare for financial crisis like the 2008 financial crisis and the post COVID19 financial crisis.

The possibility that banks could inflate the credit market by making more loans than they actually have in reserves is one of the key consequences of the fractional reserve theory. This may result in a rise in the money supply, which could spur short-term economic growth. A financial crisis can develop, as was the case with the global financial crisis of 2008, if an excessive amount of credit is created.

The effect on inflation is another aspect of the fractional reserve theory. When banks provide more credit than the economy can handle, demand for goods and services may rise, which may result in price increases. This might result in inflation, which would lower people's purchasing power and depreciate their savings. Governments frequently

regulate banks and the financial industry to reduce these dangers. For instance, in the US, the Federal Reserve establishes reserve requirements for banks that specify the amount of cash they must keep on hand as reserves. This serves to maintain the stability of the financial system by preventing banks from issuing an excessive amount of credit.

The possibility for credit bubbles, the influence on inflation, and the requirement for governmental regulation to guarantee financial stability are just a few of the real-world implications of the fractional reserve theory of banking. To maintain economic development and stability, officials must carefully weigh the advantages and hazards of fractional reserve banking, which is a complex idea with enormous economic repercussions (Mishkin, F. S., & Eakins, S. G. 2015).

### **2.3.4 The Financial Intermediation Theory of Banking**

Under the financial intermediation theory of banking, banks are financial intermediaries that are equivalent to other financial institutions that are not banks. These institutions put together deposits from the general public and lend those deposits out to investors Werner (2016). In other words, banks currently create liquidity by simultaneously lending long and borrowing short (Dewatripont, Rochet, & Tirole, 2010). According to this, banks gather deposits by obtaining funds from depositors whose maturity is short-term and using it to make loans to borrowers with longer-term maturities, making money for the banks in the process. Supporters of this theory in the early 1990s like von Mises (1912) stated that banks borrow funds from depositors so that they can loan it to investors and household which intern contribute to the profitability of the bank. In order to further explain his point, Mises (1912) differentiate between bankers and capitalist. According to him, bankers are those who borrow money from depositors and lend to other people while capitalist are those who lend their own money. In supporting this argument Keynes (1936) states that for any investment to take place; the first condition is for banks to gather savings.

Domar (1947), stated that international banks play a part to economic development in developing countries after the war era with her lending activities abroad, she is able to provide the much-needed domestic savings and so support international economic development. This process contributed to the increase in international lending and borrowing which in turn affect the level of country indebtedness. Gurley and Shaw (1955, 1960) stated that there was nothing special about banking institutions as they in

the same manner as other non-bank financial institutions all shared the role of serving as mediators in finance. According to Tobin (1963) the difference between banks and non-banking institutions lies on the special reserves requirement and the restrictions on banks' interest rates that they must abide by. Because there is no specific interest rate cap for banks in the UK, these institutions are classified as banking institutions by Tobin's is very much true in recent years. According to Woodford, (2010) financial intermediaries' carryout a crucial role in the allocation of resources most especially during periods of economic crisis. According to Farhi, & Tirole (2021) the main activities of banking institutions are built in four pillars; lending to small and medium size enterprises lending, collection of deposits, access to the prudential oversight and lender of last resort. By offering the crucial financial resources to spur investment, banking entities thus serves a crucial function in aiding the economic development of the nation. According to Yao et al, (2021) financial intermediation has a positive relationship with foreign direct investment which spurs economic growth.

According to Boa, Zimková, and colleagues (2021), the intermediation technique is not a reliable way to assess how well commercial banks or other banking institutions are doing at carrying out their role as financial intermediaries for the general public. He proposed that the best way to assess the success of financial institutions in providing services is by assigning weight to the services provided by these institutions in relation to their contribution to growth of the economy and development. Banks, in the opinion of Kashyap et al. (2002), are financial intermediaries that enable banks to create a model whereby, banks buy assets with the funds they acquired in the form of deposits or through issuing bonds or equity thereby promoting economic investment, which in turn promotes economic growth and development. This theory has practical applications, one of which is that banks can contribute to raising the general level of investment in an economy. Banks assist in the mobilization of savings and the constructive use of those funds by routing money to organizations and people with investment opportunities. As a result, new companies may be founded, old companies may grow, and new goods and technology may be created. For instance, a World Bank study discovered that a strong banking sector can significantly affect economic growth. According to the report, countries with effective banking systems have higher investment levels, which in turn boosts productivity and economic growth (World Bank, 2014). In essence, the Financial Intermediation Theory of Banking emphasizes the crucial part that banks play in attracting savings and encouraging investment.

Banks can support economic growth and development in a variety of industries and sectors by facilitating access to credit.

The researcher will employ a variety of methods for this investigation including the use of this theory as it relates with the underlying principle of banking which involve channeling financial resources from idle units through the collection of savings from households to investment units by offering loans to investors. The interests they charge for this loan constitute the profitability of the bank.

### **2.3.5 The Theory of Banking Credit Creation**

Based on this concept, banks do not operate in an aggregate or as financial intermediaries. In this theory, there are rumors that banks have the power to generate credit and cash from nothing. According to this theory, banks do not have to start by collecting deposits or reserves before lending as stated by the financial intermediation theory. This theory suggests that bank balance sheet tend to show an increase in trend overtime period when the bank credits that are outstanding grows. Supporters of this theory included Schumpeter (1912), Hawtry (1919) just to name a few. Macleod (1856) suggested three important aspects of banking which include; the accounting aspect, legal aspect and the financial aspect. According to him, these aspects of banking should be taken into kind consideration and should be respected as they very are important to the bank's operations. Depending on this view, a bank's credit always takes the form of deposits, which are essentially equivalent to money. According to Schumpeter (1912) the functions of banks and bankers is to identify the best plans brought up by investors and fund them as well as denying funding opportunities for other unserious entrepreneurs. Furthermore, according to Howe (1915), banks prefer not to make loans of any kind. They rather prefer to loan their credit and charge an interest on these credits to generate profit for the banks. Banks function independently, contrary to the financial reserve theory, which sees them as a component of a system or an aggregate, which is one important distinction between the credit creation theory and the financial reserve theory of banking.

The Theory of Money and Credit, written by Austrian economist Ludwig von Mises, is one of the most significant publications in this field (1912). Mises offers a thorough examination of the monetary and credit systems and their effects on the economy in this book. He believes that banks' creation of credit results in an expansion of the money supply, which then raises prices and causes inflation. Mises also stresses

the significance of stable banking practices and reliable currency for a strong economy. Milton Friedman's "The Quantity Theory of Money" is another significant piece in this field (1956). In this work, Friedman outlines the quantity theory of money, which contends that the money supply affects both inflation and the level of prices. Additionally, he contends that the Federal Reserve's influence over the money supply plays a significant role in the business cycle and that the central bank should strive for a consistent, moderate rate of money supply expansion.

This theory equally state that a loan from one bank automatically create credit for the other banks. According to Momeni (2020), one of the driving forces to the financial crisis of 2008 was the issue of credit creation by banks. As many central banks throughout the world have acknowledged, the money base multiplier theory of banking was a bad concept. According to Bernardo & Campiglio (2014), the main mechanism in the process of credit creation in recent times are private banks who make a greater contribution to the nation's economic development by granting credits to investors for their investment purpose and household for their day to day consumption. Lee (2021) suggests that the ability of banks to produce credit or money out of nothing is the foundation of the capitalist machine with a genuine promise to repay this credit so as to keep the financial institution afloat. The credit creation theory is relevant for this research in that it introduces and explains the concept of credit creation and how the mainstream banks go about their borrowing and lending activities thereby facilitating economic growth and development around the globe.

This notion has important ramifications. First of all, it implies that the money supply may be regulated by the central bank by affecting how much credit banks can issue. This enables the central bank to carry out monetary policy by modifying reserve requirements or interest rates. Second, the idea suggests that the economy can be significantly impacted by the volume of credit that banks have produced. The economy will thrive if banks are issuing a lot of loans, but it may be hindered if credit creation slows down.

Overall, knowing the Theory of Banking Credit Creation is essential for policymakers to make educated decisions since it has practical implications for monetary policy and economic growth. This study will apply the banking financial intermediation theory because it is more suited for this study. Without banks acting as intermediaries to transfer funds from one economic agent to the other, economic growth becomes a challenge.



## 2.4 Empirical Literatures

The researcher reviews the works of other authors in recent times to better understand the concepts of this research and how they affect economic growth.

The great degree of adaptability displayed by the Central and Eastern European (CEE) banking sector throughout the most recent financial crisis, as well as the part this sector plays in supporting the local economy and growth rate, have attracted the attention of academics from all over the world. This forms part of the reason why Alexandra and other (2021) investigates the elements that influence bank profitability in Central and Eastern European (ECC) nations. The research used panel data from 2009 to 2018 and with the use of the two step GMM methods, the researchers selected a few well-chosen drivers from macroeconomic and banking-specific issues. According to the conclusions of this study, the success of banks in Central and Eastern Europe is adversely affected by a number of factors, including unemployment, inflation, the budget balance, non-government lending, non-performing loan rates, concentration rates, and capitalization rates.

In a similar study, Lehmann & Wahl (2021) carried out a study on “The German bank–growth nexus revisited: savings banks and economic growth in Prussia”. Regional public financial intermediaries in Germany were proven to exist and aided in the growth of industry. Based on information from the Prussian Savings Bank in Germany, it was determined that government intervention was crucial to the financial sector's success, especially early in the industrial development process when the amount of capital needed is still within reach and access to the global capital markets is extremely difficult. The work differs from this research in that, it focuses on how banks have helped Germany's economic development. That is, the sole focus of the research was developing the German industry thereby leaving out the wellbeing of households.

Ledhem & Mekidiche (2020) researchers used a balance panel of data from all Islamic banks to examine the impact of Islamic banks' financial performance on economic growth in Brunei, Malaysia, Turkey, Indonesia and Saudi Arabia. operating in all five of those countries (2014 Q1 to 2018 Q4) and the GMM approach. The CAMELS system parameters were utilized in this study as variables to track financial performance and GDP as a stand-in for economic growth. The findings of this study showed that only significant factors of financial performance affected economic growth through profitability. The study also proposed that there is the need to stimulate

other financial performance factors of banks in Islamic regions in order to stimulate economic prosperity and subsequently economic development. This research focuses on Islamic banks thereby leaving out the impact of non-Islamic banks in contributing to economic growth. This research will address this problem by considering all the commercial banks operating in Cameroon.

In the Middle East, North Africa, and Turkey (MENAT) area, El Khoury et al. (2021) look into how environmental, social, and governance (ESG) factors affect bank performance. The study's sample size consists of 46 listed banks in this region from 2007 to 2019. Using ROE and ROA as proxies, this study measures financial success, while Tobin's Q Stock Return measures the market indicators. After adjusting for bank-specific, macroeconomic, and financial development variables, the impact of ESG and its quadratic term on financial performance was calculated. The results for this work suggested a nonlinear correlation between ESG and performance of financial organizations. Furthermore, the findings showed that while the ESG pillars exhibit varied patterns, financial development variables were significant. The association between accounting performance and market return was concave, but the relationship between the environmental pillar and return on investment was convex. To sum up, three vectors—pillars, financial performance measure, and ESG level—are necessary to comprehend how ESG and financial performance are related. In order to rationalize their investments and generate effective returns on their investments, banks should work to identify the ESG turning moments. This work suggest that banks should rather focus on determining the ESG turning point which is not the only factor that contribute to investment and returns of the bank, other factors contribute to the investment levels ranging from the interest rates the bank changes on loans as well as other financial services offered by the bank.

In a study conducted by Kartal (2021) to identify variables influencing the banking sector's profitability in Turkey from 2006 to 2018, in this study, it was evident that the profits of Turkish banks have been on a downward movement over the years. Return on Assets (ROA) on the Turkish banking industry decreased from 2.3% in 2006 to 1.4% in 2018. In the same way, Return on Equity (ROE) also decreased from 18.8% in 2006 to 10.5% in 2018 pointing to a decline in profitability trend hence problem in the Turkish banking sector within the last two decades. According to this study, important determinant of profitability needs to be identified and improved upon in order to make bank profitability in the Turkish banking sector stable. In order to attain

this objective, the research used quarterly data from the banking sector from the year 2006 to 2018. Information on net income, capital, and the proportion of defaulted loans in the total amount of credit total assets, and the USD/TL foreign exchange rate were all used in the study. This study used Multivariate Adaptive Regression Splines (MARS) to identify the elements that influence Turkish banks' profitability. The study concluded that necessary measure needed to be taken by the state through the central bank to keep the profitability of banks in turkey stable. This will give banks the opportunity to issue more credit to finance investment projects and contribute positively to the economic growth of turkey. This study evaluates banks performance based on the Turkish perspective. This research will focus on Cameroon as well as the factors that the Cameroon government needs to concentrate on in order to stimulate the economy towards growth.

Matveevsky, (2021) looks at the Importance of the Brazilian Development Bank for Economy and Trade. Using information from statistics from the World Bank and the Brazilian national bank, the data for this research uses the results integration model that take in to consideration relationship goals. The findings for this research showed that the most important variable to illustrate the impact that the Brazilian Development Bank has on the national economy included; the ratio of GDP to funding and gross domestic fixed capital formation (GFCF). This research concludes that the BNDES performs the function of monitoring and evaluation of the systems put in place ensures that strategic goals are being attained thus contributing greatly to the economic prosperity of the nation.

In order to learn more about the contributing factors that affected bank profitability in 23 countries between 2002 and 2016, Le and Ngo (2020) performed a cross-country analysis. The generalized method of moments was employed in this investigation to pinpoint the elements that affected bank profitability across several countries. The findings of this study showed that the number of bank cards issued, the number of automated teller machines, and the number of point of sale (POS) terminals across the nation all have an impact on the profitability of all banks. This study also demonstrated the detrimental effects that market dominance has on profitability and made the case that bank profitability and capital market development should be considered as mutually complementary. With this an increase in bank profitability too will positively affect economic growth as banks will be able to issue out more loans to investors for their investment purposes.

Examination of the impact of the banking sector on economic growth was also conducted by Zeqiraj in 2020. The survey found a strong favorable trend between the effect that banks' performance has on these countries' economic innovation, focusing on 13 southeast European countries from 2000 to 2015 and considering, among other things, commercial openness, investment, and human capital. The research also concluded that positive associations were observed among variables including human capital, investment, and trade openness with economic growth. This research recommended the governments of these countries should build a robust banking system because it procures a direct interface on a country's growth. While this examination puts its focus over thirteen east European countries as opposed to our study that focuses on a single country in central African trade bloc.

Doan & Bui, (2021) examined how bank profitability is affected by liquidity. They adopted return on assets (ROA) to assess profitability, while liquid assets to total assets (LATA) and the ratio of total loans to total deposits were used to measure bank liquidity (TLTD). 26 commercial banks comprise the group in Vietnam that was used for this study over the period 2013 to 2018. The study used GMM estimation to determine whether or not liquidity has a material impact on profitability of commercial banks in Vietnam. The results showed that the profitability (ROA) was negatively impacted by the liquid asset ratio (LATA). Loan to deposit ratio was observed to be positively correlated with profitability (TLTD). Other factors that were seen to affect bank profitability were inflation and economic growth. This study captured profitability considering return on assets which is being omitted by the current study in Cameroon.

Assessing return on assets a further study, Nyabaga & Wepukhulu (2020), examines the effect of corporate characteristics on financial performance with a focus on banks listed on the Nairobi Securities Exchange between 2010 and 2018. The bank's capital sufficiency, leverage, asset quality, and bank size were all taken into consideration. STATA 11 was used to gather and analyze the data for this investigation. Descriptive, correlational, and regression approaches were employed in this investigation to ascertain the relationship between the dependent and independent variables. The results for this research demonstrated that asset quality had a considerable negative impact on ROE but a negligible impact on ROA. Leverage was seen to exert a positive significant effect on ROE and ROA. In accordance with this report, listed Kenyan commercial banks should maintain a sizable amount of capital

adequacy in order to be able to withstand losses brought on by economic shocks. Additionally, the size of the bank has a major favorable impact on performance. This study examines banking performance from an African perspective which corresponds to this research as it addresses the ramifications of bank performance on economic growth in Cameroon. Furthermore, Ngumo and other, (2020) research on Kenya's Microfinance Banks' Financial Performance Determinants. Throughout a five-year span, from 2015 to 2020, the study used a descriptive study approach and secondary data from seven micro financial banks in Kenya. Correlation and regression analysis were used to examine the data that was gathered. The study's outcomes revealed a significant and favorable association between operational effectiveness, enough capital, company size, and the manifestation of microfinance banks in Kenya. The study finds a direct correlation between operational effectiveness, adequate capital, firm size, and the financial performance of micro financial institutions in Kenya. It also finds a negative correlation between liquidity risk, credit risk, and the financial performance of micro financial banks in Kenya. This study shows the importance of micro financial institutions to the economy, they help to provide funds for small business creation thereby contributing to economic growth and development. Thus this research differs from this work in that it addresses the relevance of Cameroonian commercial banks to economic innovation of Cameroon's economy.

Munangi & Bongani (2020) did a second study to examine the impact of credit risk on the financial health of 18 South African banks between 2008 and 2018. The study employed panel data and pooled ordinary least squares (pooled OLS), fixed effects, and random effects estimators for data analysis to investigate how credit risk and financial performance are related. Return on Assets (ROA) and Return on Equity (ROE) were used to gauge bank performance (ROE). According to the data, credit risk was found to be adversely correlated with financial performance; in other words, the more non-performing loans there are, the lower the rate of bank profitability. The findings showed that credit risk was negatively connected with financial performance, or put another way, the rate of bank profitability is negatively correlated with the amount of non-performing loans. The results also reveal a favorable relationship between these banks' performance and capital adequacy ratio, suggesting that a higher capital adequacy ratio boosted shareholder confidence in the bank. Economic development, in general, has a beneficial impact on bank performance. Additionally, there was no clear correlation between bank size and performance in this analysis.

Lastly, the study discovered a detrimental link between leverage and financial success. In order to decrease the volume of non-performing loans being granted, this study advises banks to adhere to strict credit policies. In line with the study, in order to lessen the risk of bank failure, banks should act in accordance with the rules established by the banking industry. Igoni and co. (2020) carried out research to determine the consequences of digital finance on Nigeria's economic development. ATM, POS, NIP, and GDP were the variables for this study, with GDP serving as a stand-in for economic growth. The information for this study was provided by the Central Bank of Nigeria (CBN), which covered the years 2012 to 2017. The results of the investigation, which used the Philips-Perron unit root and the Granger Causality test, demonstrated that the variables were stationary at the first difference. Additionally, the Granger Causality test demonstrates that digital finance via the ATM, POS, and NIP channels has no causally significant impact on the Gross Domestic Product of the Nigerian economy. The study recommends banks in Nigeria to carryout sensitization on the use of digital services offered by the bank so as to boast bank performance and hence economic growth.

In Tanzania, Joseph (2020) investigates the connection between bank loan and economic growth. In this study, time series data from 1993 to 2017 were subjected to a causality test and a vector error correction model. The findings show that there is no causal link between bank credit and economic growth or between bank credit and economic growth. In addition, the findings demonstrate that bank credit has a long-term beneficial impact on economic growth as opposed to the short run and at such, the research recommend that policies aimed at enhancing banks' ability to issue out credit should be encouraged so as to increase the rate of deposits which then spirals to increase the banks' ability to issue credit hence leading to growth and development of the economy.

Satia & Okle (2020) assess the effect of financial innovation on the prospects for Cameroon's economic progress. While economic growth was measured by gross domestic product per capita, the research used domestic lending to the private sector, the ratio of broad money to GDP, and mobile banking penetration as proxies for financial innovation. The autoregressive distributed lag (ARDL) model was used to examine the connection between financial innovation and economic development. This study came to the conclusion that, over time, financial innovation contributes favorably to Cameroon's economic growth. This demonstrates how important a part

the banking industry plays in Cameroon's economic development and prosperity. However, the net interest margin, profitability, and bank deposits were not used in this study as stand-ins for measuring bank performance. Furthermore, Ngimanang, (2020) looks the connection between Cameroon's financial development and the growth rate of its GDP. In this paper, economic growth is captured by the growth of real GDP. Real GDP growth is a measure of economic growth. The research produced the following conclusions utilizing time series data spanning the years 1978 to 2017 and combining the Engels and Granger Causality test with the error correction model. Financial progress and economic expansion showed a beneficial association that was stronger in the short term than the long term. The study discovered a bidirectional causal link between economic expansion and financial development after accounting for other factors. The research recommended that the financial sector of Cameroon should make credit readily available to the private sector because it both short and long-term stimulates economic expansion.

The connection between Cameroon's economic expansion and bank performance has been the subject of numerous studies. These studies typically discover a positive correlation between the two factors, demonstrating the importance of a robust banking industry for economic growth.

According to a study by Ngouhouo and Tamo (2015), the economic development of Cameroon is positively and significantly impacted by bank performance as indicated by metrics like capital adequacy, asset quality, and profitability. The availability of credit is essential for promoting investment and economic activity, as demonstrated by a study by Abanda and Ambe (2016) that discovered bank lending is positively connected to economic growth in Cameroon. The connection between Cameroon's economic growth and bank performance has been the subject of numerous studies. For instance, a 2019 study by Fouda et al. discovered that Cameroon's economic growth is positively impacted by bank performance. The authors discovered that an increase in bank efficiency results in a rise in economic growth using data from 14 commercial banks in Cameroon.

Similar to this, a 2018 study by Oyinlola and Uwuigbe discovered that the growth of the banking industry in Cameroon has a favorable impact on economic expansion. The authors discovered that the expansion of the banking industry can result in higher investment, which can then result in economic growth using data from 8 commercial banks in Cameroon.

According to one study by Mabou and Tchana (2019), economic development in Cameroon is positively impacted by the performance of the country's commercial banks. The study, which examined data from 1991 to 2015, discovered that higher bank deposits, loans, and profitability were associated with higher economic growth. The study also discovered that metropolitan areas had a greater effect on economic growth than rural ones did.

According to Bhegawati & Utama (2020) Banks play a key role in the economic development and progress of a country. The business activities of banks are not solely directed at making profit but, they also incorporate raising the living standards of the various communities that they operate. Banks on the other hand also serve as functional intermediaries that connect people that have capital with those that need capital for various reasons (investment purposes, running of the house hold etc.). Furthermore, banks contribute to the economic growth and development by channeling financial resources to small and medium size enterprises which exert an impact on the macroeconomic policies of the country. That is, banks facilitate payments for all sectors of the economy (Simatupang, 2019).

In a study on the impact of bank credit on Tanzania's economic growth, Joseph E (2020) undertook. This study specifically assesses the causal relationship between the credit borrowing sector and economic growth, as well as the relationship between financial intermediaries and economic growth. Time series data from 1993 to 2017 were used in this investigation. The causality test and the vector correction model were both used by the researcher to assess the data for this study. It was concluded from the study's results that in the near term, there was no causal association between bank credit and economic growth in Tanzania. The analysis found that, in contrast to the short run, bank credits in Tanzania had a favorable and significant impact on the country's economic growth in the long term. According to the study's suggestions, Joseph advised that policies that promote the expansion of the financial industry be prioritized. As regards the explanation for the long run relationship, Joseph stated that increasing the deposits remained an integral part towards the provision of credit services by banks in Tanzania.

Ibrahim & Abdalla (2020) used data from 1980 to 2017 in another study to assess how Sudan's banking sector development has affected the country's economic growth. The outcomes of this study are based on the Autoregressive Distributed Lag (ARDL) model of cointegration. The consumer price index (CPI) and GDP per capita were used to



define the relationship between the dependent and independent variables used in the study. The data for this model also included the credit to GDP ratio, deposit to GDP ratio, assets of the central bank of Sudan as a GDP ratio, and GDP per capita. The study's conclusions showed that there was no long-term correlation between Sudan's banking development and country's economic expansion. However, in the short run, there exists a relationship between deposit to GDP ratio and economic growth in the Sudanese community. The implications of these findings indicate that majority of Sudanese banks provided little or no credit to the general public over the years covered by this study and at such, the research made various recommendations to the Sudanese authorities relating to stimulating economic growth through banking activities. According to this study, appropriate merger and acquisition should be encouraging as well as banks should employ the use of mobile financial services aimed at obtaining deposits from customers and giving out loans to investors. Lastly, the study recommends the efficient distribution of bank resources across the entire country so as to spur economic growth and development.

Furthermore, Ugwoke et al, (2020) investigated the effect of bank deposit through mobile money services on the economic growth of Cameroon. Using mobile money as the independent variable and with the use of GDP as a proxy for economic growth, the researcher analyzed the data for this study with the use of SPSS. To continue, the study made use of secondary information from papers that were released by the Economic Bank of Central African States (BEAC) and Knoema for Mobile Money. With the use of a simple linear regression and at 95% confidence interval, the study found that there was a weak positive insignificant relationship between mobile money service and the economic growth of Cameroon. The study concluded that the reason for the insignificant relationship was as a result of the fact that the system was still a new phenomenon in Cameroon and the adoption of the service was equally slow. The study further concluded that in the long run, when majority of the citizens most have adopted the service, its relation on economic growth will be positive and significant because of the advantages that the service offers to users.

Abdullahi & Eze (2020) in their study investigates the connection between banking industry indicators and the economic growth of Nigeria. The study was based on time series data running from 1980 to 2019. The banking indicators that were used in this study included the following; customer deposits, interest rate, credit to private sector, volume of bank frauds and volume of capitalization. These indicators were used

as the independent variables for the study while economic growth was the dependent variable captured by GDP. The findings for this study showed that within the period employed by the research, customer deposit and credit to private to private sector exerted a significant positive effect on the economic growth of Nigeria while the other variables; volume of bank frauds, non-performing loans and interest rate had a negative effect on the economic growth of Nigeria. This study recommended that operations in the banking industry should be improved upon through efficient policies aimed at stimulating this sector to growth. Furthermore, banks should put appropriate control mechanisms to guide against fraud and non-performing loans should be monitored and dealt with to the greater good of these banks and the general economy as a whole.

Ezeocha (2020) looks at the impact of banking sector reforms and Nigeria's economic expansion in a different study. In this study, secondary data from the global bank development indicators are used. The ordinary least squares method was used to evaluate the study's hypothesis and determine the impact of bank reforms on Nigeria's economic expansion. The results demonstrate an antagonistic link between loans and GDP. This suggests that a rise in the volume of loans provided by commercial banks led to a drop in Nigeria's GDP. In addition, there was a strong positive correlation between real sector financing and bank reforms in the Nigerian economy. As such the researcher made the following recommendations; a time lag should be given to transition from one reform period to the other. This should be done in order to facilitate effective planning and development of policies by the powers that be for the smooth transition and hence a continuance of economic growth and development of Nigeria (A. F. Assi et al., 2020; Ala Fathi Assi et al., 2020a; Assi et al., 2021; Isiksal et al., 2022; Isiksal and Assi, 2022) and (Ala Fathi Assi et al., 2020b; Assi et al., 2021; Fathi et al., 2022; Fathi and Isiksal, 2021a, 2021b, 2021c; Fathi and Zhakanova Isiksal, 2022; Isiksal and Assi, 2022).

Moyo & Le Roux (2021) carried out a panel study on the financial development's effect through bank performance on the economic growth in SADC countries. The data for this study covers a period of 25 years (1990 to 2015). The methodology for this study incorporates the pooled mean group estimator. Financial indices were also created because of the strong correlation between the financial development indicators. The findings of this research indicated that financial development has a negative impact on economic development in the long run. As a

limitation to this study, the researcher ignores the importance of development in the stock markets and its impact on economic growth, thus focusing solely on banks. As recommendations, institutional quality should be boosted so that SADC countries should benefit from the development of the financial sector.

According Okafor (2020) another contributor to economic growth results from agricultural produce. In his study, Okafor looked on the relationship between Nigerian agriculture's progress and commercial bank lending. Among the data examined for this analysis are interest rates and programs that guarantee agricultural loans. The yearly reports of the Nigerian central bank were used to gather this information. To check for unit roots, the Augmented Dickey Fuller and Philip Perron tests were used. The ordinary least squares method is used in the study to determine how commercial bank lending affects agricultural development. The findings showed that Nigeria's agricultural development had a favorable, considerable impact as a result of the agricultural credit plan. As recommendations, the study recommends that government should develop more credit granting schemes to farmers to help them boost productivity and hence economic growth and development.

Moreover, Saeed et al. (2020) looked into the causal link between Pakistan's banking sector and country's economic expansion. A panel of 24 banks was used in this investigation, and data from 2006 to 2016 were used. Panel cointegration and the panel Vector Error Correction Model were used in the study (VECM). The results of this study demonstrate that bank investment, bank innovation, and lending capacity all have positive, meaningful effects on economic growth over the long and short terms. The report ends by advising authorities to exercise caution since excessive banking growth can lead to an increase in the number of non-performing loans and a decline in investment activity, both of which have a negative impact on the nation's economic growth and development.

Overall, the empirical evidence indicates that a strong banking sector is crucial for fostering economic growth in Cameroon, and policymakers should concentrate on enhancing bank performance and expanding credit access to assist economic development.

## **2.5 Research Gap**

There is a significant research gap in the literature concerning the relationship between bank performance and economic growth in Cameroon. Many studies have

looked at how the financial sector's expansion affects Cameroon's economic growth, but few have specifically looked at the role that banks play in this relationship.

From the above literature, it can be seen that several works have been conducted in the concepts of bank performance and economic growth. Talking about Cameroon, few studies have examined the connection between bank performance and economic growth using deposits, net interest margin, profitability, and bank capital to asset ratio as proxy measures of bank performance. The knowledge from this work will be among the first researches illustrating the standpoint of how banks performances triggers an economy's growth on this perspective. Furthermore, most research in Cameroon assesses economic growth by focusing on foreign direct investment and other macro-economic variables that determine growth.

Investigating the variables that affect bank performance in Cameroon and how these variables affect economic growth is one possible line of inquiry. This could entail examining the banking sector's regulatory environment, the extent of industry competitiveness, and the standard of banking services provided to clients. A study like this could point up areas where policy changes should be made to enhance bank performance and support economic growth.

Investigating the ways in which bank performance affects Cameroon's economic growth is another line of inquiry. For instance, it could be investigated whether better financial intermediation by banks or easier access to credit results in more investment, job creation, or productivity growth. This will necessitate a thorough examination of the lending practices of Cameroonian banks and the effects they have on various economic sectors.

In general, improved comprehension of the connection between bank performance and economic expansion in Cameroon is essential for decision-makers hoping to advance the nation's sustainable development.

## **2.6 Assessment of the Literature in Brief**

The conceptual literature review is the opening paragraph of the literature review for this project where the concept for this study were review and a relationship establish between these concepts and the dependent variable; economic growth. This chapter equally presented theories relating to bank performance and economic growth. Some of the theories include the following;

The classical growth theory: this theory set out to determine factors that contribute to economic expansion. The primary justification for this view is that surplus in production levels affect economic growth but not all activities of the economy can provide surplus production. This theory also states that labor can be divided into two distinct categories inefficient and efficient labor productivity, and this division of labor is crucial for economic development. The Growth Theory by John Maynard Keynes: According to this theory, the economy requires government influence to balance output leading to an improvement in purchasing power which subsequently results to an improvement in economic development. Thus, this theory shows the role of the government in promoting economic expansion in the country.

The Banking Fractional Reserve Theory: This theory contends that banking organizations produce money through the process of multiple deposit growth and views each bank as a financial intermediary.

The Financial Intermediation View of Banking: Based on this theory, banks are just another type of financial intermediary like other non-banking financial institutions. These organizations receive deposits from the public and lend those deposits to investors.

The Credit Creation Idea of Banking: Conforming to this theory, banks do not act as financial intermediaries or as a group. In this theory, credit and money are allegedly created by banks out of nothing. According to this theory, banks do not have to start by collecting deposits or reserves before lending as stated by the financial intermediation theory. This theory suggests that bank balance sheet tend to show an increase in trend overtime period when the bank credits that are outstanding grows. Supporters of this theory included Schumpeter (1912).

**Table 1.1: Summary Table of Related Empirical Review**

Cited	Country/Region	Date	Method	Results
Alexandra and other (2021)	Eastern and Central Europe (CEE)	2021	two step GMM methods	The profitability of the banks in the CEE was negatively impacted by unemployment, the budget balance, inflation, non-government credit, non-performing loan rates, concentration rates, and capitalization rates.
Lehmann & Wahl (2021)	Germany	2021		It was proven that regional government financial intermediaries supported Germany's industrial growth.
Ledhem & Mekidiche	Malaysia, Indonesia, Brunei, Turkey and Saudi Arabia	2020	GMM method	that only significant factors of financial performance affected economic growth through profitability
El Khoury and other (2021)	Turkey, the Middle East, and North Africa	2021	Return on Tobin's Q Stock	The pillars, financial performance measure, and level of ESG are the three vectors that determine the connection between

				ESG and financial results.
Kartal (2021)	Turkey	2021	Multivariate Adaptive Regression Splines (MARS)	The study concluded that the government must take the required steps through the central bank to maintain consistent bank profitability in Turkey.
Matveevsky, (2021)	Brazil	2021	results integration model	The findings of this research demonstrated that the ratio of GDP to financing and gross domestic fixed capital creation were the most crucial variables to calculate the impact of the Brazilian Development Bank on the national economy (GFCF)
Le & Ngo (2020)	23 countries in Asia	2020	moment-generalized approach	The quantity of issued bank cards, automated teller machines, and point of sale (POS) terminals across the nation all have an

				effect on all banks' profits.
Zeqiraj, (2020)	13 South East European countries	2020	generalized method of moment	The effects that the performance of banks has on the development of these nations' economies are significantly beneficial. The study also came to the conclusion that elements like human capital, investment, and trade openness influenced economic growth in a positive way.
Doan, T & Bui, T. (2021)	Vietnam	2021	GMM	The findings demonstrated that the liquid asset ratio has a negative impact on profitability (ROA) (LATA). Profitability was found to be strongly connected with the loan to deposit ratio (TLTD). The pace of economic growth and the rate of inflation were also noted as influencing bank profitability.



Nyabaga & Wepukhulu (2020)	Kenya	2020	To determine the connection between the dependent and independent variables in this study, descriptive, correlational, and regression methods were used.	The research's findings indicated that asset quality has a considerable negative impact on ROE but a negligible impact on ROA. ROE and ROA were observed to benefit significantly from leverage.
Ngumo et al, (2020)	Kenya	2020	analysis by correlation and regression	The success of microfinance banks in Kenya was shown to be strongly and positively correlated with operational effectiveness, enough capital, and company size, according to the study's findings.
Munangi & Bongani (2020)	South African	2020	Ordinary least squares with pooling (pooled OLS)	The research revealed a negative correlation between credit risk and financial performance. The results also show that the capital adequacy ratio is positively correlated with these

				banks' performance and that economic expansion in general has a positive effect on bank performance.
Igoni et al (2020)	Nigeria	2020	Philips-Perron unit root and the Granger Causality test	The Nigerian economy's Gross Domestic Product is not significantly impacted by digital money through the ATM, POS, or NIP channels.
Joseph, (2020)	Tanzania.	2020	the vector error correction model and a causality test	The findings show that there is no causal link between bank credit and economic expansion or between bank credit and economic growth. Additionally, the findings show that, as opposed to the short run, banks' credit has a beneficial impact on economic growth over the long term.
Satia & Okle (2020)	Cameroon	2020	Autoregressive Distributed Lag (ARDL) Model.	Long-term economic growth in Cameroon is positively

				impacted by financial innovation.
Ngimanang, (2020)	Cameroon	2020	Engels and Granger Causality test,	Financial growth and economic prosperity showed a beneficial association that was stronger rather than over the long run.
Mabou, C. P., & Tchana, F. T. (2019).	Cameroon	2019		Commercial Banks Performance and Economic Growth in Cameroon. International Journal of Economics and Financial Issues, 9(5), 14-23.

## CHAPTER III

### Research Methodology

#### 3.1 Introduction

This chapter is concerned with data collection, processing and analysis. The model for this research is presented in this study as well as the tools for data analysis. According to Zikmund et al. (2010) research methodology is concerned with the description of the various methods used in conducting research.

#### 3.2 Study Area

The study area for this research comprises of the banking sector in Cameroon. Central Africa is the home of the Republic of Cameroon. Nigeria, Chad, Gabon, Equatorial Guinea, Central African Republic, and the Atlantic Ocean all border Cameroon's territory. Cameroon is a member of the CEMAC economic region (Economic and Monetary Authority of Central African States). Chad, Central African Republic, Gabon, Equatorial Guinea, Congo, and Sao Tome and Principe are the other nations that make up this economic bloc. This trade zone uses a common currency called the FCFA. Cameroon being the dominant economy in this region plays host to the central bank of CEMAC. Cameroon has an average population of 25 million as of 2020 with a per capita income of 1590USD for the year 2021. Cameroon had a diversified economy with revenue coming through the exploitation of crude oil and other mineral resources like gold, bauxite, iron ore, coal and natural gas just to name a few. The country also engages in agriculture through cash crops production like cocoa, coffee, timber and so on.

#### 3.3 Overview of Cameroon Banking Sector

The banking industry in Cameroon contributes significantly to the nation's economy by offering a range of financial services to citizens, companies, and governmental organizations. A significant number of banks and a widespread network of branches and ATMs characterize Cameroon's well-developed banking sector. The Bank of Central African States (BEAC) and the Ministry of Finance oversee the banking industry.

As stated above, within the Economic Community of Central African States (CEMAC), Cameroon has the greatest economy. With a per capita income of USD 2170, Cameroon had a GDP estimated at USD 44.327 billion in 2010, which was half

the GDP of the CEMAC sub-region at the time (Jeune Afrique Economie, 2011). Over the past few years, this nation's economy has grown steadily up till 2016 when the Anglophone Crisis started and in 2019 with the advent of COVID 19.

Before Cameroon gained her independence in 1960 for the French section and 1961 for the English-speaking section of Cameroon, foreign banks dominated the banking industry to a considerable extent. Following independence, the majority of banks were French institutions tasked with supporting and financing French operations in Cameroon. Credit Lyonnais Group, SCB (Societe Camerounaise De Banques), BICIC (Banque International Pour Le Commerce Et L'Industrie Du Cameroun), SGBC (Societe' Generale De Banques Du Cameroun), Groupe Societe General, and La Banque International Pour L Afrique Occidentale Au Cameroun were among the banks operating in Cameroon at the time (Groupe BIAO).

Furthermore, banks coming through the United States of America entered the Cameroon banking market, these included Bank of America, Chase Manhattan Bank of Cameroon, Boston Bank of Cameroon (Groupe Boston Bank), and Groupe Chase Bank. Following that, the Cameroonian government got involved in international banking operations there and began buying shares in some of these banks, including Credit Lyonnais, BIAO, SGBC, and BICIC. This pattern persisted up until 1987, when the nation went through a financial crisis that led to higher prices, trade deficits, and a reduction in government revenue. This led to the closure of many banks in Cameroon. At this time the bank that had the rights to issue currency and regulation on how banks operate within the borders of Cameroon were the Central Bank of Cameroon and Equatorial Africa. This bank was replaced by BEAC (Central African States' Economic Bank) and function as the CEMAC subregion's central bank. To name a few of the banks that are currently doing business in Cameroon, there is United Bank for Africa (UBA), Atlantic Bank, BGF Bank, EcoBank Cameroon, Afriland First Bank, Societe Generale, Banque International du Cameroun pour l'Epargne et le Crédit (BICEC), Standard Chartered Bank, Union Bank, Commercial Bank of Cameroon, National Financial Credit (NFC), Community Credit Company (CCC).

The country's rising economic growth, rising consumer confidence, and the rising popularity of digital banking services have all contributed to the banking sector's tremendous rise in recent years. More and more clients are using digital banking services similar to online and mobile banking, to manage their finances as a result of the growth of mobile banking. Due to the increased rivalry among the nation's banks

as a result of this trend, customers are now provided more cutting-edge financial goods and services. In Cameroon, the banking industry is vital to promoting financial inclusion and economic prosperity. The nation is well-positioned to maintain its economic growth and development in the future thanks to a well-developed banking industry, a sizable network of branches and ATMs, and the rising popularity of digital banking services.

### **3.4 Data**

Time series data covering the period from 1972 to 2020 are used in this study. The World Bank's development indicators were used to gather the information. This research captures bank performance with the use of variables like bank profitability, net interest margin, bank capital to asset and bank deposit. The study's dependent variable is economic growth, which is modeled in the model as a proxy using gross domestic product (GDP).

### **3.5 Method of Data Analysis**

This research uses an Autoregressive Distributed Lag Vector Autoregressive (VAR) Model to investigate the connection between Cameroon's economic development and bank performance. First, the researcher conducted a trend analysis to see how the variables moved over time in order to prepare the data for this analysis. The researcher used the Augmented Dickey Fuller to carry out a Stationarity Test in order to make sure the data for this research is suitable for analysis. The Johanson Test was employed by the researcher to ascertain the long-term association between the dependent and independent variables. The researcher equally carried out a pairwise correlation test to work out the level of multicollinearity among the independent variables. After this test, the researcher used the OLS to ascertain the effects of each independent variable on the dependent variable.

### **3.6 Model Specification**

This research uses a multiple unit direction model with the expression given as follows;

$Y = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_nX_n + \dots + u$ . this expression justify that the dependent variable y is affected by more than one independent variables and as such, the value of y will increase or decrease depending on changes in x. this model is supported when

there is no correlation among the independent models and  $y$  has a correlation with all independent variables. this implies that  $Cov(X_1X_2) = 0$

Thus the function for this research is presented below

$$EG = f(PR, BCAR, NIM, BDP) \dots\dots\dots (1)$$

From the function above, the following econometric expression can be generated

$$EG = \beta_0 + \beta_1PR + \beta_2BCAR + \beta_3NIM + \beta_4BDP + \mu \dots\dots\dots (2)$$

Where,

$\beta$  = coefficient of estimation

EG = Economic Growth

PR = Profitability

BCAR = Bank Capital to Asset Ratio

NIM = Net Interest Margin,

BDP = Bank Deposit,

$\mu$  = Error Term

From the above expression, a prior expectation theory is presented below.

$\beta_0 \neq 0$  this implies at any point in time, there are factors affecting economic growth.

$\beta_1 > 0$  this implies if bank profitability is increased, there will be a corresponding rise in economic expansion.

$\beta_2 > 0$  This shows that when bank capital to assets increases, there will be a ripple effect on economic growth since it will cause an expansion of the economy.

$\beta_3 > 0$  This demonstrates that rising net interest margins will spur economic expansion.

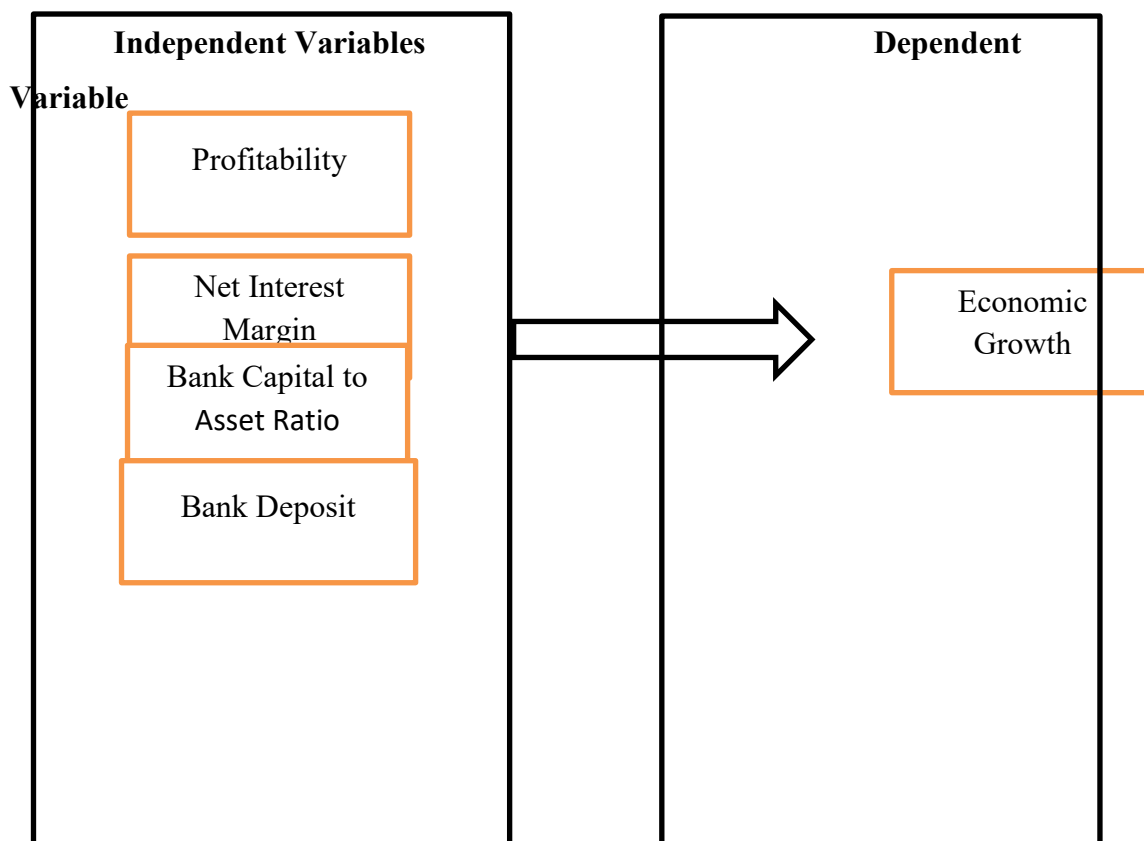
$\beta_4 > 0$  Study from the past suggests that a rise in bank deposits will translate in a rise in economic output.

To have a graphical representation of the conceptual literature, the researcher has presented the following conceptual framework used in the study.

### 3.7 Conceptual Framework

The association between the financial performance indicator and economic growth was demonstrated by the researcher using a straightforward model.

The purpose of the study is to determine whether there is a significant correlation between the independent and dependent variables. Contrarily, the null hypothesis states that there is no relationship between bank performance and economic growth.



Source: By the Researcher 2022

### Figure 3.1 conceptual frame work of the research

This will be tested by gathering and analyzing data from the world bank development indicators to see how well the above variables comprehend each other.

### 3.8 Limitation of the Study

It should be noted that no research can be undertaken without its challenges. This research has a couple of limitations. These include; inadequate finances to source out data from the World Bank indicators. The researcher equally had a challenge obtaining the software to analyze the data that was collected. Last but not the least, the time frame was another limitation. This is because the research carried out this study with in a period of three months which was challenging to the researcher because of his tight schedule.

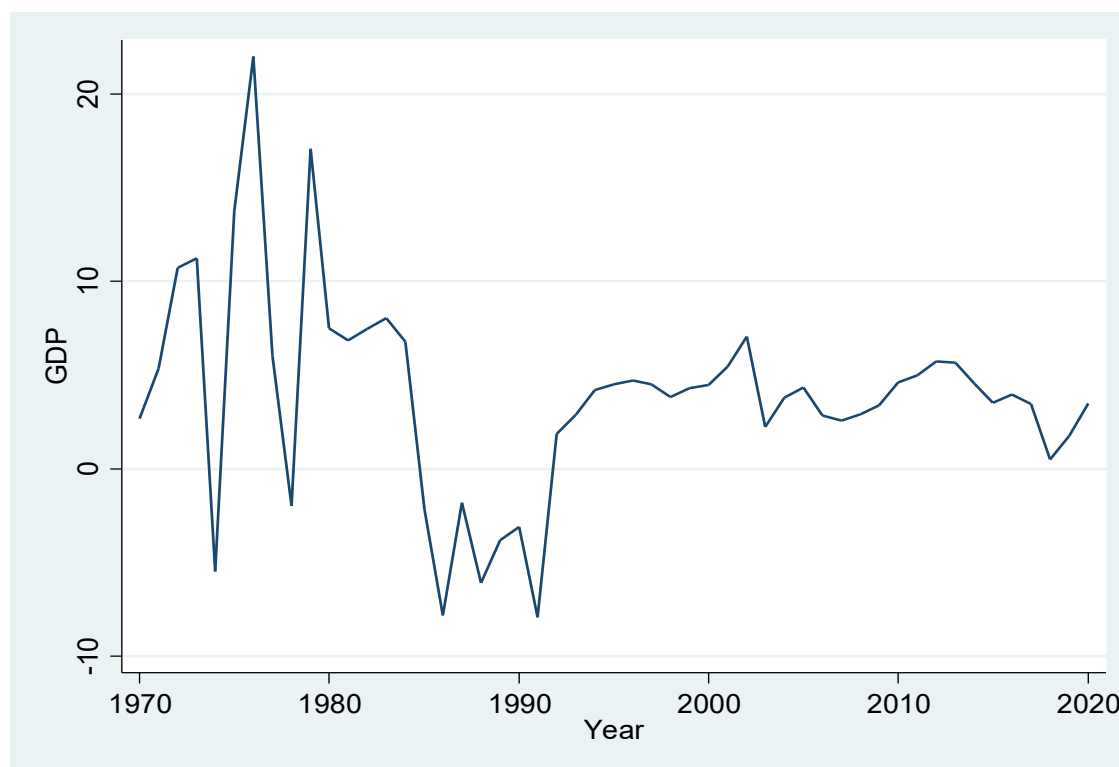


## CHAPTER IV

### Data Analysis and Discussion of Results

#### 4.1 Trend Analysis

Considering that the data for this study is secondary and comprising of time series data, the researcher carried out a trend analysis to ascertain the movement of the variables over the given time period. This information is presented in the figures that follow below.

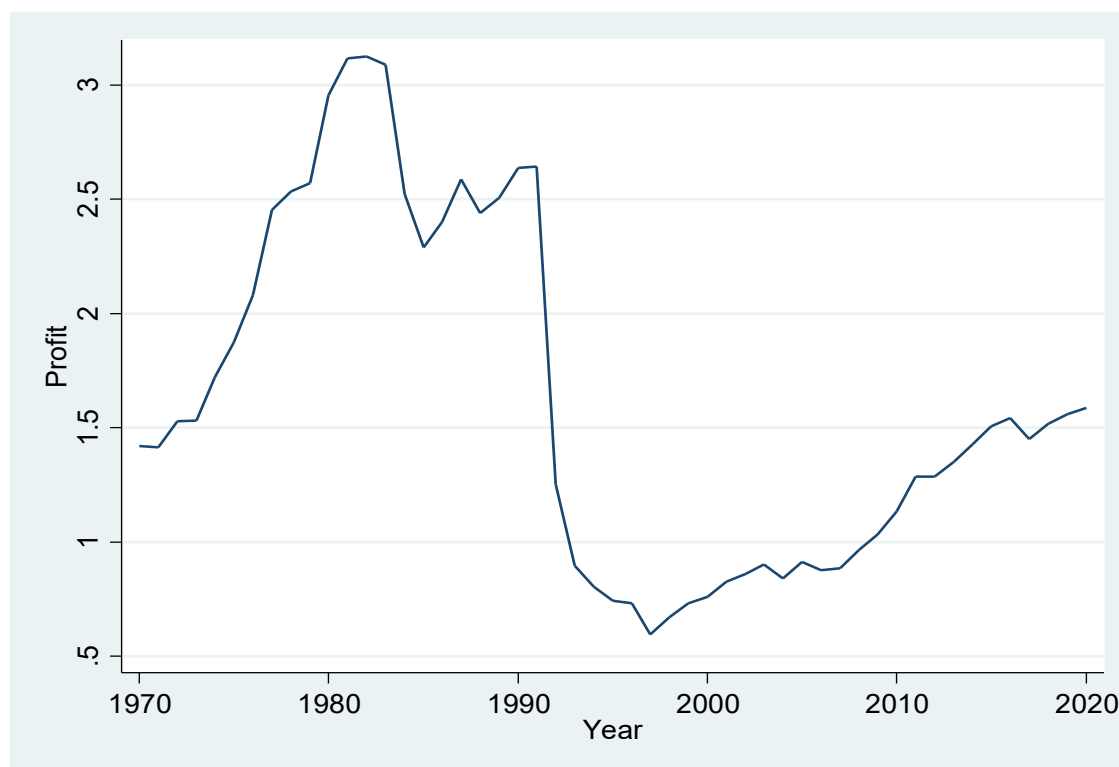


Source: constructed by the researcher using Stata 14

#### Figure 4.1 Trend Analyses for GDP

Figure 4.1 depicts the trend line of the GDP of Cameroon from 1972 to 2020. From this figure, it can be seen that the GDP of Cameroon have fluctuated over the years experienced its peak late in the 1970s. This moves in line with the expansion in Cameroon because during this period, crude oil was discovered in Cameroon and the Cameroonian economy became diversified. That is the economy that only relied on the exportation of agricultural product notice an influx in foreign direct investment in the domain of oil extraction, this contributed to the rise in economic growth of Cameroon. From the 1980s to 1990s, Cameroon experienced a series of political instability that affected the GDP growth rate as explained by the figure 4.1. As from the early 2000s till 2014, there was a period of relative political stability in Cameroon

as a result; the GDP became stable with burst period occurring in 2008 which came about because of the global financial crisis and in 2016 due to the Anglophone crisis that erupted (armed conflict between the English speaking separatists and the government of Cameroon). Last by not the least, the GDP was equally affected by the COVID 19 pandemic that destabilized world trade with Cameroon included. The researcher equally constructed a trend line for bank profitability in Cameroon as shown below.

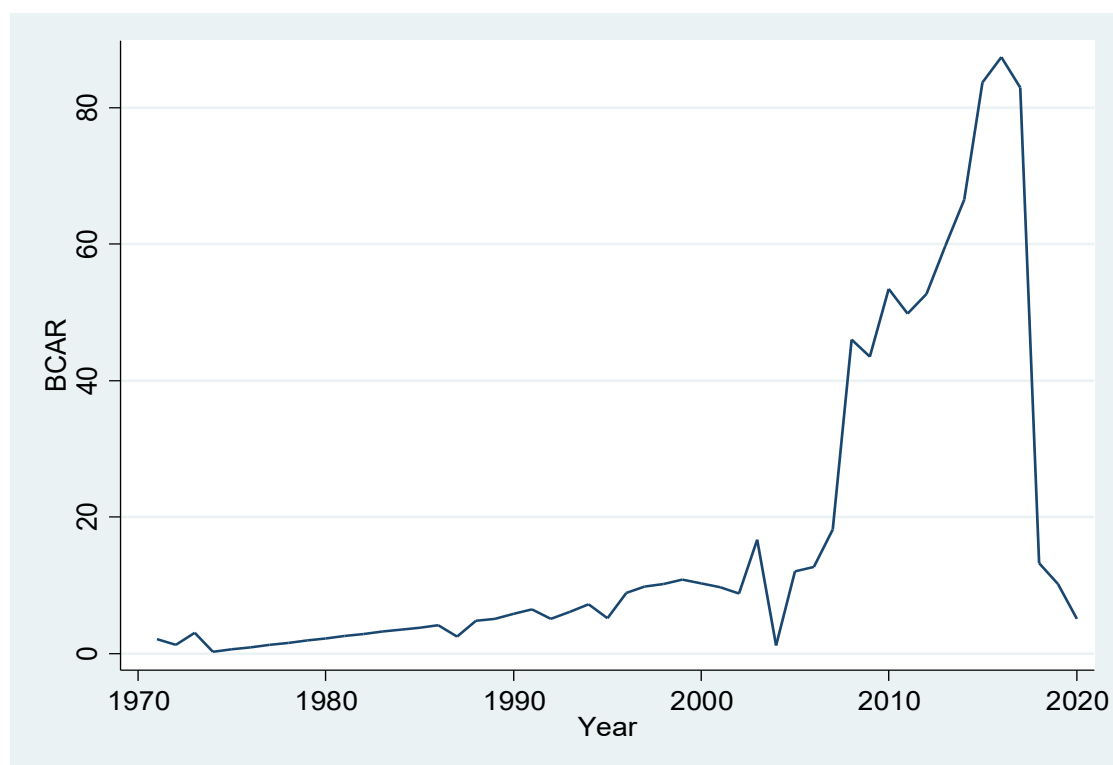


Source: constructed by the researcher using Stata 14

### Figure 4.2 Trend Analyses for Profitability

From figure 4.2 above, it can be seen that there was a drastic fall in bank profitability in Cameroon from the late 1980s to late 1990s. This corresponds to the period of political and economic instability in Cameroon. However, bank profitability started to increase as the political atmosphere became calm with an increase in economic activities. During this period, the level of economic engagement from Cameroonians increased thereby prompting them to utilize more banking services thereby increasing the revenue streams and subsequently bank profitability. It can be seen that the bank profitability has been on the rise until 2016 when the Anglophone crisis started in

Cameroon. The researcher equally carried out a trend analyses of bank capital to asset as shown in figure 4.3 below.

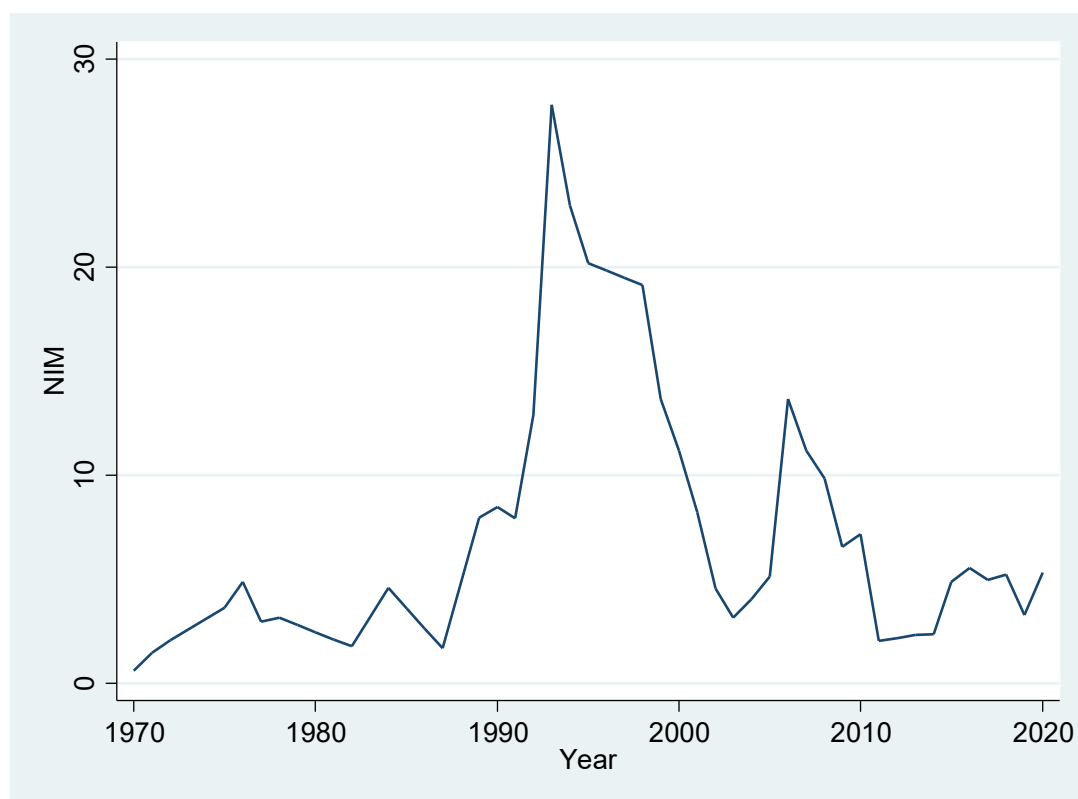


Source: constructed by the researcher using Stata 14

#### **Figure 4.3 Trend Analyses for Bank Capital to Asset Ratio**

From figure 4.3, it can be seen that the bank capital to asset ratio have been low over the years till the year 2000 when it increased and dropped again in the year 2008 due to the world economic crisis that was detrimental to Cameroon's banking industry. There was a steady growth from 2009 till 2016. The possible explanation for the downward trend in the Bank Capital to Asset trend over the years in light of the of the Anglophone dilemma that took off in 2016 coupled with the COVID 19 pandemic. These two factors accounts for the fall in bank capital to asset ratio in Cameroon.

The researcher also carried out a trend analysis for net interest margin from 1970 to 2020 as presented in figure 4.4 below.

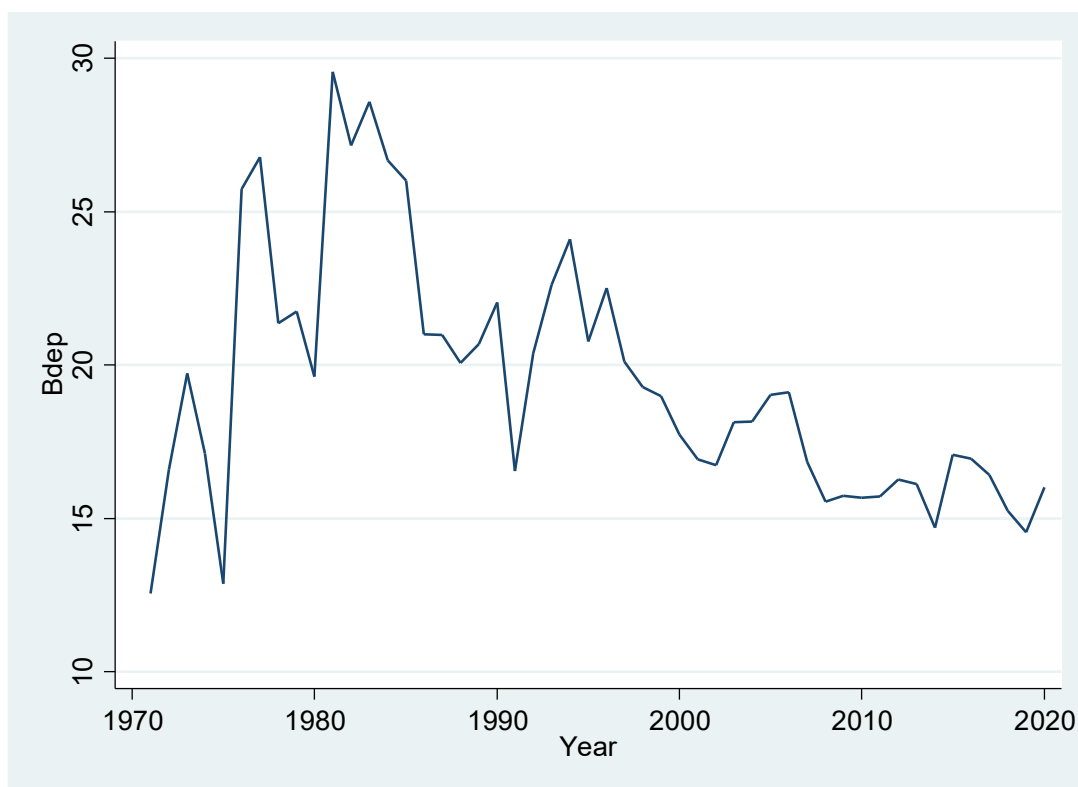


Source: constructed by the researcher using Stata 14

#### **Figure 4.4 Net Interest Margin Trend Analysis**

From figure 4.4 As can be seen, Cameroon's banks have a net interest margin that has been very stochastic over the years. A possible explanation for this trend is that in Cameroon people go for investment loans as per the economic trends. From 1990 till 1995, the net interest margin was on a steady increase. From 2010 till 214, the net interest margin was constant and corresponds to the period of relative political stability in Cameroon. From 2015, it increased and the curve flattens from 2016 till 2019 when it starts to fall. This can be explained by the fall in economic activities in the country due to the COVID 19 pandemic's negative consequences and the political upheaval. During this time, people were more concern with getting foodstuffs and taking care of their house rents as opposed to investing in projects or businesses.

Lastly, the researcher equally conducted a trend line for bank deposits made by banks operating in Cameroon from 1970 to 2020. This information is presented in figure 4.5 below.



Source: constructed by the researcher using Stata 14

#### **Figure 4.5 Trend Analyses for Bank Deposit**

Figure 4.5 depicts the trend line for bank deposit over the years. The trend line is very stochastic, thereby showing that people carryout bank deposits for different reasons. The quantity of bank deposits made in Cameroon decreased from 2010 to 2015. As from 2016, there was a slight increase and from 2018 a decline was experienced. From the year 2020 an upward trajectory is experienced thus indicating that more people have begun to save their earnings.

## 4.2 Stationarity Test (unit root)

**Table 4.1 Enhanced Dickey-Fuller Unit Root Test (ADF)**

Variable	Intercept Level		Intercept 1st difference		Trend & Intercept Level		Trend & Intercept 1st difference	
	T Statistic	P Value	T Statistic	P Value	T Statistic	P Value	T Statistic	P Value
GDP	-2.33477	0.1657	-4.10765	0.0023	-4.76170	0.0018	-9.15666	0
PROFIT	-1.57292	0.4886	-5.03859	0.0001	-1.49394	0.8186	-4.98896	0.0009
NIM	-1.57432	0.4868	-5.60791	0	-1.65712	0.7488	-5.52313	0.0003
BDEP	-3.15543	0.0289	-8.65685	0	-4.45536	0.0044	-8.63857	0
BCAR	0.46933	0.9834	-4.35462	0.0013	-1.12018	0.9125	-4.23281	0.0095

Source: constructed by the researcher 2022

The findings presented in table 4.1 uses the Augmented Dickey-Fuller check the stationarity of variance. It is evident from the findings above that none of the variables are stationary at levels 1(0) and as such the researcher conducted a first difference 1(1). At the initial difference, every variable was stationary at 1%, 5% and 10% with the exception of Profit and Net Interest Margin that after taking the first difference, there were still not stationary at 1%. From the above stationarity analysis, due to the fact that all variables remain stationary after the initial difference, the Vector Auto Regressive Model (VAR Model) will be utilized. The Auto Regressive Distributed Lag Model (ARDL Model) will be used by the researcher to investigate both long- and short-term dynamics. The researcher equally carried out the Johansen Test of cointegration as presented in table 4.2 below.

## Test For Cointegration and Pairwise Correlation Matrix

**Table 4.2 Johansen Tests for Cointegration**

Number of observations = 49

Lags = 2

Sample 1972-2020

Trend: constant

Maximum Rank	Parms	LL	Eigen Value	Trace Statistics	5% Critical Value
0	30	-574.61087		81.5721	68.52
1	39	-557.37179	0.50522	47.0939	47.21
2	46	-547.65884	0.32729	27.6680	29.68
3	51	-539.98076	0.26904	12.3119	15.41
4	54	-535.58491	0.16425	3.5202	3.76
5	55	-533.82483	0.06932		

Source: constructed by the researcher 2022

From table 4.2 above, as can be observed, the dependent variable (GDP) and the independent factors do not have a long-term connection. Because every value in the trace statistics column is higher than the crucial values. As such, the ARDL Model will not be appropriate for this study.

In order to ascertain the relationship that exists between the variables, the researcher additionally performed a pairwise correlation matrix as shown in table. 4.3 below.

**Table 4.3 Pairwise Correlation Matrix**

Obs = 51

Variables	GDP	Profit	BCAR	NIM	Bdep
GDP	1.0000				
Profit	-0.0711	1.0000			
BCAR	-0.0018	-0.2621	1.0000		
NIM	-0.0539	-0.5577	-0.0755	1.0000	
Bdep	0.1183	0.4492	-0.2985	0.1523	1.0000

Source: constructed by the researcher 2022

From table 4.3 above, it can be seen that Profit, Bank Capital Asset ratio and Net Interest Margin are negatively correlated to GDP with the exception of Bank Deposits that have a positive correlation to GDP. Furthermore, looking at the inter item correlation, there is a possibility that the variables do not show a strong link. as the values are below 0.8, thus making this model good for the study. The last table before running the model is the summery statistics as presented in table 4.4 below.

#### 4.4 Regression Analyses

**Table 4.4 Summary Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
GDP	51	3.873946	5.472032	-7.932067	22.003	0.1513	0.0162
Profit	51	1.614952	0.7656174	0.5938795	3.124235	0.1056	0.0215
BCAR	50	17.35397	24.26838	0.3180714	87.39	0.0000	0.0001
NIM	47	7.311832	6.513537	0.6118017	27.81729	0.0001	0.0007
Bdep	50	19.41566	4.081708	12.5529	29.56272	0.0021	0.0047

Source: constructed by the researcher 2022

For the descriptive statistics analysis in table 4.4, the researcher has taken into account the raw data. In this data set, there are 51 observations for GDP and Profit, 50 observations for Bank Capital Asset Ratio (BCAR) and Bank Deposit (Bdep). The Net Interest Margin recorded 47 observations because of the amount of missing data that was omitted. The observations are a reflection of the 51 years used for the study from 1970 to 2020. Economic growth with GDP as a proxy has 51 observations, mean of 3.87 and a standard deviation of 5.47, the least value of -7.93 and highest outcome of 22.03. Profitability with 51 observations has 1.61 as mean value with 0.77 being the standard deviation, a least value of 0.59 and the highest occurrence value of 3.12. On the other hand, bank capital asset ratio with 50 observations due to one missing variable has a mean score of 17.31 with standard deviation value of 24.27. It also has



0.38 as the smallest value while 87.39 is the highest occurring value. The variable Net Interest Margin has 4 missing variables with a mean score of 7.31 and a standard deviation of 6.51 with a minimum value of 0.61 and a maximum value of 27.81. Bank Deposit has one missing value and a mean score of 19.41 and standard deviation of 4.08. This variable has the least value of 12.55 and a highest value of 29.56.

Further analysis of descriptive statistics shows that all the variables were positively skewed. This implies that their means are peaked to the right of the distribution (right skewness). All of the variables' coefficients for kurtosis were below 3.00 thus indicating that they are platykurtic and relative to the normal distribution indicating that they have less extreme outliers than the normal distribution.

#### 4.4.1 ARDL Model

Before conducting the VAR model to ascertain the long run and short run dynamics as well as the model fit, the researcher initially applied the ARDL model. It was shown that the dependent and independent variables did not have a long-term relationship and as such the researcher presented the R square and Adjusted R squared figures as is the case in table 4.5 below.

**Table 4.5 summary of ARDL Model**

Sample	1972-2020 with gaps
The quantity of observations	34
R-squared	0.5237
Adj R-squared	0.3451
Root MSE	0.4793

Source: constructed by the researcher 2022

**Figure 4.6** R square and the Adjusted R square are presentation.

The adjusted R squared for this model is 34.51% thus indicating that the independent variables (Profit, Bank Capital to Asset Ratio, Net Interest Margin and Bank Deposit) for this study account for 34.51% of the disparity of the dependent variable (GDP). The researcher presents the VAR Model as shown below. For the purpose of this study, the entire ARDL Model is presented in the Appendix.

**Table 4.6 summary of the VAR Model**

Vector Autoregression

Sample: 1972-2020

number of observations =49

Log likelihood = -533.8248

AIC = 24.03367

FPE = 19597.85

HQIC = 24.83931

Det (sigma\_ml) =1996.964

SBIC = 26.15714

Comaprison	Parms	RMSE	R-square	Chi2	P<chi2
GDP	11	5.09206	0.3403	25.27405	0.0048
Profit	11	.23647	0.9273	624.9768	0.0000
BCAR	11	12.5147	0.7921	186.6535	0.0000
NIM	11	2.78089	0.8588	297.9161	0.0000
Bdep	11	2.22438	0.7553	151.2279	0.0000

Source: constructed by the researcher 2022

From the table 4.5 above, it can be concluded that the model is globally significant at 1 percent.

**Table 4.7 VAR Model**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	GDP	Profit	BCA	NIM	Bdep	GDP	Profit	BCA	NIM	Bdep
			R					R		
L.GDP	0.475	0.0119	0.083	-0.121	0.275	0.475	0.0119	0.083	-0.121	0.275
			0					0		
	(0.140)	(0.0065	(0.34	(0.076	(0.0612	(0.140)	(0.0065	(0.34	(0.0765	(0.0612

		1)	4)	5)	)		1)	4)	)	)
L2.GDP	0.172	-	-	0.0176	0.0613	0.172	-	-	0.0176	0.0613
		0.00468	0.135				0.00468	0.135		
	(0.161)	(0.0074	(0.39	(0.087	(0.0703	(0.161)	(0.0074	(0.39	(0.0879	(0.0703
		7)	6)	9)	)		7)	6)	)	)
L.Profit	2.281	1.182	1.431	-8.507	1.121	2.281	1.182	1.431	-8.507	1.121
	(3.106)	(0.144)	(7.63	(1.696	(1.357)	(3.106)	(0.144)	(7.63	(1.696)	(1.357)
			3)	)				3)		
L2.Profit	-0.213	-0.391	-	9.247	2.322	-0.213	-0.391	-	9.247	2.322
			5.366					5.366		
	(3.285)	(0.153)	(8.07	(1.794	(1.435)	(3.285)	(0.153)	(8.07	(1.794)	(1.435)
			3)	)				3)		
L.BCAR	-0.0150	-	0.975	0.0191	-	-0.0150	-	0.975	0.0191	-
		0.00126			0.0041		0.00126			0.0041
					8					8
	(0.0573	(0.0026	(0.14	(0.031	(0.0250	(0.0573	(0.0026	(0.14	(0.0313	(0.0250
	)	6)	1)	3)	)	)	6)	1)	)	)
L2.BCAR	-0.0412	0.00109	-	-	-0.0361	-0.0412	0.00109	-	-0.0392	-0.0361
			0.145	0.0392				0.145		
	(0.0577	(0.0026	(0.14	(0.031	(0.0252	(0.0577	(0.0026	(0.14	(0.0315	(0.0252
	)	8)	2)	5)	)	)	8)	2)	)	)
L.NIM	0.268	-0.001	0.032	0.686	0.297	0.268	-	0.032	0.686	0.297
		79	8				0.00179	8		
	(0.222)	(0.0103)	(0.54	(0.121	(0.0971	(0.222)	(0.0103)	(0.54	(0.121)	(0.0971
			6)	)	)			6)		)
L2.NIM	-0.107	-0.0155	-	0.122	-0.103	-0.107	-0.0155	-	0.122	-0.103
			0.275					0.275		
	(0.222)	(0.0103)	(0.54	(0.121	(0.0969	(0.222)	(0.0103)	(0.54	(0.121)	(0.0969
			5)	)	)			5)		)
L.Bdep	-1.069	0.0192	-	-0.112	-0.0133	-1.069	0.0192	-	-0.112	-0.0133
			0.149					0.149		
	(0.331)	(0.0154)	(0.81	(0.181	(0.145)	(0.331)	(0.0154)	(0.81	(0.181)	(0.145)
			3)	)				3)		

L2.Bdep	0.211	-	0.271	-	0.132	0.211	-	0.271	-0.0808	0.132
		0.00023		0.0808			0.00023			
		4					4			
	(0.213)	(0.0098	(0.52	(0.116	(0.0930	(0.213)	(0.0098	(0.52	(0.116)	(0.0930
		9)	3)	)	)		9)	3)		)
Constant	14.64	0.0631	8.919	4.708	9.751	14.64	0.0631	8.919	4.708	9.751
	(4.135)	(0.192)	(10.1	(2.258	(1.806)	(4.135)	(0.192)	(10.1	(2.258)	(1.806)
			6)	)				6)		
Observations	49	49	49	49	49	49	49	49	49	49

**Notes:** parenthesis for common mistakes \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: by the researcher 2022

The results in Table 4.7 looking at the lag values, it can be concluded that the profit for the current in years can be determine by the profit of the past two years likewise Bank Capital to Asset Ratio, Net Interest Margin, Bank Deposits and the dependent variable GDP.

#### 4.5 Post Estimation Test

##### 4.5.1 The Variance Inflation Factor

The table below shows the variance inflation factor which is very important in determining the level of correlation in our model. This information is shown in table 4.8 below.

**Table 4.8 Factor for Variance Inflation**

variable	VIF	1/VIF
lnprofit	3.19	0.313760
lnNIM	3.03	0.329904
lnBdep	1.75	0.571800
lnBCAR	1.28	0.778853
Mean VIF	2.31	

Source: constructed by the researcher 2022

The variance inflation factor demonstrates the degree of correlation between the study's variables. As it can be seen from the accompanying table, the variables in the study were not strongly associated because all of the VIF values are below the cutoff value of 5. As a result, we can draw the conclusion that the variables employed in the study do not exhibit multicollinearity.

#### 4.5.2 Heteroskedasticity

In order to check whether the variances for this study are constant, the Breusch-Pagan test for heteroscedasticity was used by the researcher, as can be seen in table 4.9 below.

##### Heteroskedasticity test

Breusch-Pagan / Cook- Weisberg test for heteroskedasticity

H0: constant variance

Variables: fitted values of ln GDP

Table

Chi2(1) = 0.28
Prob>chi2 0.5950

Source: constructed by the researcher 2022

When p values for the Breusch-Pagan Test are examined, it becomes clear that the value is higher than 5%, which serves as the cutoff point. As a result, we are unable to disprove the null hypothesis and come to the conclusion that the variance in this study is constant, meaning that the heteroskedasticity of the variables under examination is not an issue.

## CHAPTER V

### Discussion, Conclusion and Recommendation

#### 5.1 Introduction

The main objective of this study is to determine how bank performance affects Cameroon's economic growth using GDP as a growth proxy. This chapter presents a summary of the research with a single emphasis on the conclusions made in chapter four. The chapter offers suggestions for further research after basing them on the findings.

#### 5.2 Discussions of Research Findings

The banking industry's contributions to economic growth and expansion have been debated by many scholars around the world. This debate has been tailored to focus on ways through which bank performance stimulate economic growth in the country.

This research was centered around four objectives as depicted in conceptual framework figure 2.1 from which the hypothesis was tested based on the GDP as a gauge of profitability and economic expansion, as well as bank capital asset ratios, net interest margin, and bank deposits as a gauge of performance. In line with the findings, the following research hypothesis are discussed thereof;

**H<sub>01</sub>: The economic growth of Cameroon is not significantly impacted by bank profitability.**

The results demonstrate that profitability has a moderately favorable and significant effect on Cameroon's economic expansion. As from the VAR Model, it is clear that a 1% boost in bank profitability will result in a boost to the current economy's growth rate by 1.19% as opposed to when we go to two lags back where an increase in 1% of bank profitability resulted to a decrease in economic expansion in Cameroon by 0.4% over the years. Thus it can be concluded that bank profitability has little contribution to the economic expansion of Cameroon over the years.

**H<sub>02</sub>: Bank capital on asset has little impact on Cameroon's economic expansion.**

From the VAR model presented in chapter four above, it can be seen that Bank Capital to Asset Ratio had a negative but insignificant effect on economy's growth in Cameroon. Based on the findings, a 1% rise in Bank Capital to Asset Ratio contributes to a reduction in economic growth by 1.504%. Thus, it is clear that the relationship

between the bank capital to asset ratio and economic development is not particularly significant.

**H<sub>03</sub>: Interest rate margin does not affect the growth of the economy of Cameroon.**

As per VAR Model presented above, net interest margin has a positive and an insignificant effect on Cameroon's economic development. Observing the table above, a 1% rise in net interest margin will result in a rise in economic development by 26.81% over the years. Thus, it can be said that net interest margin has a positive effect on the economic development of Cameroon.

**H<sub>04</sub>: Bank deposit has no effect on the economic development of Cameroon.**

Bank deposit was seen to be statistically significant at 5% and have a negative relationship with the economic development of Cameroon. Observing the VAR table above, a 1% rise in bank deposit will lead to a decrease in the economic expansion of Cameroon by 106%. As such banks are not encouraged to keep deposits but issue out these savings to other aspects of the economy as opposed to keeping idle cash in the banks.

### **5.3 Conclusion and Recommendations**

From the findings revealed in chapter four, from the research, the following findings can be made. In Cameroon, there is no long-term correlation between bank performance and economic expansion. This is due to the fact that long-term, other factors have a greater impact on Cameroon's economic growth than the banking industry. Furthermore, despite not being particularly substantial, profitability appears to support Cameroon's economic expansion. Furthermore, compared to net interest margin, which had a beneficial impact on Cameroon's economic growth, bank capital to asset ratio was detrimental to that nation's progress. The economic development of Cameroon was believed to be negatively impacted by bank deposits.

The research advises the government to implement economic growth measures that will raise the level of GDP per capita based on the findings. In terms of Cameroon's banking regulations, the government should ensure that banks work within the framework governing the banking institutions. This in essence will build trust between the banking institutions and the citizens thereby increasing the role banks play in economic growth. This is because Cameroonians do not trust banking institutions with their finances and at such have resulted to make frequent use of micro financial

institutions in Cameroon. Thus the government should make the banking climate favorable so as to attract outside investors.

Furthermore, banks should ensure to give out idle cash to investors at affordable interest rates. This will drive the nation forward both in the near and far future. Considering that net interest margins has a positive effect on the economic expansion of Cameroon, banks are encouraged to manage the interest rates charges so as to attract more customers to the bank while at the same time contributing positively to the economy of Cameroon.

#### **5.4 Suggestions for Further Research**

The researcher recommends that the subsequent studies be looked into;

- The effects of micro financial institutions on the development of Cameroons economy.
- The reverberations of globalization on the socio-economic development of Cameroon.
- Determinants of bank profitability and economic development.
- Micro-level analysis: A closer look at the Cameroonian banking industry at the micro-level might reveal more complex connections between bank performance and economic expansion. This could entail researching the effects of certain banks on regional economies as well as the function of bank intermediation in promoting economic growth.
- Financial sector changes: A thorough analysis of the effects of Cameroon's financial sector reforms, including the implementation of new laws and regulations, on bank performance and economic expansion is possible. This would give important information on how well changes work to encourage stability and expansion in the financial industry.
- Market concentration and competition: Future research might look at how these two factors interact in the banking sector of Cameroon and how they affect bank performance and economic expansion. This will make it clearer to what extent the structure of the banking sector influences the overall economic performance of the nation.
- Interest rates and monetary policy: Future research might look at how monetary policy, interest rates, and economic growth in Cameroon are related. This will



help to clarify how much monetary policy influences the nation's economic performance and how interest rates contribute to economic growth.

- Research can be done to look at the lending policies of Cameroon's banks and how they affect the country's economic expansion. This will involve a look at the sorts of loans being offered, how banks manage credit risk, and how the quality of their loan portfolios affects economic growth.
- Future research might examine the contribution that microfinance institutions and financial inclusion make to fostering economic development in Cameroon. This will help to clarify how much financial access has an impact on the nation's economic performance.
- Comparative analysis of the banking industries in other regional nations could shed light on the competitiveness of the industry and its contribution to economic growth in Cameroon. Furthermore, it might point out regional best practices that Cameroon could use.
- Technology's function in boosting bank performance and spurring economic expansion in Cameroon could be researched. This may include the effects of mobile and digital banking on financial inclusion, loan availability, and general economic growth.
- Studying the long-term effects of bank performance on Cameroon's economic expansion is possible. This could entail looking at the trends in the relationship between bank performance and economic growth through time and their underlying causes.

The relationship between bank performance, economic growth, and other significant elements in Cameroon will be better understood as a result of the research in these areas. Policy makers and other stakeholders will subsequently be informed about the necessary actions to support the nation's sustainable economic growth and development.

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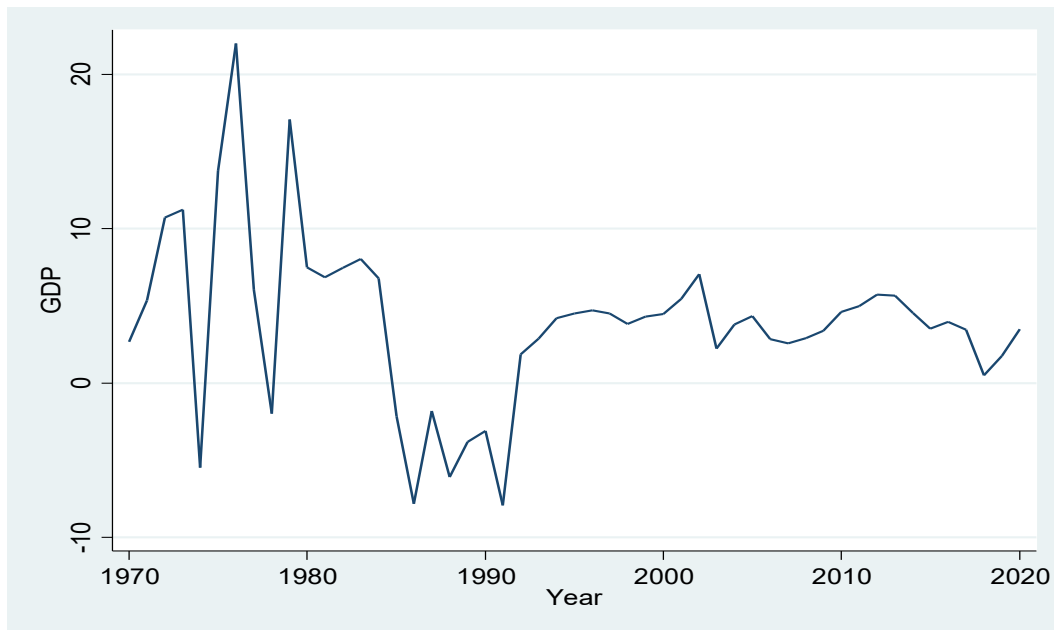
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## Appendices

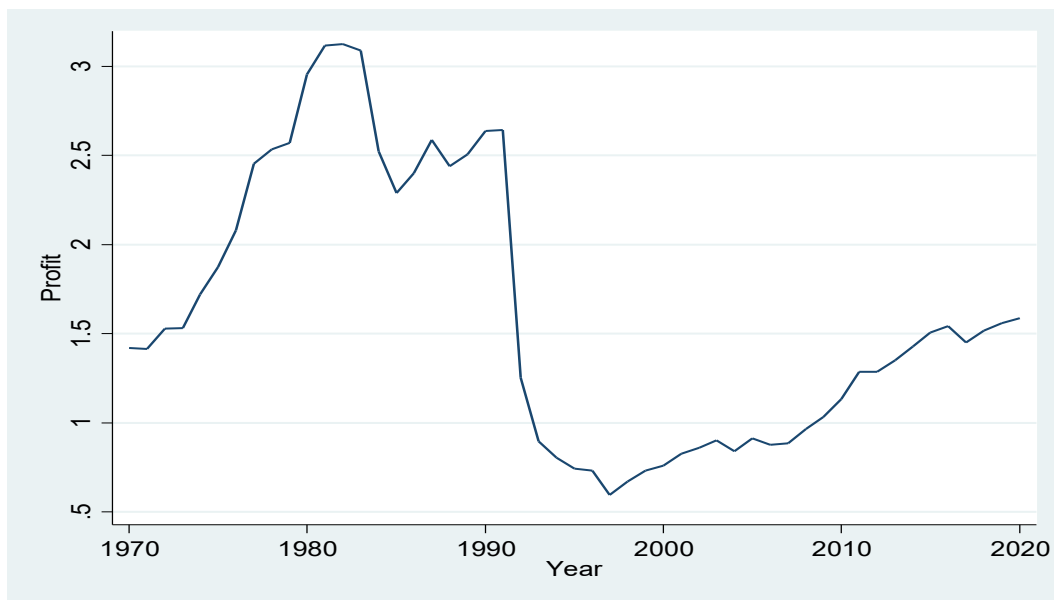
### Appendix A

#### Trend Analysis of the Variables Under Consideration

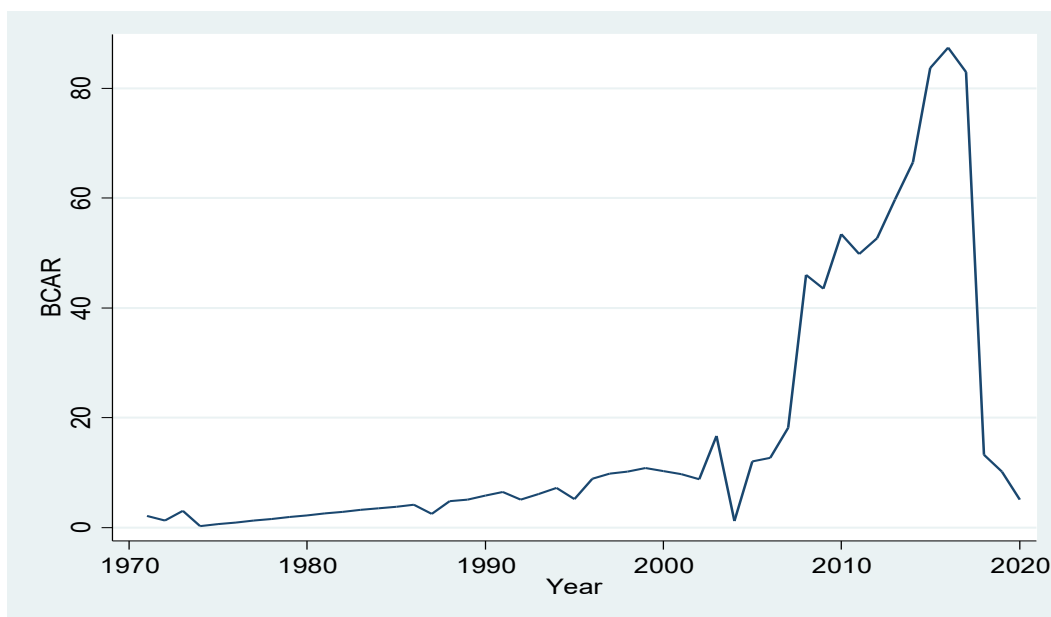
##### Trend Analysis for GDP



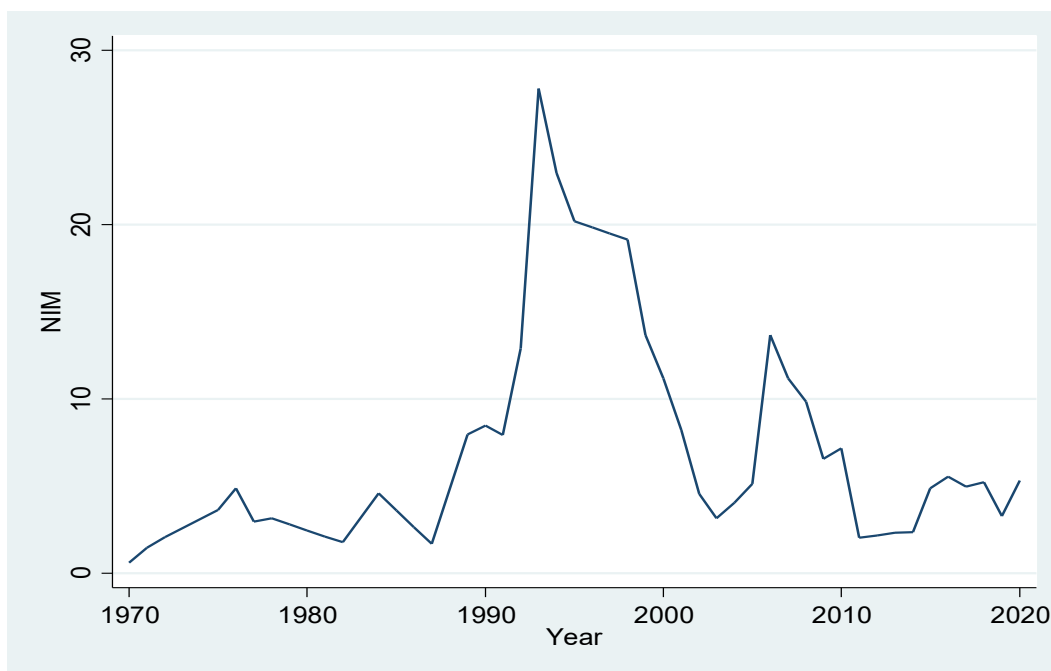
##### Trend Analysis for Profit



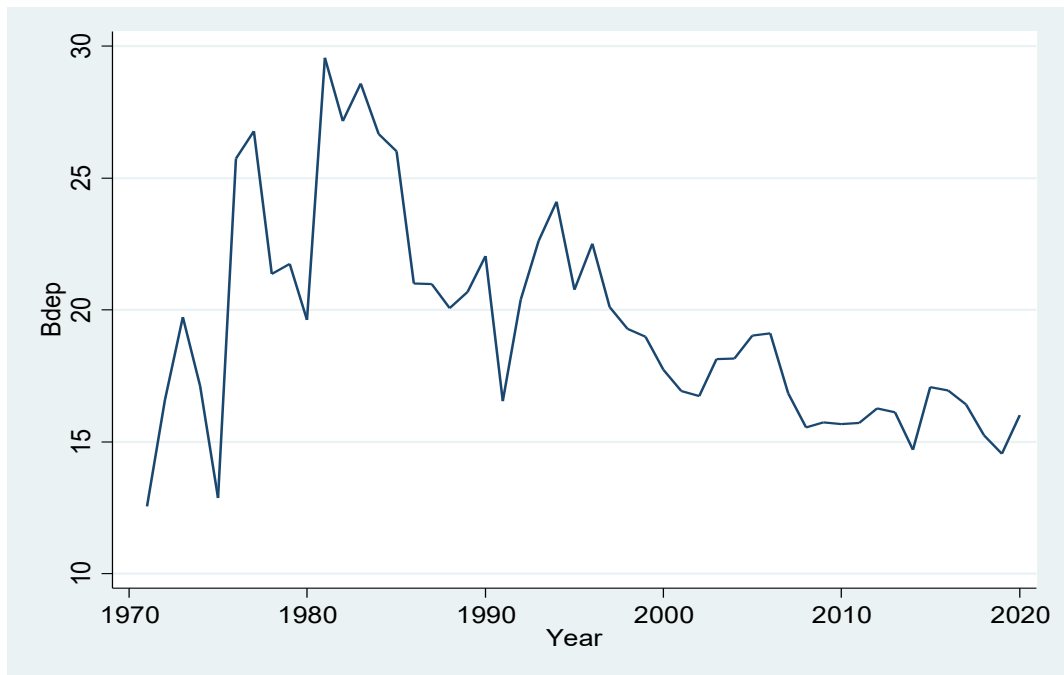
### Trend Analysis for Bank Capital to Asset



### Trend Analysis for Net Interest Margin



## Trend analysis for bank deposit



## Appendix B

### Stationarity Test

#### Stationarity Test for GDP

Augmented Dickey-Fuller test for unit root                      Number of obs    =            47

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-6.903	-3.600	-2.938	-2.604

MacKinnon approximate p-value for Z(t) = 0.0000

#### Stationarity Test for Profit

Augmented Dickey-Fuller test for unit root                      Number of obs    =            47

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-3.339	-3.600	-2.938	-2.604

MacKinnon approximate p-value for Z(t) = 0.0132

#### Stationarity Test for Bank Capital Asset Ratio

Augmented Dickey-Fuller test for unit root                      Number of obs    =            46

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-4.076	-3.607	-2.941	-2.605

MacKinnon approximate p-value for Z(t) = 0.0011



### Stationarity Test for Net Interest Margin

Augmented Dickey-Fuller test for unit root                      Number of obs    =            32

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-3.328	-3.702	-2.980	-2.622

MacKinnon approximate p-value for Z(t) = 0.0137

### Stationarity Test for Bank Deposit

Augmented Dickey-Fuller test for unit root                      Number of obs    =            46

Test Statistic	Interpolated Dickey-Fuller			
	1% Critical Value	5% Critical Value	10% Critical Value	
Z(t)	-5.954	-3.607	-2.941	-2.605

MacKinnon approximate p-value for Z(t) = 0.0000

## Appendix C

### Test for Cointegration and Pairwise Correlation Matrix

Johansen tests for cointegration

Trend: constant Number of obs = 49  
 Sample: 1972 - 2020 Lags = 2

maximum				trace	5%
rank	parms	LL	eigenvalue	statistic	critical value
0	30	-574.61087	.	81.5721	68.52
1	39	-557.37179	0.50522	47.0939*	47.21
2	46	-547.65884	0.32729	27.6680	29.68
3	51	-539.98076	0.26904	12.3119	15.41
4	54	-535.58491	0.16425	3.5202	3.76
5	55	-533.82483	0.06932		

### Pairwise correlation matrix

. cor GDP Profit BCAR NIM Bdep  
 (obs=51)

	GDP	Profit	BCAR	NIM	Bdep
GDP	1.0000				
Profit	-0.0711	1.0000			
BCAR	-0.0018	-0.2621	1.0000		
NIM	-0.0539	-0.5577	-0.0755	1.0000	
Bdep	0.1183	0.4492	-0.2985	0.1523	1.0000

## Appendix D

### Regression Analyses

#### Summery Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
GDP	51	3.873946	5.472032	-7.932067	22.003
Profit	51	1.614952	.7656174	.5938795	3.124235
BCAR	50	17.35397	24.26838	.3180714	87.39
NIM	47	7.311832	6.513537	.6118017	27.81729
Bdep	50	19.41566	4.081708	12.5529	29.56272

#### Vector autoregression

Sample: 1972 - 2020	Number of obs	=	49
Log likelihood = -533.8248	AIC	=	24.03367
FPE = 19597.85	HQIC	=	24.83931
Det(Sigma_ml) = 1996.964	SBIC	=	26.15714

Equation	Parms	RMSE	R-sq	chi2	P>chi2
GDP	11	5.09206	0.3403	25.27405	0.0048
Profit	11	.23647	0.9273	624.9768	0.0000
BCAR	11	12.5147	0.7921	186.6535	0.0000
NIM	11	2.78089	0.8588	297.9161	0.0000
Bdep	11	2.22438	0.7553	151.2279	0.0000

The model is globally significant at 1%

## Appendix E

## VAR Model

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	GDP	Profit	BCAR	NIM	Bdep	GDP	Profit	BCAR	NIM	Bdep
L.GDP	0.475*** (0.140)	0.0119* (0.00651)	0.0830 (0.344)	-0.121 (0.0765)	0.275*** (0.0612)	0.475*** (0.140)	0.0119* (0.00651)	0.0830 (0.344)	-0.121 (0.0765)	0.275*** (0.0612)
L2.GDP	0.172 (0.161)	-0.00468 (0.00747)	-0.135 (0.396)	0.0176 (0.0879)	0.0613 (0.0703)	0.172 (0.161)	-0.00468 (0.00747)	-0.135 (0.396)	0.0176 (0.0879)	0.0613 (0.0703)
L.Profit	2.281 (3.106)	1.182*** (0.144)	1.431 (7.633)	-8.507*** (1.696)	1.121 (1.357)	2.281 (3.106)	1.182*** (0.144)	1.431 (7.633)	-8.507*** (1.696)	1.121 (1.357)
L2.Profit	-0.213 (3.285)	-0.391** (0.153)	-5.366 (8.073)	9.247*** (1.794)	2.322 (1.435)	-0.213 (3.285)	-0.391** (0.153)	-5.366 (8.073)	9.247*** (1.794)	2.322 (1.435)
L.BCAR	-0.0150 (0.0573)	-0.00126 (0.00266)	0.975*** (0.141)	0.0191 (0.0313)	-0.00418 (0.0250)	-0.0150 (0.0573)	-0.00126 (0.00266)	0.975*** (0.141)	0.0191 (0.0313)	-0.00418 (0.0250)
L2.BCAR	-0.0412 (0.0577)	0.00109 (0.00268)	-0.145 (0.142)	-0.0392 (0.0315)	-0.0361 (0.0252)	-0.0412 (0.0577)	0.00109 (0.00268)	-0.145 (0.142)	-0.0392 (0.0315)	-0.0361 (0.0252)
L.NIM	0.268 (0.222)	-0.00179 (0.0103)	0.0328 (0.546)	0.686*** (0.121)	0.297*** (0.0971)	0.268 (0.222)	-0.00179 (0.0103)	0.0328 (0.546)	0.686*** (0.121)	0.297*** (0.0971)
L2.NIM	-0.107 (0.222)	-0.0155 (0.0103)	-0.275 (0.545)	0.122 (0.121)	-0.103 (0.0969)	-0.107 (0.222)	-0.0155 (0.0103)	-0.275 (0.545)	0.122 (0.121)	-0.103 (0.0969)
L.Bdep	-1.069*** (0.331)	0.0192 (0.0154)	-0.149 (0.813)	-0.112 (0.181)	-0.0133 (0.145)	-1.069*** (0.331)	0.0192 (0.0154)	-0.149 (0.813)	-0.112 (0.181)	-0.0133 (0.145)
L2.Bdep	0.211 (0.213)	-0.000234 (0.00989)	0.271 (0.523)	-0.0808 (0.116)	0.132 (0.0930)	0.211 (0.213)	-0.000234 (0.00989)	0.271 (0.523)	-0.0808 (0.116)	0.132 (0.0930)
Constant	14.64*** (4.135)	0.0631 (0.192)	8.919 (10.16)	4.708** (2.258)	9.751*** (1.806)	14.64*** (4.135)	0.0631 (0.192)	8.919 (10.16)	4.708** (2.258)	9.751*** (1.806)
Observations	49	49	49	49	49	49	49	49	49	49

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Appendix F**

## Post Estimation Test

## Variance Inflation Factor

Variable	VIF	1/VIF
lnProfit	3.19	0.313760
lnNIM	3.03	0.329904
lnBdep	1.75	0.571800
lnBCAR	1.28	0.778853
Mean VIF	2.31	

## Heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of lnGDP

chi2(1) = 0.28

Prob &gt; chi2 = 0.5950

## ARDL(1,1,1,1,1) regression

Sample: 1972 - 2020, but with gaps Number of obs = 34  
 R-squared = 0.5237  
 Adj R-squared = 0.3451  
 Log likelihood = -17.318209 Root MSE = 0.4793

D.lnGDP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ADJ						
lnGDP						
L1.	-.6365271	.1866499	-3.41	0.002	-1.021753	-.2513007
LR						
lnProfit	-.3671308	.5748159	-0.64	0.529	-1.553492	.8192309
lnBCAR	-.1945584	.1763293	-1.10	0.281	-.5584842	.1693675
lnNIM	-.2675623	.316924	-0.84	0.407	-.9216613	.3865367
lnBdep	-.3810507	1.68146	-0.23	0.823	-3.851414	3.089312
SR						
lnProfit						
D1.	-.7958291	1.33758	-0.59	0.557	-3.556459	1.964801
lnBCAR						
D1.	.2093883	.1403527	1.49	0.149	-.0802855	.499062
lnNIM						
D1.	-.1281123	.2577486	-0.50	0.624	-.6600792	.4038546
lnBdep						
D1.	1.299877	.6765414	1.92	0.067	-.0964357	2.69619
_cons	2.245139	2.836022	0.79	0.436	-3.608124	8.098401

**ETHICS COMMITTEE APPROVAL**

NEAR EAST UNIVERSITY

**SCIENTIFIC RESEARCH ETHICS COMMITTEE**

12.12.2022

Dear Peter Fuh

Your project “**Title:“The effects of banking performance on the economic growth of Cameroon”**,” has been evaluated. Since only secondary data will be used the project does not need to go through the ethics committee. You can start your research on the condition that you will use only secondary data.

Prof. Dr. Aşkın KİRAZ

The Coordinator of the Scientific Research Ethics Committee

## PLAGIARISM REPORT

PETER FUH-20204129-THE EFFECTS OF BANKING  
PERFORMANCE ON THE ECONOMIC GROWTH OF CAMEROON-  
Master thesis

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