

**THE IMPACT OF COVID-19 ON THE FINANCIAL PERFORMANCE OF  
COMMERCIAL BANKS IN KENYA**

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## DECLARATION

I declare that this research project proposal is my original work and that it contains no materials that have been published by other persons except that reference has been made. In the event that any part of this project is to be reproduced, permission from the author as well as the University should be sort.

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## ABSTRACT

Banks are a critical sector in the economy of any given country, and it is therefore important to study various factors that may affect its performance. Some of these factors may be internal that is within banks, others may be external i.e., macroeconomic factors while others may be unprecedented a proper example is the covid-19 pandemic. Thus, the motive of this study was to assess the impact of covid-19 on the financial performance of commercial banks in Kenya. This research strived to give insights on the effect that the pandemic has posed to the banking sector. It is therefore important to point out the financial performance of banks as it helps banks in achieving it's set objectives as well as its profit margins.

The objectives used in this study include credit risk, interest rates and inflation, the effect of covid-19 upon these factors and the subsequent effect on the financial performance of commercial banks in Kenya. The study employed a descriptive research design with the eleven commercial banks listed in the Nairobi Stocks Exchange (NSE) as the target population. The study utilized the entire target population. The agency theory and the financial intermediation theory have been used to explain the theoretical framework. The validity of this study that is its quality and consistency was assured with the use of a diagnostic test testing all the 4 key principles: linearity, normality, homoscedasticity, and autocorrelation.

This study employed secondary data collected from the Central Bank of Kenya (CBK) and financial statements of the commercial banks listed in the NSE. This study relied on regression and correlation analysis as well as descriptive statistics. Data was analyzed using SPSS package. Information from the analysis was presented in mean, standard deviation, charts, and tables. This study upholds its ethical standard by holding the data collected with utmost confidentiality and to be used solely for academic purposes.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Background Information

Commercial banks play a vital role in the economy of any country as they facilitate resource allocation. They act as a channel through which they pool funds from depositors and channel it to investors as well as those that need these funds (Ongore, 2013). Ongore (2013) further add that banks need to generate enough income to properly facilitate the intermediation role. Profitability is critical for financial institutions and commercial banks are regarded as the major constituent. The marketing strategy adopted by a department determines the success as well as its growth especially due to the competitive nature of the sector (Swarnapali, 2014). The main concern to investors, experts and most importantly management, is the financial performance of the various commercial banks (Chong, 2008). The profitability of commercial banks has a corresponding effect on the growth of a country's economy therefore several corrections and improvement have been developed to improve the performance of these banks (Hussain, 2010). It is however important to point out that the analysis on the performance of banks came to be of interest during the 1940's, the great depression (Farah, 2019).

It is worth mentioning of some of the significance of commercial banks; offer investment products for example current account and savings, promote trade using bills of exchange both within the country as well as abroad, effectively facilitating the flow of credit within the market (Abdullahi, 2020). Commercial banks assist the central bank in that they are a channel through which they transmit effective monetary policies from the central bank. This is to say that the commercial banks do share a responsibility in the country's economy as they enhance stability (Shoaib, 2011).

Makkar and Singh (2013) further point out that the soundness of a commercial bank is largely contingent on how they perform financially, and this is a parameter that can be used to either determine their strengths or weaknesses. From the statement by Ongore (2013) that banks ought to generate enough income so that they can cover their operational costs, it is from the income or otherwise these profits that are divided to shareholders as dividends due to the investment they had put forth. Thus, this encourages more investment and in return there is a steady flow in funds and this process therefore promotes sustainability in operations. A business will continue its operations on the basis that they are making profits and if such is not the case in that they are making losses, the management opt to consider closing the business simply because they are making losses (Ongore, 2013).

Ongore (2013) further added that this does not mean that commercial banks or businesses are merely guided by profits, they have goals and objectives with not only social but also economic benefits.

Ayanda (2013) defines profitability as being the ability of an organization to maintain gains year after year. Podder (2012) further commented on profitability in banking in terms of the efficiency with which a bank generates its earnings. Ayanda (2013) explains that profitability is beneficial to the country's economy as it contributes to development and further, these profits are reinvested to the various businesses which create employment opportunities for its individuals and through taxes from these individuals, the revenue of the country rises. On the contrary, poor performance in banks is crucial and it can as well lead to decline in a country's growth as well as its development and in addition have an impact on citizens' wellbeing (Ongore, 2013).

Ayele (2012) mentions that since commercial banks are of great importance to the economy, several researchers have put more attention towards the issues that concern the performance of commercial banks. However, the performance of commercial banks can be expressed in a number of ways for instance through profitability, efficiency, productivity and competition as elaborated by Macit (2011). Athanasoglou (2005) mentions that banks with good financial performance are those that are able to counter external negative shocks that may arise. They contribute to the stability of a country's financial system.

The banking sector in Kenya is regulated under various Acts; The Companies Act, The Central Bank Act, The Banking Act as well as some guidelines that have been laid or issued by the Central Bank of Kenya. The liberalization of the Banking sector in Kenya took place in 1995 as well as the withdrawal of the exchange controls. The Central Bank of Kenya is responsible for the formulation as well as the implementation of the monetary policy. They are also tasked with the responsibility of ensuring that there is liquidity, solvency as well as proper functioning of the country's overall financial system. They are also entitled to publish valuable information that relates to banking as well as non-banking financial institutions. The publications include information on interest rates prevalent in the country as well as other guidelines. The commercial banks in Kenya formed a body known as the Kenya Bankers Association (KBA) which serves the interests of its members. They also address issues and grievances that affect registered commercial banks in the country (Central Bank of Kenya, 2013). The outbreak of the coronavirus SARS-CoV-2 epi-centred in China from Hubei province and spread to other countries as well. The World Health Organization (2021) defined the Coronavirus (Covid 19) as an infectious disease caused by a newly discovered coronavirus.

On 30<sup>th</sup> January 2020 the World Health Organisation declared a global health emergency due to the rise in the infection rates in China as well as international locations (Meyer, 2020). A number of sectors have been affected as a result of the Covid 19 among them commercial banks. KPMG (2021) also state that among the areas that have been majorly affected in the banking sector is profitability. It is also important to note that some of the determinants of financial performance have been affected, interest rates, credit risk and inflation. These are key determinants of commercial bank performance. This study uses interest rate, inflation, and credit risk in explaining the effects that covid 19 has had on the performance of commercial banks in Kenya.

### **1.1.1 Interest Rates**

As stated by the Bank of England (2021), interest rate from a bank perspective is the percentage that is charged on the amount of money a client borrows or saves. It is also quite important to note that interest rate, is an external factor as the factors that affect the performance of a bank can be grouped into two, internal and external factors. The external factors are those that the bank has very little or no control over (Podder, 2012).

The aspect of interest rates can be looked more from the theory of financial intermediation whereby the banks are a channel through which they avail funds from lenders and lend these funds to borrowers (Fernandez, 2003). From the model of Ho and Saunders (1981) which tries to explain the determinants of interest margin, a bank is looked at from a point of being a risk averse dealer when it comes to the credit market. Banks are assumed to be risk averse since those that are risk neutral tend to be indifferent upon the dynamics of interest rates (Angelini, 2000). This is because they act as intermediaries through the pooling of funds in order to lend it out to those that need them (Fernandez, 2003).

It is important to touch on the aspect of exchange rates. This is mainly due to the fact that interest rates and exchange rates are highly correlated and are also linked to stock prices since they are important economic factors that have direct effects upon the financial markets. Interest rate is a critical component as it is more directly affected in the financial market. An increase in the rate of interest can cause an investor to change the structure of his/her investment for instance from the capital markets to something like a fixed income security (Haq, 2012).

Further, it was observed that when the interest rate reduces, growth is slow and nonperforming loans also increase, an increase in the number of loans that are nonperforming leads to losses. However, this observation was made apparent especially during a recession. It can therefore be concluded that when there is poor market performance, smaller banks are likely to struggle with

their financial performance. The observation also clearly portrays that the relation between interest and the performance of a bank is a positive one (Podder, 2012). Fornaro and Wolf (2020) state that due to the pandemic, interest rates were lowered this reduced the yield in cash and this directly affects the bank's earnings. Thus, the bank reports low profitability.

### **1.1.2 Inflation**

Inflation is a macroeconomic factor that affects a number of sectors among them banks. It has however been observed by researchers that when there is a rise in inflation then this has a corresponding effect on the interest rates. The consequence is that there is a high interest on loans. In response, the high interest rate may cause a rise in income to commercial banks as elaborated by (Swarnapali, 2014). Swarnapali (2014) further goes on to explain that the aspect of inflation depends on whether it was anticipated or not and this will mainly determine the financial performance of the institution. In a situation where the inflation has been anticipated fully and the interest rate has been altered accordingly, then this will definitely lead to a positive performance. On the flipside, when the inflation has not been anticipated whatsoever then the borrowers cash flows are challenged and in response it leads to loan losses and the bank may somehow be forced to terminate the loan agreement prematurely. Banks therefore need to take ample time in making the necessary adjustments to the interest rates. It may also be difficult to carry out planning activities when the interest rates are quite high and when they tend to vary. In addition, it makes it difficult to negotiate for loans (Shoaib, 2011).

Umar, Majjama'a and Adamu (2014) in their evaluation elaborate that an increase in inflation has negative repercussions on the financial performance basing their argument on the study carried out by Huybens and Smith (1999) who came to a conclusion that as the inflation rate rises, the volume of lending tends to decrease or to drop which in turn affects the trading in the equity markets.

Boyd et. al. (2001) shows there is a relationship that exists between inflation and that of the banking sector. The author found the relationship to be negative and non-linear. The study attests to the decrease in overall bank lending as the level of inflation rises and this greatly affects the financial performance of banks as they experience significant drops in terms of performance. Ghazouani (2004) also confirms the relationship to be negative that is between the bank performance and inflation. In addition, Ghazouani (2004) argued out that a slight rise in the rate of inflation is however harmless when it comes to the stock market.

Dietrich and Wandered (2008), in their research went on a broader scope to evaluate the effect of macroeconomic conditions on banks financial performance and conducted a multivariate model.

The macroeconomic conditions that Dietrich and Wandered (2008) mentions as the empirical results conducted were depicted on inflation. The empirical results show that there exists a positive effect of macroeconomic conditions on performance of banks; the relationship was positive but insignificant. The sample data was collected from 80 commercial banks across the globe.

Inflation not only affects commercial banks but also the consumers. When the rate of inflation is high, this causes the purchasing power to be low. This therefore means that the funds consumers would have saved or invested in the commercial banks will be used for their own consumption. In addition, consumers will also withdraw their funds for their own usage. Banks will rely on the funds that have been deposited in order to issue them to borrowers. When consumers fail to deposit money, this means that the bank's cash reserve is reduced, and they will not be in a much capacity to issue loans to those that need them. (Rasiah, 2010). Faazah (2021) mentions that the effect covid 19 posed on inflation was that it resulted in consumers losing their purchasing power as they are very careful of their spending as a result reducing the savings they make to commercial banks.

### **1.1.3 Credit Risk**

Credit risk can be defined as the loan loss provision to loan ratio as elaborated by Podder (2012). Kibor (2015) inarguably states that credit risk has an impact on the financial performance of these loans. Bizuayehu (2015) points out that credit risk is the most crucial among the various risks that banks are faced with. It arises when a borrower is unwilling or unable to perform in accordance with the obligations specified in the contract, that is non-performance of contracts by a borrower. The non-performance action by a borrower exposes the bank to credit risk as they receive funds as deposits and lend them out as credit (Muriithi, 2016).

Mwaurah (2013) elaborates some of the factors that may arise causing credit risk in banks and one among them is management inefficiency/management deficiency and this is mainly due to the fact that a deficient management tends to affect liquidity so this in turn leads to a rise in the nonperforming loans. In a study conducted in Nepal, it was noted that poor management of credit risk is among the primary causes of bank failure (Bhattarai, 2019).

A number of research were carried out to try and establish the relationship between credit risk and bank performance and there were mixed results. Some concluded the relationship to be negative whereas others presumed it to be positive. The extreme end of the study established zero relationship between performance and profitability (Muriithi, 2016). Hosna et al. (2009) also conducted a study to verify this relationship from 4 Swedish banks from the year 2000 till 2008.

The study concluded that an inverse relationship exists between capital adequacy together with nonperforming loans against Return on equity. A similar relationship was established between performance, profitability and credit risk (Muriithi, 2016).

It is however important to note that banks can mitigate the exposure of credit risk this is through the help of the central bank and the concerned regulatory bodies that set standards as well as regulations on financial institutions to ensure that there is continuous good performance from these institutions as they are very important to the economy. Banks will therefore make the necessary adjustments in line with the provisions from the authorities (Murerwa, 2015).

Murerwa (2015) confirms that credit risk is a factor in determining the financial performance of banks and it is dependent on risk attitude and the decision that is taken into consideration by the management. The Central Bank of Kenya (2021) mentions that the government has put forth measures to minimize this risk, for instance having payment holidays as peoples conditions are different some may be adversely affected as compared to others. Banks on the other side have made strict their credit standards, approaching customers to discuss their situation and how they will eventually make their payments. KPMG (2021) state that among the areas that have been majorly affected by the covid 19 pandemic in the banking sector is profitability. They further mention that among the indicators of financial performance is profitability.

## **1.2 Problem Statement**

Unexpected events occur and affect the way day to day operations are conducted and at times may have a major impact on the economy. This is in relation to the Coronavirus that affected various sectors of the economy. However, the focus of the study is on commercial banks and how the pandemic has affected its performance. How various factors influence the performance of commercial banks is important to stakeholders as well as interest groups such as the Central Bank (Ayele, 2012). A number of studies that have been carried out on some of the factors that influence financial performance of banks reveal that a number of conditions do affect performance. These conditions can be internal as well as external whereas others can be unanticipated and others are anticipated (Ongore, 2013). Unanticipated conditions are for instance covid 19.

Ziegler (2020) states some of the direct effects covid 19 has had on banks and global markets for instance loan losses as customers are unable to repay their loans, loss in value of bonds and other traded financial instruments. In addition, the study also explains the effects the pandemic has on borrowers. However, the downside is that it fails to state the specific factors that affect bank performance because it touches on broad aspects of the economy hence this study goes in depth

in explaining how the pandemic has affected the main factors influencing performance, interest rates, inflation and credit risk.

Nica (2020) states that the pandemic poses a new challenge to the world as the event has caused massive losses to human, material and financial which is the main focus of this study. Due to the shock, it has brought upon the global economy, this has led to the need of conducting this study as the concerned institutions will be able to get insights on some of the effects the pandemic has on performance of banks and possibly device means on how to counter the situation so as to ensure that the general economy of the country is not adversely affected.

It is also important to mention that most of the literature is carried out focusing on the international arena and very little on the African context as well as locally. This has also created the need of conducting this study to look at the local Kenyan context. However, most of the previous studies are about the determinants of bank financial performance and this study has gone the extra mile on how the pandemic has influenced those determinants and the effect on financial performance.

It is quite clear that the pandemic being a new event, it has somehow taken a new position in our lives, and we therefore need to be armed with proper insights on how it affects the performance of our commercial banks which as earlier mentioned are an important entity to a country's economy. This study properly captures all these aspects. It is also worth noting that the duration which the pandemic is to last is uncertain therefore there is need for information about the effects the pandemic possess to institutions so that the banks as well as concerned institutions can know how to shield themselves during this tough pandemic period.

### **1.3 Research Objectives**

The main objective of this study is to determine the impact of Covid 19 on the financial performance of Commercial Banks in Kenya. The specific objectives include:

- i. To assess the effect of Covid 19 on interest rates and the subsequent effect on the financial performance of Commercial Banks in Kenya.
- ii. To examine the effect of Covid 19 on inflation and the subsequent effect on the financial performance of Commercial Banks in Kenya.
- iii. To evaluate the effect of Covid 19 on credit risk and the subsequent effect on the financial performance of Commercial Banks in Kenya.

#### **1.4 Research Questions**

- i. What is the effect of Covid 19 on interest rates and the subsequent effect on the financial performance of Commercial Banks in Kenya?
- ii. What is the effect of Covid 19 on inflation and the subsequent effect on the financial performance of Commercial Banks in Kenya?
- iii. What is the effect of Covid 19 on credit risk and the subsequent effect on the financial performance of Commercial Banks in Kenya?

#### **1.5 Significance of the study**

##### **1.5.1 Commercial Banks**

The study will be of benefit to Commercial Bank managers as it will give them more insight on how Covid 19 affects financial performance of Banks in Kenya. They will be in a good position to put up proper measures to ensure that their performance is not severely affected by the adverse effects that arise as a result of the pandemic.

##### **1.5.2 The Government**

The study will be of great importance to the Government as well as the Central Bank of Kenya in formulating policies that will spur growth and profitability to banks and the economy at large.

##### **1.5.3 Researchers and Academicians**

Researchers and academicians in various field such as finance, economics will find useful this study as a guide whereby they can carry forward their research.

##### **1.5.1 Investors**

The study may also be significant to international agencies whereby investors can rely on the information provided in the study to make various decisions

#### **1.6 Scope of the Study**

This study focuses on evaluating the impact of Covid 19 on the financial performance of listed Commercial Banks in Kenya in the Nairobi Securities Exchange (NSE). The independent variables include interest rates, inflation and credit risk. The target population is the registered commercial banks in Kenya listed in the NSE. The study uses secondary data for data analysis.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter critically reviews the relevant literature as well as focusing on the research variables. It explains theoretical foundations of the study and further discusses the empirical review in detail. A summary of the research gaps, the conceptual framework and operationalization of variables.

#### 2.2 Theoretical review

The theoretical framework is a structure that can hold or support a theory of a research study (USC, 2021). A study can apply a theory or a model which further describes why the research problem is covered under the study as it explains a phenomenon, challenges it and further extends knowledge within the limits of the critical bounding assumptions (USC, 2021). This study is grounded on the Financial Intermediation theory and the Agency theory.

##### 2.2.1 Financial Intermediation Theory

The financial intermediation theory was developed in the 1960's. This was as a result of the work put forth by two men: Gurley and Shaw (Andries, 2009). Financial intermediaries as well as Financial Markets are crucial institutions that play a role in ensuring that resources are optimally allocated in an economy. Financial intermediaries borrow from savers or consumers of funds or resources and lend out to those that need them. The financial intermediation theory bases its roots from the Informational asymmetry theory and the Agency theory. In context, the existence of the theory of financial intermediation is made possible by the following factors; high transactional cost, information being incomplete and regulatory methods. A critical factor in the study of financial intermediation is the argument of Information asymmetry (Andries, 2009).

In summary, information asymmetry can be said to be a difference in information between agents (Chae, 2005). From a banking perspective, one of the initial important functions of a bank is to assemble information about their clients among them borrowers. Banks have to distinguish creditworthy from non-creditworthy borrowers. Banks are able to obtain information in the lending process as well as the subsequent role of monitoring the clients. This whole process is what is often seen to be the defining characteristics in Bank Financing (Marquez, 2002). Among the implications of Information asymmetry is adverse selection. Banks will be faced with adverse selection when they are competing for borrowers. This is such that either the bank or the borrower is better informed about the prospect of a borrower (Marquez, 2002). Banks may also be faced with moral hazard; a proper instance is shown upon making deposits. Bank deposits may not necessarily be insured, if for instance the deposits are not insured and the risk choice faced by the bank is observable by depositors, in this case the bank's risk will be efficient. Reason being that banks will

assess the impact of a risk via depositors as a higher compensation will be demanded if a higher risk is incurred. Contrary, if the deposits are insured and the risk, not observable by the depositors, the bank will be required to make a choice of having a higher risk choice profile at the cost of the depositors. This is because the depositors will demand a reasonable return that is not high, and this is in response to the choice of the higher risks by the respective bank. Such an instance is said to lack market discipline and the choice of a bank's risk to default is said to be subject to having moral hazard.

In a nutshell, Information asymmetry creates market imperfections, and this is in contrary to the Perfect Markets theory (Andries, 2009). The perfect market theory points out that a perfect financial market entails the following: a single participant is not enough to influence prices, discriminatory fees are not present, equal conditions on borrowing or placement to all participants, financial securities tend to be homogenous, participants have complete access to financial information (Andries, 2009). However, in an ideal market, information asymmetry exists and so does market imperfections for example moral hazard as a cause of market imperfection as pointed out.

At times banks may receive new clients and may not have full information about them. That is to say their creditworthiness; although banks will try to properly assess a client before giving them a loan, this approach may not work practically as there is a possibility of default. Having many clients that default may negatively affect the performance of a bank. However, Juan Fernandez (2003) mentions that in order to attain a much better social welfare, then it is of great significance that the work of financial intermediation be carried out at a low cost as much as possible. Therefore, the relevance of the theory in this study is to show the role played by banks. Banks act as intermediaries by pooling funds from savers and lending them out to borrowers.

### **2.2.2 Agency theory**

The agency theory stems its roots from economics. The theory hinges around the principal and agent, the problems between the two as well as governance mechanisms. The theory, from an economic perspective has a view on risk sharing between the agent and principal however, each party is said to have different approaches as to how they solve these problems (Bendickson, 2016). In simple terms, the theory is basically based on the relationship between the principal and the agent. The principal, delegates work to another party, the agent on the assumption that the agent will work on the principal's best interest. Now an agency problem arises when the two parties are not in pursuit of similar interests (Muldoon, 2015).

At the very core of the agency problem lies a self-interested behaviour and this may attract an agent into being overzealous, so the agent fails to act in accordance with the principal's best interest. This divergence is as a result of the agent's actions as it implies costs. This is according to how the principal perceives it. When the relationship between the agent and the principal is being initiated, the costs that is the agency costs are made clear however, when the agent moves contrary to the agreement, the principal perceives that they are likely to assume more risk. This is termed as the first agency problem, an emergence of a shift in sharing risk (Bendickson, 2016).

The second agency problem is closely linked to the first one. The agency theory states that when an agent has a stake in the firm that is they own a portion of the equity; they are likely to follow the actions outlined by the principal as those of their own especially if the results of those actions are outcome based. At times, perceived inequalities may exist in such a situation, the agent is likely to display a self-interested behaviour. As a result, it creates information asymmetry thus the principal is not able to properly keep an eye on the agent's behaviour. With this, measurement of outcomes becomes subtle thus leading to the second agency problem, monitoring the behaviour of the agent. In order to properly align risk as well as monitor the behaviour; these are the two agency problems, governance mechanisms need to be put in place (Bendickson, 2016).

From a banking perspective, bank managers who are the agents, are looked at from a point of view that they are not always willing to increase risk. The element of increasing risk is up to that point that would maximize the value of the shareholders. However, it is important to note that in an effort to minimize or to eliminate non diversifiable capital, managers seek to minimize the risk (Porter, 2007).

Strock, Travlos and Saunders (1990) mention that stock ownership by the management prompts risk taking. Using the stock owned by a manager in percentage wise, and the capital market measures of a particular risk as a proxy, provides proof that banks that are stockholder controlled take up a much higher risk as compared to a bank that is managerially controlled. All these points out to the difference in perceived interest by the parties and in this case, the agent.

In an attempt to mitigate the agency costs, the theory however suggests that a choice of the capital structure may assist in trying to minimise these costs. High leverage that is having a low equity to asset ratio, may help reduce the agency cost this will in a way constraint managers to act more towards increasing shareholder interest thus maximizing the value of the firm. This is mainly due to the fact that when a firm is highly levered, there tends to be certain threats towards the firm for instance liquidation. This affects for example their salaries and it will create pressure towards managers to ensure that more cash flow is generated (Berger, 2002).

At times the agent's behaviour could prove to be detrimental towards the performance of a bank in that the agent looks at his/her own interest. They are mainly involved in internal fraud. A proper example would be the case that occurred at KeyBank whereby the vault manager allegedly stole over four million dollars and was sentenced to ten years' imprisonment (Attorney, 2019). Such actions may for instance lead to the downfall of an institution due to the impact it leaves behind. The agency theory seeks to explain how actions taken by the agent could determine the performance of a bank such that poor actions taken by the agent could lead to failure of the institution. Likewise, if the agent makes strategic decisions, this could possibly lead to success.

### **2.3 Empirical Review**

The Banking industry is an integral sector in our day to day lives and at times unforeseen factors may influence how operations are normally carried out. A proper example of some of the unforeseen factors is the Corona Virus which affected every corner of the globe economically, health wise, socially and so on. However, this study seeks to review the empirical literature based on the themes of this research that is how the corona virus has had an impact on the financial performance of Banks.

#### **2.3.1 Interest Rates and Bank Financial Performance**

Before any loans or deposits are to be made, banks will set the interest rates. This is during the initial planning period, and it will be set to remain that way for the whole period. The banks that are risk averse in nature have a task of ensuring that the interest rate is set at an optimum level perhaps in the occurrence of uncertainties in interest rates. This can occur as a result of the asymmetry between demand for loans and the offers available for deposits. Setting the rate at an optimal level is quite useful as at times the money market may encounter risks as a result of uncertainties deriving from interest rates. In the event that the demand for loans and the supply of deposits are not equal in that the demand is in excess and the supply is insufficient, this needs to be resolved by setting up the rate of interest as a margin in comparison to the money market interest rate (Fernandez, 2003).

As covid 19 is a global pandemic, it is quite important to mention about the financial crisis that happened some time back in 2008. In a study that was conducted in Italy, there was a negative trend in interest rates. From the analysis of the study the following was observed; interest rate points declined from 3.9% to 3.1%. This was lower than the interest rate in 2008 (Calcagnini, 2012). In mentioning interest rate, one cannot go without mentioning interest rate spread. Nicholas (2018) also makes mention of interest rate spread as the difference in the rate of borrowing and that of lending. The author further adds that the spread is among the indicators of efficiency in a banking system. Before the advent of the crisis, the spread was seen to be increasing since 2006.

It can also be noted that the spread has been higher for unsecured loans than those of secured loans, this in particular for collateralized loans (Calcagnini, 2012).

Cooray (2018) mentions of some of the effect of having a wide interest rate spread and the author mentions that it discourages savings as it makes the deposits to have low interest rates and in turn restrict lending activities for investments. The effect of having high interest spreads was not only evident in developing countries but also developed countries such as United States, United Kingdom. The spread rose significantly. This was evident during the 2008 Financial crisis and the observations were as a result of the crisis.

Contrarily, Charles (2015) mentions that when the interest rate rises, it is expected that there should be a boost in the bank's performance simply because the spread has increased. An evaluation was conducted based on that in the United States of America and it was found out that this was mainly apparent to the smaller banks. Charles (2015) conducted the study after the occurrence of the financial crisis and analyzed the effects the crisis had on interest rates in the United States of America.

Covid 19 affected interest rates in that banks were forced to apply interest cuts as mentioned by PWC (2021). Commercial banks in the United States lost 1 billion dollars in interest income because of the reduction in interest rates. Further, they mentioned that the current cuts will be more severe than that which was earlier on at the beginning of the pandemic (PWC, 2021).

Barua (2020) also confirms that the pandemic did lead to a decline in interest rate and further mentions that it is likely to be worse off in developing countries whereby the banks serve a large number of individuals with less economical and financial capacity operating in an environment with a relatively weak policy and an aggressive competitive market. An implication to this is that there is a fall in interest income. This means that the revenue that the bank will receive will be low and this consequently leads to a decline in performance of commercial banks.

Makkar and Singh (2013) went further into their research to explaining how interest rates affect both the customers and the bank itself. The effect on the bank is the loan losses whereby the bank will be forced to wipe off these debts. These loan losses occur when there is an upward shift in interest as customers have a hard time trying to service the various loans that is paying up the principal amount as well as the interest. This is recorded off as a loss by the bank. However, on the flipside, when the interest rates are relatively too low, the amount the bank expects to earn as interest will also be too low and as a result add little profit to the bank. Banks therefore need to strike a balance to ensure that they stay safe in terms of their performance (Lipunga, 2014).

Customers do not wish to pay up a high interest rate therefore when the rates tend to go up, there is low consumption of the loans as they would prefer to sort lending to other institutions that are relatively cheaper. This is a great challenge to the commercial banks as their ability to earn interest from the loans they offer is greatly narrowed and this greatly eats out into their profitability. A key point to drive home is that interest rates are a very significant component as they have a great impact on the banks financial performance (Macit, 2012)

The pandemic has posed major threats to all sectors of the economy and in banking, the International Monetary Fund explain that among the effects it has had is the lowering of interest rates (Jackson, 2021). The effect of lowering interest rates is that it tends to depress the profitability of banks (Gambacorta, 2017). A number of banks across the globe lowered their interest rates among them; The Bank of England, The Peoples Bank of China just to mention a few. However, with The Peoples Bank of China, they cut their reserve requirements so as to ease the cost of borrowing for both individuals and firms within their country and in addition to that, they added funds worth 79 billion dollars to boost and stimulate their economy (Jackson, 2021).

For the Kenyan sector, the Central Bank of Kenya made some adjustments by cutting off their benchmark to a rate of lending of 7.25 percent. In addition, they lowered the cash reserve from 5.25 percent to 4.25 percent this was done with an aim that banks will continue to lend out to customers as the lowering of the cash reserve ratio is expected to raise 330.83 million dollars which is equivalent to 35.2 billion Kenya Shillings (Jackson, 2021).

A point worth noting as mentioned by Jackson (2021) is that the financial crisis that occurred in 2008 also faced the same effect of interest rate cuts.

### **2.3.2 Inflation and Bank Financial Performance**

Senel (2021) mentions that the financial crisis triggered a number of economic consequences among them inflation. The author goes ahead to mention that inflation resulted to a drop in individuals purchasing power. However, the study was conducted among the countries located in Central and Eastern Europe. Hurab (2011) in the study states that the more the inflation, the more individuals need money for their daily expenses thus they end up withdrawing their deposits or otherwise reducing the deposits, they place in banks. When consumers fail to deposit money, this means that the bank's cash reserve is reduced, and they will not be in a much capacity to issue loans to those that need them. As banks rely on these deposits to give them out as loans and through these loans, they earn income through the interests that borrowers pay. Therefore, a rise in inflation would cause the bank's cash reserve to be low as deposits are also low and because not much is offered out as loans, the performance of the bank declines (Rasiah, 2010).

A study conducted by Kathleen, Vardiabasis and Yavas (2012), mention that during the financial crisis, banks were not willing to give out loans. This was because of the high levels of inflation as banks had a relatively low cash reserve as a result of customers failing to deposit as well as others withdrawing money for their personal use. There was also a decline in the purchasing power. Banks reported low performance during the period.

A study by Joshi (2020) conducted in India established that the covid 19 pandemic led to a rise in unemployment meaning that there is less distribution of income. In addition, there is negative savings because of having less purchasing power as there is overall reduced distribution of income. The lack of savings leads to a decline in the bank's cash reserve and as Rasiah (2010) puts it, there is a decline in the financial performance.

In a research conducted by Deloitte (2020), Kenya's inflation was at an average of 5.2 percent and this was before the advent of covid 19. Upon conducting the 2020 forecast, the average inflation rate increased to 6.5 percent from 5.2 in 2019. The ratings were assessed by fitch solutions, IMF. Although inflation rates were uneven in African countries, countries such as Kenya and South Africa managed to contain the inflationary pressures (Salami, 2021)

### **2.3.3 Credit risk and Bank Financial Performance**

Nikolaidou (2014) mentions that the financial crisis in 2008 did have an effect on the credit risk and continues to mention that there was an increase in the credit risk as a result of the financial crisis. During the financial crisis in 2008, the credit risk in the Turkish banking system increased. This was brought about by the increase in nonperforming loans during the period. This made the banking system in Turkey vulnerable as their profits shrank and ultimately lead to decline in the performance of banks in Turkey. The increase in nonperforming loans also leads to an increase in liquidity risk (Ekinici, 2019)

Similarly, from a study conducted by Macerinskiene (2014), indicated of the link between nonperforming loans and credit risk. The author mentions that the nonperforming loans ultimately lead to credit risk. During the 2008 financial crisis, the ratio of nonperforming increased from 7.2% during the first quarter of 2009 to 18.9% in the second quarter of 2010 causing a major decline in the performance of the Bank of Lithuania. The decline in performance is mainly attributed to nonperforming loans.

Khalil (2013) sides with Nikolaidou and further mentions that when it comes to credit risk, its management is equally important as he continues to mention that most banking problems globally are brought about by poor credit risk management. Among the factors are ineffective credit risk measurement and also poor credit risk rating as well as insufficient lending procedures.

Wakode (2021) mentions how covid 19 impacted credit risk but by using three risk metrics: total/binding exposure, past due loans and loss given default. In conclusion, the author mentions that there was an increase in the credit risk among banks as a result of the pandemic. The study conducted on Commercial Banks in Mumbai, India. Further, the author mentions of the decline in performance among banks in Mumbai as there was high default among clients as well as nonperforming loans.

The covid 19 pandemic however did affect credit risk. The Central Bank of Kenya (2021) points out that several risks increased as a result of the pandemic and credit risk was among the mentioned risks. The Central Bank of Kenya continue to mention that nonperforming loans are increasing and are expected to increase in the future if the covid situation persists. The situation is uncertain as to when the pandemic condition will improve as well as the overall economy.

Mugo (2018) further mentions that the 2008 financial crisis brought about an increase in loan defaulters. Kithinji (2010) conducted a study on Kenyan banks to establish the effect credit risk has on financial performance and concluded that credit risk brought about by nonperforming loans do affect profitability, they cause the profitability of commercial banks to drop as a number of customers fail to pay out the principal amount as well as the interest of the loan they took. This means the profit the bank had anticipated to receive is not achieved. However, this is in accordance with the Kenyan setup as contrasting results have been shown by studies conducted across various parts of the globe.

### **2.3 Research Gap**

A study by Goodell (2020) on the impact of COVID-19 discusses about the effect of the pandemic on the economy and social aspects and fails to speak in depth about how covid 19 has impacted the banking sector in terms of its performance because banks are quite a critical sector of any economy of a given country therefore its performance without a doubt needs thorough review. Another challenge is that although the paper is indicated in the introduction that it touches on the global economy, very little information is given concerning the Sub Saharan Africa.

Another study by Seelye (2020) on the impacts of covid 19 on banking, do not mention the main factors that affect performance but rather talk more of loan risk which is an upcoming factor and not a main factor. In addition, it has not yet been attested whether it affects a global scale or the United States Banks alone.

Ziegler (2020) states some of the direct effects covid 19 has had on banks and global markets. In addition, the study also explains the effects the pandemic has on borrowers. However, the downside is that it fails to state the specific factors that affect bank performance because it touches on broad

aspects of the economy hence this study goes in depth in explaining how the pandemic has affected the main factors influencing performance, interest rates, inflation and credit risk.

Global banking stability in the shadow of Covid 19 outbreak by Elnahass (2021) in their study, elaborates how covid 19 has impacted the financial performance of commercial banks with data evidence from various commercial banks. However, the data covers a wide European geographical region and very minimal from Africa or the local context.

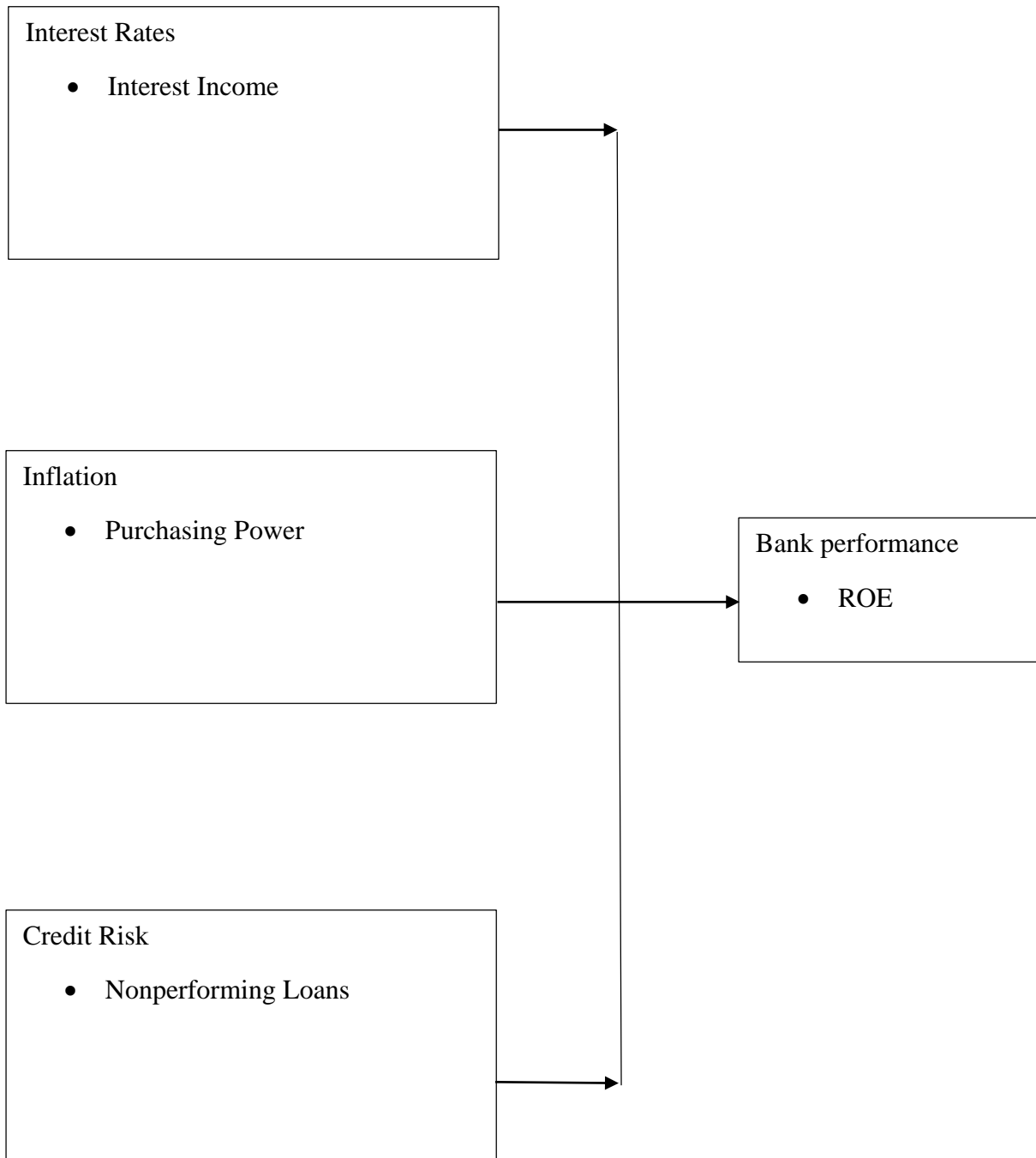
Therefore, this study in a nutshell to explains the effects of covid 19 on the financial performance of banks in Kenya as it goes ahead to explain how these factors have such as interest rates, inflation and credit risk affect financial performance under normal conditions and it also further goes ahead to explain how covid 19 has impacted each factor and the corresponding effect on financial performance

## 2.4 Conceptual Framework

Figure 2.1 Conceptual Framework

**Independent variable**

**Dependent variable**



Source: Author (2021)

## 2.5 Operationalization of Variables

Table 2.1 Operationalization of Variables

<b>Variable</b>	<b>Indicator</b>	<b>Measurement</b>	<b>Data Analysis</b>	<b>Supporting Literature</b>
Interest rate	<ul style="list-style-type: none"><li>• Interest Income</li></ul>	Return on Equity (ROE)	Descriptive analysis and correlation analysis	Mouri (2016), Wambari (2017)
Inflation	<ul style="list-style-type: none"><li>• Purchasing Power</li></ul>	Return on Equity (ROE)	Descriptive analysis, Regression Analysis	Marimba (2018), Oleka (2014)
Credit risk	<ul style="list-style-type: none"><li>• Nonperforming Loans</li></ul>	Return on Equity (ROE)	Descriptive analysis and regression analysis	Masinde (2017)

Source: Author (2021)

## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 Introduction

The chapter introduces the research methodology adopted in the study. It describes the research design, the population, the sampling design, data collection and data analysis techniques, validity testing as well as the ethical considerations.

#### 3.2 The Research Design

The research design provides a framework through which the researcher can gather data and present the data collected. The study employs a descriptive research design and as Greener (2008) puts it, a descriptive research design is when the researcher wishes to describe certain behaviours as they occur in the environment. The purpose of conducting a descriptive research design is such that the researcher can assess the field of study and report the data as it is without any manipulation whatsoever. Mugenda and Mugenda (1999) observe that a study that employs a descriptive research design helps to report situations as they are. It is therefore relevant to this study in that due to the impact the pandemic has posed, the data obtained will be reported as obtained to draw conclusions as to what extent the pandemic has affected the performance of commercial banks in Kenya. In addition, a descriptive research design is intended to produce statistical information about various phenomena that are of interest to policy makers, and this will be required to make informed decisions (Saunders, Lewis & Thornhill, 2009).

#### 3.3 Population and Sampling

##### 3.3.1 Population

The population is the whole set of items or individuals in the study described as the area of study whereby the researcher is attempting to observe the characteristics or their behaviours. It is important to note that the population is inclusive of all the items that suit the study area, and this is the exact area that the researcher selects a sample that is subject to the study (Kothari 2004). The target population for this study was 11 Commercial Banks listed in the Nairobi Securities Exchange (NSE).

##### 3.3.2 Sampling

Cooper and Schindler (2006) define a sample frame as the list of elements from which a sample is drawn, and it is closely connected to the population. Saunders (2007) also goes ahead to define the sampling frame as the list of all cases in which a sample is drawn. The sampling frame for this study was 11 Commercial Banks listed in the Nairobi Securities Exchange (NSE) and this is the target population as well.

The study adopted a census as the study targeted all the 11 Commercial Banks listed in the Nairobi Securities Exchange therefore the research utilised the entire population.

A sample of a study is the proper number of items or individuals that the researcher selects from a population (Murerwa, 2015). This study surveyed the 11 Commercial Banks listed in the Nairobi Securities Exchange. These were therefore the banks that were subject to the study.

### **3.4 Data Collection**

The study made use of secondary data. Various researchers define secondary data as data that has already been collected by another researcher or an individual to be used in another study or for some other purpose (Greener, 2008).

Data on interest rate was sourced from the Central Bank of Kenya (CBK) which is the regulatory body that oversees the banking industries in Kenya. The financial measures of profitability Return on Equity are one of the measures whose data was sourced from the financial statements of the commercial banks from their websites. Credit risk was measured by non-performing loans in the financial statements.

### **3.5 Data Analysis**

Data that has been collected needs to be processed, analysed, and presented. Data analysis is therefore the transformation of data into a meaningful form that can be useful in aspects such as decision making. This study used descriptive measures to analyse data as well as inferential statistics. Descriptive analysis involves measures of central tendency. These measures are means, mode and standard deviation. The inferential statistics incorporated the multiple regression model so as to assess the effect the independent variables have on the dependent variable. The study also incorporated the SPSS package in the data analysis. The multiple regression model is as follows:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

$\alpha$  = Constant

$\beta_1, \beta_2, \beta_3$  = Partial regression coefficient

$X_1$  = Interest Rates

$X_2$  = Inflation

$X_3$  = Credit Risk

$\varepsilon$  = Error term

### **3.6 Validity Testing**

As mentioned by Gall and Borg (2003), Validity is a criterion used to denote the degree with which inferences can be drawn from a study so as to make accurate clarifications. Further, Bryman and Cramer (2005) posit that the concept of validity is such that it ascertains accuracy as a result of the inferences drawn from the study. The study employed diagnostic validity testing justifying four key principles: linearity, normality, homoscedasticity, and autocorrelation. For instance, the linearity aspect checks the relationship between the dependent and independent variable, homoscedasticity is a constant variance of the errors for instance against any of the independent variables. A Durbin Watson test was conducted for testing autocorrelation. Homogeneity was confirmed with the use of a scatter plot.

### **3.7 Ethical Issues**

This study safeguarded all the ethical considerations throughout this research study period. The study also ensured that before any data collection was carried out, an ethical review committee permit was obtained from the university. Respondents' anonymity was guaranteed as well as their consent before further carrying out any research. The study also ensured that the data collected from this research was handled with utmost confidentiality and was solely used for academic purposes.

## CHAPTER 4

### RESULTS AND FINDINGS

#### 4.1 Introduction

The chapter presents data on the effect of covid-19 on interest rates, inflation, and credit risk and the subsequent effect on the financial performance of commercial banks in Kenya. The findings and results are presented in tables, mean and standard deviation in line with the literature review and study objectives. The research uses secondary data obtained from the Central Bank of Kenya and the Financial Statements of eleven Commercial Banks listed in the Nairobi Securities exchange.

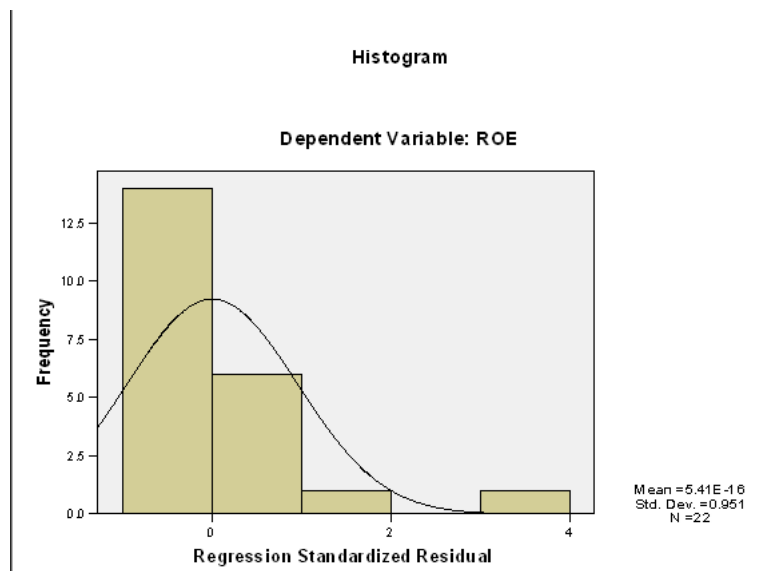
#### 4.2 Validity test

The tests were conducted with the use of diagnostics such as normality, homoscedasticity as well as autocorrelation.

##### 4.2.1 Normality test

A histogram was used to test for normality of the variables. The variables are interest rates, inflation and credit risk and Return on Equity (ROE) as the dependent variable. The histogram showed a positive skewness meaning that the relation between the dependent and independent variables were not normally distributed.

*Figure 4.1 Normality test*



Source: Author (2022)

### 4.2.2 Homoscedasticity

A scatter plot in this case was used to test for the homoscedasticity. The scatter plots showed a downhill pattern indicating that there is a negative relationship between the independent and the dependent variables meaning that as the independent variables increase or move to the right, the dependent variable decreases or moves down.

### 4.2.3 Autocorrelation

Autocorrelation was carried out by the Durbin Watson statistic which recorded a value of 2.3399 indicating a negative autocorrelation meaning that there is a negative relationship between the independent and the dependent variables. This is because values between 2.0 and 4.0 indicate a negative autocorrelation.

### 4.3 Descriptive Statistics

The descriptive statistics of the study are as explained. The data collected ranging between 2019 and 2020. The study also incorporated data from the eleven commercial banks listed in the Nairobi Securities Exchange.

The table is as shown below:

*Table 4.1 descriptive statistics*

	Minimum	Maximum	Mean	Std. Deviation
ROE	2%	53.8%	16.05%	10.52%
NPL	6.28%	29.06%	12.35%	6.1%
INF	5.05%	5.7%	5.42%	0.3%
IR	6%	7%	6.89%	0.03%

The results are as follows; the minimum Return on Equity (ROE) is 2% whereas the highest is 53.8%. The average ROE is 16.05% whilst the variability in the ROE is 10.52%.

Further results displayed that the least number of non-performing loans is 6.28% and the highest being 29.06%, the mean non-performing loans which is a measure of the credit risk was 12.35%. The variability from the mean which is the standard deviation is 6.1%

With inflation, the results displayed a minimum inflation rate at 5% with the maximum at 6%. The mean inflation rate was 5.42% with a deviation of 0.3% from the mean.

The findings from the interest rate indicated that the minimum interest rate charged by commercial banks as portrayed by the Central Bank of Kenya was 6.8% and the highest rate of interest that was charged was 7%. The average interest charged was 6.89 with a variability of 0.03%.

#### 4.4 Multiple Linear Regression

The analysis of the variables in this study was conducted using fixed effects panel regression model.

Table 4.2 Anova

	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	0.062356422	0.020785474	3.48756639	0.037347755
Residual	19	0.169856553	0.008939819		
Total	22	0.232212975			

The study incorporated a regression model that was carried out at a 5% significance level. The table above is a summary of the regression model with its significance. As shown in the table, the significance F/P value was 0.037. The value is below 0.05 which indicates that there is a significant level of relationship between bank performance measured by ROE, credit risk, inflation, and interest rates. All these variables collectively show the effect covid-19 has had on the performance of commercial banks. By looking at each variable individually, credit risk, inflation, and interest rates, the effect covid-19 has had on these variables and the subsequent effect on banks financial performance.

Table 4.3 Model Summary

Multiple R	0.518199932
R Square	0.268531169
Adjusted R Square	0.138902871
Standard Error	0.094550614
Observations	22

The summary of the model shown above attempts to show the strength of the relationship between the dependent and the independent variables that is bank performance and credit risk, inflation, and interest rates and the impact covid-19 has had on bank performance. The R value which is shown by the multiple R in the table above indicates that there is a relative strong linear relationship between the dependent and the independent variables. The R Square value indicates that 27% of the points fall on the regression line that is 27% of bank performance can be explained by the independent variables.

Table 4.4 Coefficients

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.198604265	0.298330243	0.665719519	0.005135921
NPL	-0.908553291	0.347317629	-2.615914697	0.001699754
INF	1.367685721	0.615056947	0.243574684	0.301041707
IR	23.26118326	5.744306171	0.319766377	0.512461715

The linear regression established is as follows:

$$\text{ROE} = 0.198 - 0.909.\text{NPL} + 1.368.\text{INF} + 2.261.\text{IR} + \epsilon$$

The intercept coefficient is a +0.1986 and its value is statistically significant. The non-performing loans is negative meaning that as non-performing loans increase, the bank performance reduces. Thus, banks should strive to ensure that the non-performing loans are kept at a much lower level as possible by for instance setting aside a high loan provision this helps in reducing the levels of non-performing loans. The non-performing loans too was statistically significant as its level of significance was at 1% which was below 5%.

Further, the model indicates that the inflation rate has a positive relationship meaning that as the rate of inflation increases, the ROE increases meaning that the bank performance also increases. This is to note that as the purchasing power increases, the bank performance also declines, and the reverse is true in that if the purchasing power declines then the bank performance rises. The inflation was not statically significant at 95% level of confidence

Interest rate too displayed a positive relationship in that as the interest rate rises, the bank performance too rises. As the banks interest income rises, the banks exhibit an increase in their financial performance. However, interest rate was not statistically significant, and it was above 5% as displayed in the table above.

#### 4.5 Summary of Findings

The objective of this research was to assess the impact of covid-19 on the financial performance of commercial banks in Kenya. Bank performance was the dependent variable with interest rates, inflation, and credit risk as the independent variables. The study established that all the variables were valid, and this is due to the validity tests carried out on those variables. It is worth noting that the variables do affect bank performance though inflation and interest rate had low P Values, they still affect bank performance to a considerable degree.

In addition, the variables too had a significant level of correlation with bank performance. With credit risk exhibiting a negative correlation whereas interest rate and inflation showed a positive correlation. With all these information, the study can state that covid-19 did affect performance of commercial banks. However, covid-19 mainly affected credit risk followed by inflation and lastly interest rate and this is also in relation to the summary of the data analyzed.

## CHAPTER 5

### SUMMARY, CONCLUSIONS & RECOMMENDATIONS

#### 5.1 Introduction

The chapter presents a summary of the findings from the previous chapter, the conclusions as well as recommendations that are grounded on the objectives of this study. In conclusion, the chapter outlines the various limitations encountered whilst conducting this research and various suggestions that can be used for further research and studies.

#### 5.2 Summary of findings

The main objective of this study was to assess the impact of covid-19 on the financial performance of commercial banks in Kenya. The population of this study was the eleven commercial banks listed in the Nairobi Stocks Exchange (NSE). The data collected was secondary from the financial statements of the eleven commercial banks listed in the Nairobi Stocks Exchange (NSE) and the Central Bank of Kenya. Further, data was analyzed using a regression analysis, correlation and the data was presented as means, standard deviation and tables.

From the findings, the effect of covid-19 on bank performance was not too strong. This is because only 27% of the observations/data from the dependent variable could be explained by the independent variables.

However, the relationship between non-performing loans and bank performance (measured by Return on Equity, ROE) was found to be negative meaning that high non-performing loans leads to a decline in financial performance. Hosna et al. (2009) too in their empirical studies from 4 Swedish Banks observed the relationship between credit risk and financial performance to be negative. In this study non-performing loans was used as a parameter of credit risk.

Interest rate exhibited a positive relationship with bank performance. Podder (2012), in their study observed the relationship between bank performance and interest to be positive. This therefore means that banks ought to be careful in the event that covid-19 would cause a severe decline in interest rate, then that would mean that the performance will likely decline significantly as the relationship with bank performance is positive. The reverse is also true in that if interest rates are to go up the bank will exhibit a rise in their financial performance.

Lastly, the relationship between inflation and bank performance was positive. Dietrich and Wandered (2008) empirical studies results show that there exists a positive relationship between bank performance and inflation. However, the relationship was positive but insignificant.

### **5.3 Conclusions**

The study concluded that the coefficients/independent variables (credit risk, interest rate and inflation) have a relatively weak relationship with bank financial performance with regards to the impact caused by covid-19. This can be evidenced from the P-values of these coefficients whereby intercept/dependent variable (measured by ROE) had a value of 0.005, non-performing loans had a p-value of 0.001. The rest inflation and interest rate had values of 0.3 and 0.5 respectively.

### **5.4 Recommendations**

The Central Bank of Kenya should maintain the cash reserve ratio of banks at lower levels. In 2020, the CBK lowered their cash reserve ratio from 5.25 percent to 4.25 percent. This ratio should be maintained so as to enable banks to continue lending funds to customers despite having low reserves as a result of the impact of covid-19. The CBK should ensure that the inflationary level within the country is well balanced so as to prevent severe losses by commercial banks, alternatively derivatives can be used to mitigate inflationary levels within the country. According to the results of this study, since credit risk was a very significant variable with a P-value of 0.001, commercial banks could device internal credit risk management systems so as to control/manage credit risks.

### **5.5 Limitations to the study**

The study only looks at the data of eleven commercial banks in Kenya that are listed in the NSE while there are about 42 banks in Kenya thus information from unlisted banks is not captured in the study. It is also right to put that the information does not represent the entire banking period.

The study is focused on looking at the impact of covid-19 on the financial performance of commercial banks in Kenya. Thus, it fails to look at other factors that may affect the financial performance of commercial banks in Kenya as it is not only covid-19 that may affect financial performance.

Some commercial banks do not clearly indicate their non-performing loans ratios on their financial statement, and this posed as a challenge as it made the data collection process a bit difficult. However, banks do not wish to disappoint their investors by indicating high non-performing ratios if there are any as the financial statements are made available to the public. They wish to save their reputation.

The study is limited to one geographic location that is Kenya. Therefore, the data from this study may not properly suit other countries.

Lastly, the study only analyses data for a two-year period that is 2019 and 2020 and uses three variables credit risk, inflation, and interest rates.

### **5.6 Suggestions for further research**

As the objective of this study was to assess the impact of covid-19 on the financial performance of commercial banks in Kenya, only 27% of the dependent variable can be explained by the independent variable. It is therefore suggested that a study may be carried out while looking at other variables as well so as to ascertain whether the R square can be higher and more of the independent variables can explain the dependent variable.

Future studies to be done should have a longer period for carrying out this study for instance 2020 and 2021 when the pandemic was still very apparent versus 5-year series period i.e., 2019-2015. This may increase the accuracy of the research and to be done in other banks as well.

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