

**EFFECTS OF HEDGING SECURITIES ON FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN NAIROBI CITY COUNTY, KENYA**

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE
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DECLARATION

I declare that this document and the research that it describes are original work and that they have not been presented in any other university for academic work.

Signature 


Date 8TH June, 2021

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SUPERVISOR'S DECLARATION

This project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

This research project is dedicated to my lovely family. My husband Edward Nyandemo, my children Jeremy and Randy Nyandemo for their sacrifice, support and understanding during research writing. Fellow students for their support and encouragement during the research writing period.

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ABSTRACT

The study focused on determining the effects of hedging securities on financial performance of commercial banks in Nairobi City County, Kenya. The study was guided by the specific objectives such as hedging strategies, hedging risk exposure, and hedging relationship. The study used expected utility theory and resource-based view theory in order to ascertain and validate the findings of the study. The study findings are important to policy makers, government stakeholders as well as private enterprises in implementing hedging securities on financial performance. The study targeted a population of 350 and a sample size of 78 respondents drawn from selected commercial banks in Nairobi city County. The study adopted a descriptive research design. The study used stratified random sampling procedure. In this sampling technique, the population was divided into smaller groups known as strata. The strata comprised of the selected commercial banks in Nairobi city County. In addition, the respondents were randomly sampled from each stratum. The stratum reduced the amount of tension and suspense of respondents towards the study hence provided honesty and reliable information. Data was collected from the selected commercial banks in Kenya where the respondents were issued with structured questionnaires to enhance the process of data collection. The structured questionnaire was subdivided into six main sections. Section one was collection of demographic information of the respondents. The rest of the sections collected data based on the independent and dependent variables of the study. Pilot study was conducted at 10% of the target population to determine the feasibility of conducting a large-scale study. The pilot study helped to inform the researcher on the strength or weakness of the study. The researcher prepared 78 questionnaires for distribution to the respondents. The response rate obtained from the respondents was 53 which represented 67.9% which was sufficient to carry out the study. A multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS Version 25) to code, enter and compute the measurements of the multiple regressions. Findings were recorded on a five-point Likert scale anchored on Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5). Statistically, the study indicated that there existed a significant relationship between hedging strategies and hedging relationship with a coefficient value of 0.925 (at significant level of 0.05). Financial performance also was shown to contribute up to 72% on hedging strategies. Also, a strong relationship existed between hedging risk exposure and hedging strategies with a coefficient value of 92.5% (at a significance level of 0.05). Hedging relationship and financial performance of commercial banks in Kenya exhibited a strong relationship at a coefficient value of 83.6% (at a significance level of 0.05). The study recommended that the beneficiaries of the findings should make informed decisions based on the findings of the study.

DEFINITION OF TERMS

Derivatives: - Refers to a financial instrument such as Swaps, futures and options that derives their value from an underlying asset, for example, stocks, bonds, real and property.

Hedging securities: - A hedge security is something which reduces the risk of future price movements and hedging provides relatively inexpensive and highly liquid positions similar to those obtained with diversified stock portfolios.

Spot Contract: - Refers to trades that involve an immediate exchange in purchases of stock, purchases of gold, and exchanges of one currency for another which is fundamental building blocks for valuing and risk managing forward and option positions.

Strategies in hedging securities: - This refers to forward contracts, foreign currencies and financial instruments; and swap contracts interest rates, Currency swaps and Hybrid swap.

Effect of risk exposure in hedging securities: - This refers to Interest risks, and foreign exchange rate risks.

The hedging securities relationship: - This refers to fair value hedge Swap contracts, cash flow hedge and hedge of a net investment.

Financial performance of banks: - This refers to return on assets, net profit margin and return on investment.

LIST OF ABBREVIATIONS

CD	Certificate of Deposit
FC	Forward Contract
FDIC	Federal Deposit Insurance Corporation
IFRS9	International Financial Reporting Standards
LTCM	Long Term Capital Management
NACOSTI	National Commission for Science, Technology, and Innovation
OTC	Over the Counter
RBV	Resource Based View Theory
ROCE	Return on Capital Employment
SCA	Sustainable Competitive Advantages
SPSS	Statistical Package for the Social Sciences

CHAPTER ONE

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

This chapter covered the background of the study, statement of the problem, objectives of the study, research questions, significance of the study, scope of the study, limitations and delimitations of the study as well as illustrated a conceptual framework showing the relationship between the independent and dependent variables of the study.

1.2 Background of the Study

A hedge is an investment that is made with the intention of reducing the risk of adverse price movements in an asset (Adetayo, 2016). Normally, a hedge consists of taking an offsetting or opposite position in a related security. Globally, hedging securities occurred in the mid-1800s, even though there is historical evidence that attempts to “hedge” happened well before. In the mid-1800s, Chicago became a commercial center of industry, a focal point where people from across the Midwest came together from a network of rail lines. Farmers were selling grain to buyers who would then ship their grain all over the U.S. Farmers would produce grain during the spring and summer and come to the center of trade (Chicago) at the end of the summer to sell it. More often than not, a number of dealers would then offer a price to secure those purchases for a limited amount of grain.

The amount of grain produced by farmers did not necessarily align with dealer demand. There were fewer dealers than farmers, and they often wanted to buy a lesser quantity of grain than what farmers were ready to offer, creating a race to the bottom in terms of pricing. After selling grain in this “market”, whatever quantity farmers didn’t sell or consume for their own animal-feeding needs through the winter until the next crop, would ultimately be wasted. This cycle forced many farmers and some dealers into financial hardship, with countless stories of debts not being paid and banks seizing farms. Producing grain in advance, without any assurances of what price the grain could sell for, did not provide any level of certainty to farmers. They couldn’t plan for how much grain to produce, how much margin they could expect or how to resource their farms. Then, around 1848, farmers and dealers came up with a better idea. Farmers would ask dealers if they

were willing to commit to buy grain at a specific, agreed-upon price today to be paid in the future when the grain was delivered (often in the next year). If the farmer and the dealer agreed, the two parties made a “commitment” they would write on a blackboard that would hold both liable: for the farmer to deliver the grain at the specified price, and for the dealer to buy the grain at the same specified price (Dutta, 2018).

In Kenya, leading and lagging, and local currency borrowing is the most important technique. Forward contracts can reduce a firm’s translation exposure by creating an offsetting asset or liability in the foreign currency. Any loss on its translation exposure will then be offset by a corresponding gain on its forward contract. The gain on the forward contract is of a cash-flow nature and is netted against an unrealized translation gain. Leading is when a company believes that foreign currency is likely to appreciate and therefore it would be wise to pay the foreign currency dues sooner than later. While lagging is when a company believes that foreign currency is likely to depreciate and therefore it would be better to meet the payables later than sooner (Chege, 2016).

According to Chege (2016), there is a currency price that is affected by the macro-economic variables that make financial institutions reframe their risk management strategies to incorporate hedging to reduce risk exposure. The unpredicted nature of currency fluctuations is likely to affect firm performance negatively.

1.2.1 Financial Performance of Commercial Banks

The financial performance of banks is how well the banks can use assets from their core business to generate revenues. It is used to measure banks’ overall financial health over a given period of time. The study sought to measure the financial performance of banks with indicators such as return on assets that measure the managerial efficiency and capability to convert the assets into the net income, net profit margin that measures the amount of net profit a company obtains per dollar of revenue gained and return on investment that measures the probability of gaining a return from an investment. Casu et al, (2006) affirms that bank regulators screen banks by evaluating banks’ liquidity, solvency and overall performance to enable them to intervene when there is need and to gauge the potential for problems (Dietrich and Wanzenried, 2014). The higher the percentage, the more efficient a company's management is at managing its balance sheet to generate profits.

The features that determine the financial performance of banks in general have been extensively studied. Amongst the various approaches, a number of studies have focused on the structure-performance relationship of banks, with the structure-conduct performance (SCP) hypothesis and the efficient-structure (EFS) hypothesis widely tested. In general, banks' profitability and pricing power are hypothesized to be determined by market structure of the banking industry, such as the number of participating banks in the market and the market shares of banks, and bank-specific factors, such as cost efficiency, scale efficiency, and the risk attitude of banks. Macroeconomic factors, such as real GDP growth and unemployment, may also be important determinants (Wong, Fong, Wong, & Choi, 2007).

Studies have shown a number of determinants of bank financial performance. For instance, Heffernan & Fu (2010) found that some macroeconomic variables and financial ratios significantly influenced financial performance. The study also found that the type of bank was an influential determinant of bank financial performance. Clair (2004) found that the most important macroeconomic indicators were changes in interest rates, exchange rates, unemployment, and aggregate demand. According to Demirgüç-Kunt & Huizinga (1999), a larger bank asset to GDP ratio and a lower market concentration ratio led to lower margins and profits. The authors also note that foreign banks have higher margins and profits compared to domestic banks in developing countries, while the opposite holds in developed countries.

1.3 Hedging Securities

A hedge is an investment that protects your finances from a risky situation. Hedging is done to minimize or offset the chance that your assets will lose value. Brigham and Ehrhardt, (2002) concurs that hedging is done by a firm or individual to protect against a price change that would otherwise negatively affect profits. It also limits organizational loss to a known amount if the asset does lose value. It's similar to home insurance. Most investors who hedge use derivatives. These are financial contracts that derive their value from an underlying real asset, such as a stock an option most commonly used derivative. Hedging reduces the risk of future price movements which might affect a firm adversely if

not well managed (Horne & Wachowicz, 2012). It gives you the right to buy or sell a stock at a specified price within a window of time.

1.3.1 Hedging Strategies on Financial Performance of Commercial Banks in Kenya

A hedging strategy is a set of measures designed to minimize the risk of adverse movements in the value of assets or liabilities. Hedging strategies usually involve taking an offsetting position for the related asset or liability. Currency hedging is one of the most common hedging strategies. Companies operating internationally, who work with a range of currencies need to minimize the risk of devaluation of their accounts receivable in foreign currencies, as well as of their functional currency devaluing against others in which they have payments due. A wide range of products with diverse prices and degrees of complexity are available, from forward contracts to futures, options and other derivative products.

Hedging strategies are broadly classified as a) Forward Contract: It is a contract between two parties for buying or selling assets on a specified date, at a particular price. This covers contracts such as forwarding exchange contracts for commodities and currencies. b) Futures Contract: This is a standard contract between two parties for buying or selling assets at an agreed price and quantity on a specified date. This covers various contracts such as a currency futures contract. c) Money Markets: These are the markets where short-term buying, selling, lending, and borrowing happen with maturities of less than a year. This includes various contracts such as covered calls on equities, money market operations for interest, and currencies.

Hedging strategies provides a means for traders and investors to mitigate market risk and volatility. They minimize the risk of loss. Market risk and volatility are an integral part of the market, and the main motive of investors is to make profits. However, you are not in a position to control or manipulate markets in order to safeguard your investments. Hedging strategies might not prevent losses, but they can considerably reduce the effect of negative impacts.

1.3.2 Hedging Risk Exposure on Financial Performance of Commercial Banks in Kenya

Hedging is a strategy for reducing exposure to investment risk. An investor can hedge the risk of one investment by taking an offsetting position in another investment. The values of the offsetting investments should be inversely correlated. Generally, when investors consider risk they focus on market risk and how an adverse movement in a stock or the broader markets will affect their portfolios. Market risk can be defined as the chance that an investment's actual return differs from its expected return. A basic measurement of risk in a specific market, known as volatility, is the standard deviation of the historical returns or average returns of a specific investment. High standard deviations indicate a high degree of risk.

A key component of the risk management process is risk assessment, which involves the determination of the risks surrounding an investment. One of the basic ideas of investing is the relationship between risk and reward. Returns are considered a function of risk in that the greater the risk, the greater the potential for reward. The reason for this is that investors need to be compensated for taking on additional risk. For example, Certificate of Deposit at a bank is considered to be one of the safest investments and, when compared to common equity, provides a lower rate of return. The reason for this is that a corporation is much more likely to go bankrupt where the common stock would be worthless. Because the risk of investing in a CD is principal protected by the FDIC, the risk of owning a CD is very low, and therefore pays a low return.

When investors assume risk in an asset class that has a premium above a risk-free rate of return, the investor could consider hedging the exposure when the returns are better than expected and lock in profits. Investors can hedge risk exposure in many ways. An investor can use options on the specific asset, or a financial instrument that somewhat mimic the market direction of the asset that is owned. For example, if an investor-owned Apple Stock, and wanted to lock in some of their profits after the stock moved from \$500 to \$600, they could hedge their risk exposure by either selling a portion of their position, or selling another instrument such as the Nasdaq 100. The Nasdaq 100's returns are highly correlated to those of Apples, which would allow an investor protection from a downward movement

in Apple's share price. Another type of hedge that an investor could undertake would be to use options to mitigate market risk. For example, a put option provides downward protection against long stock positions. Buying Apple puts would mitigate some of the downside risks as the investor owns the right, but not the obligation, to sell Apple stock at a specific price. The market risk of a put is limited to the delta of the put.

Another way to hedge downside risk using options would be to sell a call option. In this case an investor would receive a premium which would protect a portion of a downside move.

1.3.3 Hedging Relationship on Financial Performance of Commercial Banks in Kenya

Hedge relationship describes the criteria for including the fair value of derivatives on balance sheet as part of an effort to regulate and normalize the use of hedging in corporate accounting. A hedge relationship can be conceptualized as a type of insurance contract for risk mitigation on an underlying asset and a set of tests and methods for valuation of this insurer/insuree contract in corporate accounting and reporting. In general, the use of hedges and financial derivatives to protect against risk should reflect a fair value assessment of the hedge and should not appear as items in corporate income. For companies operating outside of the financial services sector an effective hedge should protect against undue loss without being a major component of company income statements. These contracts are valuable to a company and standardized means of including their fair value on corporate balance sheets is of interest to lenders and investors.

To account for the value of these contracts all of the criteria noted in IAS section 39R.88 must be met for a hedge relationship to be deemed to exist and for hedge accounting to apply. Testing must be performed on both elements of the hedge relationship to ensure that the risk mitigation value of the hedge would be effectively reflected in the insurees profit and loss ledger. Effectiveness measures the strength of this relationship.

The hedge relationship is an accounting concept introduced by the hedge accounting standards and refers to the correlation between a company's asset or liability and the financial derivative used to hedge the economic risk associated with it.

This relationship is regulated by International Financial Reporting Standards (IFRS 9), which requires it to be highly effective in order to be eligible for the application of hedge accounting criteria. This means that any fluctuation in the fair value of the hedged item (asset or liability) must be offset by opposite changes in the fair value of the hedging instrument (derivative).

According to International Financial Reporting Standards (IFRS 9), companies applying hedge accounting are also required to test the effectiveness of the hedge relationship and define the sources of ineffectiveness. These tests can be qualitative or quantitative and they are performed prospectively at the hedge inception, at each reporting date and every time the circumstances of the hedge might have changed.

Hedge accounting is an accounting method that allows companies to modify the standard basis for recognizing gains and losses on hedging instruments and the exposure they are intended to hedge, with both being registered in the same accounting period. This procedure reduces income statement volatility that would otherwise arise if both elements were accounted for separately.

1.4 Commercial Banks in Kenya

Commercial banks in Kenya are lagging behind in the development of derivative markets this is due to commercial banks lacking a well-developed legal framework and trade liberalization culture (Chanzu & Gekara, 2016). Donna (2013) asserts that swaps are the most often used interest rate contracts while forwards are the most used currency contracts. The banks employ the use of forward contracts, swaps and spot contracts to hedge against foreign exchange and currency losses (Wanja, 2013). Ithai (2013), on the causes of slow adoption of derivatives in Kenya noted that only a few of the derivatives were being applied in Kenya. The exchange for derivatives was also not well developed. In such, they remained over-the-counter (OTC) and more familiar to brokers rather than institutions.

According to Mulwa and Kosgei (2016), most of the distressed bank in Kenya include chase bank, imperial bank and Dubai bank as the banks cannot meet their long-term financial obligations. Further the non-performing loans ratio among the banks has risen to 10 years high in the third quarter of 2016 as commercial banks have challenges in loan

default in a tough economic time. It is also asserted that some commercial banks are some of the institutions listed in Nairobi stock exchange that are undergoing restructuring as a turnaround strategy to deal with financial distress. Further some commercial banks have been closed and some are in the restructuring strategy to improve profit margins (Kavuva, 2018). This study therefore determined the effects of hedging securities on financial performance of commercial banks in Kenya, a case of selected commercial banks in Nairobi City County.

1.5 Statement of the Problem

The financial performance evaluation of commercial banks is essential to provide information about commercial bank's operating performance and their net worth. In spite of the fact that understanding the bank-specific factors and their influence on bank profitability and performance is crucial to the management of commercial banks, stakeholders and the central bank, and the government, commercial banks are exposed to face risks. Commercial banks are facing challenges in interest rate risk in their role as financial intermediaries and general changes in the cost of different currencies because of its effect on the payables and receivables denominated in foreign currencies. To cover their exposure, firms apply different instruments like SWAPs, forwards, options, and holding foreign currency-denominated rates among others (Taggart & McDermott, 2000). Commercial banks listed at the Nairobi Securities Exchange have faced various forex challenges following unstable exchange rates which saw the Kenyan currency depreciate against major currencies. Unstable forex saw some of the firms' record huge losses as this meant that to protect their exposure, they needed to implement various forex exposure management strategies.

The goal of any organization is to continuously improve performance and increase shareholders' value. Despite the important role of hedging as a risk management strategy aimed at increasing firm performance, there is however a lack of documentation on how hedging influences the firm performance since it's a reactive activity on risks faced by firms. It has further been asserted that it has no value to firms as investors increase value by holding well-diversified portfolios (Nilsson, 2017). Studies conducted in Kenya reviewed the determinants of hedging and characterize the nature of hedging in different

sectors such as non-financial firms (Mutembei, 2017). Furthermore, most of these studies reviewed focused on the effect of hedging on the market value measured by Tobin's Q proxy (Taillard, 2017). They have not addressed the strategies used in hedging securities on the financial performance of commercial banks, the effect of risk exposure in hedging securities, and the relationship between hedging securities and the financial performance of commercial banks. Based on this knowledge, forms a basis as to why there is a need to identify the effect of hedging securities on the financial performance of commercial banks in Nairobi City County Kenya. This, therefore, justifies why there was a need to identify the relationship between hedging securities and financial performance in commercial banks in Nairobi City County, Kenya.

1.6 Objectives of the Study

1.6.1 Purpose of the Study

The general purpose of the study was to establish effects of hedging securities on financial performance of commercial banks in Kenya with a case of selected commercial banks in Nairobi City County.

1.6.2 Specific Objectives

To achieve the general objective, the researcher applied the following specific objectives.

1. To establish the effect of hedging strategies on financial performance of commercial banks in Kenya.
2. To determine the effect of hedging risk exposure on financial performance of commercial banks in Kenya.
3. To investigate the effect of hedging relationship on financial performance of commercial banks in Kenya.

1.7 Research hypothesis

The study looked at the following hypothesis:

1. There is no significant relationship between the strategies used in hedging securities and the financial performance of commercial banks.

2. There is no significant relationship between the effect of risk exposure in hedging securities and the financial performance of commercial banks.
3. There is no significant relationship between hedging securities and the financial performance of commercial banks.

1.8 Significance of the Study

The findings of this study are significant to the policymakers in the banking industry. The study provides more information to the policymakers to be more informed when making decisions to support hedging securities given its importance in achieving the vision 2030. Secondly, the findings of this study are beneficial to stakeholders for providing a deeper understanding of the effect of hedging securities on the financial performance of commercial banks. This helps them in decision-making on matters concerning the improvement of their hedging securities.

The results of this study provide more knowledge on the effect of hedging securities on the financial performance of commercial banks that help all the stakeholders in the industry in understanding the importance of hedging securities and what effect they have on the financial performance of commercial banks. Therefore, the results of this study provide knowledge to both the government and stakeholders in the industry when making decisions on how to enhance hedging securities on the financial performance of commercial banks. Finally, the study contributes to the body of knowledge on the effect of hedging securities on the financial performance of commercial banks and act as a reference document for those who wish to carry out research in the field.

1.9 Scope of the Study

The study was conducted within the subject of study and geographical study area as follows: the study covered the effect of hedging securities on the financial performance of commercial banks in Nairobi City County Kenya. For this study, the researcher was limited to investigations to commercial banks of Kenya. This is because they regularly publish their financial information including notes to the reports. The research was being guided by a theoretical background of the Utility theory. The variables which were used comprised of hedging strategies, hedging risk exposure and hedging relationship in determining the effect on financial performance of commercial banks in Kenya.

1.10 Limitations of the study

These are data collection related challenges and ways of mitigating them. Not all banks likely use all the hedging practices therefore information for analysis was provided as a composite term. The researcher, faced challenges as expressed in the subsequent sections such as:

Difficulty in getting the required information from the sampled banks due to fear of giving out information to competitors, but the researcher informed the respondents that the information is for academic research.

Difficulty in getting cooperation and information from the staff of the sampled banks but was mitigated by having prior arrangements with the administration.

1.11 Delimitations of the study

The research was confined within the selected commercial banks in Nairobi City County. Research variables were hedging strategies, hedging risk exposure, and hedging relationship. The study was confined into the three main variables to determine the effects of hedging securities on financial performance of commercial banks in Kenya. The study focused on two theories including expected utility theory, and resource-based view theory. The target population was the selected commercial banks in Nairobi City County, Kenya and which comprises 51 commercial banks as per the Central Bank database 2019. And the respondents comprised of; General Manager, Marketing Manager, Foreign exchange Manager, Operation Bank Manager.

1.12 Assumptions of the Study

The basis of the study was on the assumption that there is no relationship between the effect of hedging securities and financial performance in commercial banks. and that respondents were transparent and honest in answering the questionnaires.

1.13 Theoretical Framework

A theoretical framework is a comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, books, and other sources relevant to a particular area of research. The theoretical literature review enumerates, describe, summarize,

objectively evaluate and clarify the previous research for the current study (Mugenda & Mugenda, 2013).

1.14 Conceptual Framework

A conceptual framework is a plain structure that comprises definite abstract blocks that symbolizes the observational, experimental, and systematic examination aspects of a process or scheme being envisaged (Mugenda & Mugenda, 2013). It provides an explicit explanation why the problem under study exists by showing how the variables relate to each other. The following is a graphical presentation that shows the input and output of the variables of the study.

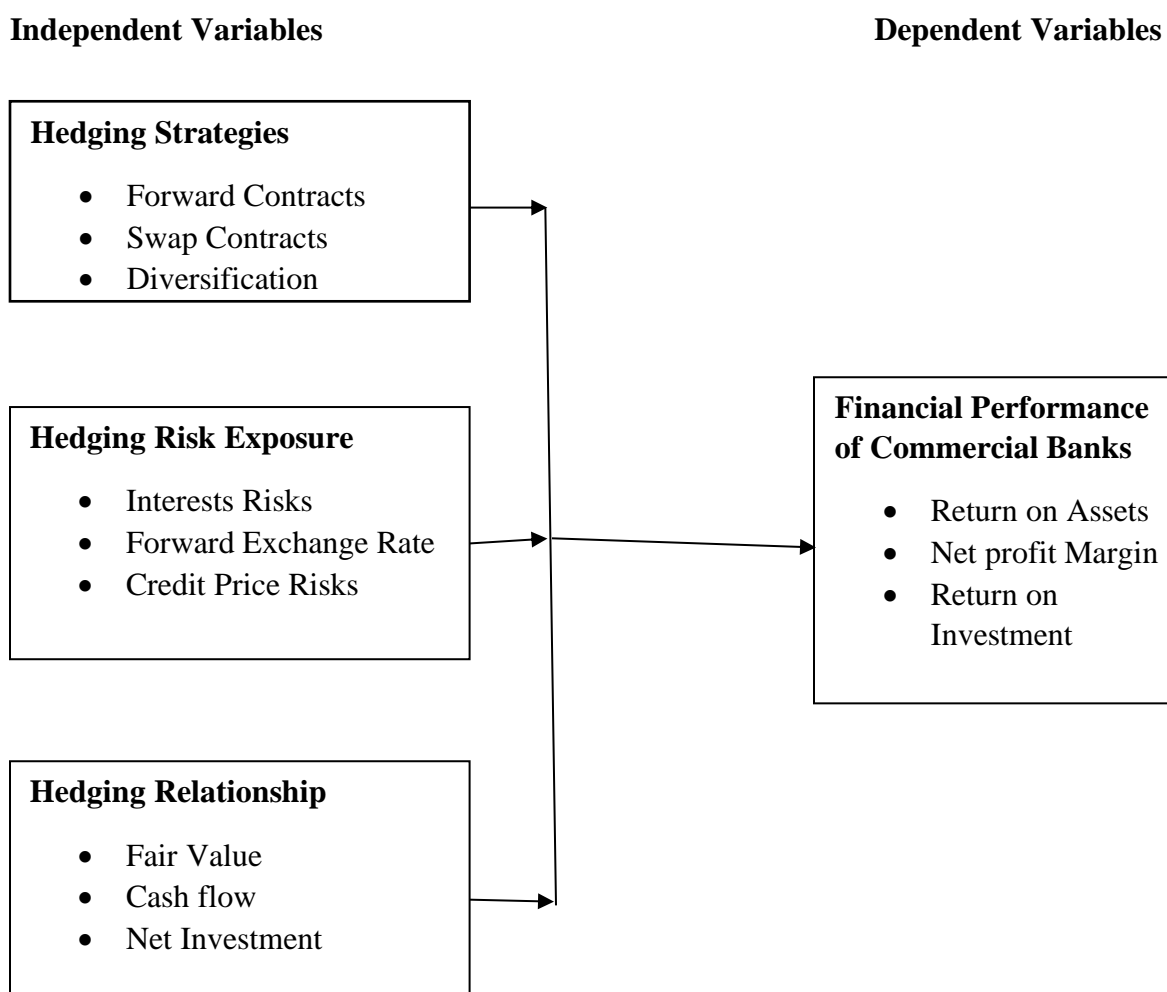


Figure 1.1: Conceptual Framework

Source: Researcher (2021)

As shown in figure 1.1 above, the independent variables had an influence on the dependent variables. The study determined the variable on hedging strategies to establish financial performance of commercial banks in Kenya through the indicators of forward contracts, swap contracts, and diversification. Forward contract was used to understand if commercial banks use the strategy to mitigate hedging securities. Swap contract strategy is a tool used by commercial banks to enhance financial performance. Diversification strategy is used to expand operations and reduce volatility of financial performance in commercial bank. The hedging strategy was a powerful tool of determining financial performance.

Hedging risk exposure was a variable that established the financial performance of commercial banks in Kenya through the indicators of interests risks, foreign exchange rate and credit price risk. Hedging interest rate risk approach was used to determined how banks apply the strategy to enhance financial performance in due course. Foreign exchange rate risk was used to determine its usage for mitigating hedging securities. Credit risk was used to determine how banks handles credit risk aspects to enhance financial performance.

Hedging relationship is a vital variable that was used to determine the effect on financial performance of commercial banks in Kenya. The indicators of hedging relationship include the fair value, determination of cash flow as well as net investment. Fair value hedge approach was established to determined how it is practiced in commercial bank to protect and enhance financial performance. Cash flow hedge was used to understand the interpretations and measures taken in supporting financial performance. Hedge of a net investment is an achievement in the financial year of a commercial bank. It was therefore important for the study to determine the hedging of net investment in commercial banks.

The financial performance of commercial banks in Kenya was established through the indicators of return on assets, net profit margin and return on investment. The financial performance of a commercial bank is determined by return on assets regardless of social standing. Net profit margin was established to understand how commercial banks are booming in the market. The return-on-investment approach is used to evaluate and measure the efficiency of an investment on financial performance in commercial banks.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presented introduction, theoretical review and empirical review. Herein, detailed literature is reviewed in line with the study objectives. Lastly, summary of the reviewed literature and the emanating knowledge gap was presented. The literature review was based on the effects of hedging securities on financial performance of commercial banks in Kenya with a distinct case of selected commercial banks in Nairobi City County.

2.2 Theoretical Literature Review

A theoretical literature review is a collection of interrelated concepts. It guides research to determine what things to measure, and what statistical relationships to look for (Chand, 2018). Sherestha and Upendra (2015) stated that theoretical review is the foundation on which the whole research project is established. They argued that theoretical review is a logically explained, defined and developed network of relations among the variables in the problem situation and documented through such procedures as literature review, observations and interviews. A good research should be grounded in theory (Mendoza, 2014). This study therefore was based on two theoretical foundations: Expected Utility theory and Resource Based View theory

2.2.1 Expected Utility theory

Expected Utility theory was discovered in 1950s by Leonard Jimmie Savage. The Expected Utility theory is used as a tool for analyzing situations in which individuals must make a decision without knowing the outcomes that may result from that decision (decision making under uncertainty). The expected utility theory defines a rational decision maker. They are completeness transitivity, independence, and continuity. The completeness assumes that an individual has well defined preferences and can always decide between any two alternatives. The theory has been widely used in literature to investigate the belief in individual preferences. As in the case of the manager's utility, the utility theory claims that hedging is purely based on a manager's risk profile and incentive to maximize their

utility (Ngaruro, 2013). A risk-taker manager will for example take a hedge whether he has a personal stake in the company or not, while a risk-averse manager will only hedge on behalf of the company if he stands to increase his value as opposed to hedging on his individually held investments. The decision to hedge by managers is also linked to information asymmetries and therefore, firms are likely to hedge when managers hold significant fractions of the firm. In an attempt to investigate how firms potentially increase shareholders' value it has been established that the firms or organizations that particularly hire highly incentivized managers perform better as managers have no conflict of interests as they are not a party to the firm's management (Brav, Jiang, Partnoy, & Thomas, 2006). Hedge fund managers are better placed to act as pure monitors as compared to an institutional investor. They are more like to generate positive returns and increase a firm's performance hence value to shareholders.

Since the theory deals with the analysis of situations where individuals must decide without knowing which outcomes match results from that decision, this is decision-making uncertainty. The theory is therefore very relevant in this study as it may help to understand how strategies hedging, risk exposure in hedging securities, and the relationship of hedging and financial performance can be handled in commercial banks and how they can affect the performance of commercial banks.

2.2.2 Resource Based View theory

Resource based view theory was postulated by Birger Wernerfelt, Prahalad and Hamel in the 1990s. The resource-based view theory is a managerial framework used to determine the strategic resources a firm can exploit to achieve sustainable competitive advantage. Resources of the right quality and quantity are important for strategy implementation (Aosa, Machuki and Aosa, 2011). Resource based view of the firm starts with the assumption that the desired outcome of managerial effort within the firm is a sustainable competitive advantage (SCA). Achieving a SCA allows the firm to earn economic rents or above-average returns. In turn, this focuses attention on how firms achieve and sustain advantages. The resource-based view contends that the answer to this question lies in the possession of certain key resources, that is, resources that have characteristics such as value, barriers to duplication and relevance. A SCA can be obtained if the firm effectively

deploys these resources in its product-markets. Therefore, the RBV emphasizes strategic choice, charging the firm's management with the important tasks of identifying, developing and deploying key resources to maximize return.

Resources comprise three distinct sub-groups, namely tangible assets, intangible assets and capabilities. Tangible assets refer to the fixed and current assets of the organization that have a fixed long run capacity. Intangible assets include intellectual property such as trademarks and patents as well as brand and company reputation, company networks and databases (Williams, 1992). Capabilities have proved more difficult to delineate and are often described as invisible assets or intermediate goods (Itami, 1987). Essentially capabilities encompass the skills of individuals or groups as well as the organizational routines and interactions through which all the firm's resources are coordinated (Grant, 1991).

2.3 Empirical Review

Empirical research review refers to any research where conclusions of the study is strictly drawn from concretely empirical evidence, and therefore "verifiable" evidence. It is a way of gaining knowledge by means of direct and indirect experience (Mugenda & Mugenda, 2013). The study reviewed the variables in connection with existing literature from other researchers in expanding the body of knowledge.

2.3.1 Effect of Hedging Strategies on financial performance of commercial banks in Kenya

In the effect of Hedging Securities and financial performance, hedging strategy management is an integral component of the financial management of firms more especially those engaged in international trade because of their exposure to foreign currency price fluctuations. This is because exchange rate fluctuations affect the value of firms differently from the share prices and return on investments by shareholders (Cao, Goldie, Liang, and Petrsek 2016; Ferson, & Mo. 2016; Grambovas & McLeay, 2006). Ferson, and Mo. (2016), noted that movement in the general exchange rate affects the reporting of financial statements for firms operating in multiple markets as they convert one currency transaction into another for financial statement preparation. However, to

minimize the effect of general changes in foreign currency prices, companies cushion themselves through the adoption of several mechanisms. These actions are aimed at minimizing the exposure thus improving the overall financial returns on investment.

Taiwo and Adesola, (2013) established that changes in the cost of different currencies directly affect the prevailing prices of commodities on the domestic market hence the overall firm profitability. It also affects the volume of goods transacted as it influences the purchasing power of consumers. Gachua, (2011), affirms that foreign exchange rate exposure affects the overall financial returns recorded by organizations. It was also asserted that risks arise whenever an organization has cash obligations and assets to be collected in the future (Schmidt, 2010). And the applicable hedge accounting mechanics vary depending on the type of hedging relationship; however, there are three types of hedging relationships.

A forward contract (FC) is an agreement to buy or sell a security currency or commodity at a pre-specified price known as the forward price (Hillier & Titman, 2012). Forward cover can be settled through delivery, cancellation, extension, and early delivery, (Hillier, Grinblatt & Tittman, 2012). A swap refers to the exchange of liabilities denominated in a different currency between two parties who agree to exchange specific amounts of two different currencies at the outset in their home currency (Adetayo & Oladejo 2004; Varvara 2014; Taiwo, & Adesola, 2013). At maturity, the person or firm with the long position pays the forward price to the person with the short position, who in turn delivers the asset underlying the forward contract. Forward cover can be settled through delivery, cancellation, extension, and early delivery. Banks usually act as intermediaries and charge a commission for the same. Forward contracts are examples of financial hedges used by firms to effectively stabilize current operating cash flows.

The effective and efficient use of risk trading has been regarded as the best form of risk management. Adetayo and Oladejo (2004) looked at how firms managed their fluctuations in foreign currency prices among selected commercial banks in Nigeria. The study found out that the spot transaction technique was more appropriate in managing a firm's exposure to general changes in the exchange rate. Spot trades are trades that involve an immediate exchange. This includes trades such as purchases of stock, purchases of gold, and

exchanges of one currency for another. Spot transactions are also the fundamental building blocks for valuing and risk managing forward and option positions (Taiwo, & Adesola, 2013).

Swap contracts are ideal for banks that should transact in foreign currencies. Hillier and Titman (2012) define a swap contract as an agreement between two investors to periodically exchange the cash flows of one security for the cash flows of another. Currency Swap can be treated as a series of forward contracts used for hedging long-term exposures (Adetayo, 2013).

The buyer and seller exchange fixed or floating rate interest payments in their respective swapped currencies over the term of the contract. At maturity, the principal amount is effectively re-swapped at a predetermined exchange rate so that the parties end up with their original currencies. The advantage is that swaps do not only hedge against exchange rate risks but also floating interest rate risks (Edelen, 2014).

This is related to the effect of hedging securities on the financial performance of selected commercial banks and is applicable in explaining how the independent variables (strategies, exposure of hedging securities, and the relationship between hedging securities) and dependent variable (financial performance of the bank).

2.3.2 Effect of Hedging risk exposure on financial performance of commercial banks in Kenya.

Financial risks for organizations may consist of unexpected changes in foreign exchange rates, interest rates, and commodity prices. Taggert and McDermott (2000) assert that firms engaged in business across national boundaries are exposed to risks arising from general changes in the cost of different currencies because of its effect on the payables and receivables denominated in foreign currencies. To cover their exposure, firms apply different instruments like SWAPs, forwards, options, and holding foreign currency-denominated rates among others.

Ahmed, Azevedo, and Guney (2014) established that the value of firms was affected by different hedging strategies. While, according to Adebayo, Adetayo, and Oladejo (2004) application of hedging strategies helps financial institutions manage their position and

hence improve overall financial results. Further, it was also established that foreign exchange risk management promoted better overall financial results of exporting firms because it enables them to improve on financial results (Cao, Goldie, Liang, and Petrsek 2016).

Were (2001) established that servicing of debt among companies in foreign currency did not affect their growth adversely debt servicing does not appear to affect growth adversely but has some crowding-out effects on private investment. However, Omagwa (2005), Gachua (2011), and Mwaniki (2012) on exposure to changes in the general currency prices established that all commercial banks practice hedging and firms were negatively affected by changes in the foreign currency prices.

To cover their exposure, firms apply different instruments like SWAPs, forwards, options, and holding foreign currency-denominated rates among others even though foreign exchange rate risk has been justified with the argument that exchange rate risk represents a major source of risk, due to its higher volatility, when compared to other financial prices (Bartram, 2005). Further, only about 5.5% of the firms are significantly exposed to exchange rate risk (Jorion2010), several other studies were carried out. For firms on the stock market in the US, researchers have applied various specifications of Jorion's framework to investigate the significance of exposure for particular samples of industries or firms, including firms (Allayannis & Ofek, 2001).

Gongera et al. (2013) assert that the financial risk involved includes credit risks, interest rate risks, and liquidity risks. Further established that a significant, negative correlation existed between liquidity risk and firms' profitability, and a strong, positive correlation also existed between firms' efficiency of risk management and profitability. Keffala et al. (2011) indicate that there are increases in total return risk and unsystematic risk, but the use of forwards and futures decreases total return risk.

A risk-mitigating strategy that is used by firms is hedging, which reduces the risk of future price movements that affect a firm adversely if not well managed (Kokkonen, & Suominen, 2015). Hedging is done by a firm or individual to protect against a price change that would otherwise negatively affect profits (Cao, Goldie, Liang, and Petrsek, 2016). It provides relatively inexpensive and highly liquid positions similar to those obtained with diversified stock portfolios (Cao, Goldie, Liang, and Petrsek 2016). To hedge a firm and use a wide

range of financial instruments, including forward agreements, futures contracts, options, or swaps, to achieve their hedging goals. Therefore, forward agreements, futures contracts, options, and swaps are commonly used in hedging interest rate risks, foreign exchange risks, and commodity price risks. The effect of hedging on the firm performance depends on the size of the firm among other factors. This study helped to understand how hedging affects the performance of commercial banks hence the researcher understood how the hedge securities affect the performance of banks considering forward contracts, swap contracts are used in hedging goals.

2.3.3 Effect of Hedging Relationship on financial performance of commercial banks in Kenya.

Ahmed et al. (2014) established that different hedging relationships affected the value of a firm among organizations outside the financial industry in the United Kingdom. The study considered several hedging strategies including: derivatives and maintaining foreign currency denominated accounts. The study applied data collected from financial records over a period of seven years starting 2005 to the year 2012. The focus of the study was on hedging strategies, interest rates differentials together with commodity price risks with futures, among other. From the findings, it was shown that different firms applied different exchange rate fluctuation changes. There were no preferred hedging strategies instead the firms applied them in accordance with their overall strategy (Ahmed, Azevedo & Guney, 2014).

Sivakumar and Sarkar (2014) examined how different organizations cushioned themselves from fluctuations in foreign currency in India and how they affected overall financial results of firms. The research findings showed that the studied firms were actively involved in cushioning themselves against possible risks arising from transacting in different currencies; SWAPS, forwards as well as various types of options for instance; put, cross currency, call and lastly range barrier options. Ahmed et al. (2014) also examined the relationship between cushioning against interest rate fluctuations among firms. The findings indicated that cushioning against adverse effects of interest rate fluctuations helped stabilize the overall financial results of firms. Chiira (2009) put on the suggestion that the identification of the specific currencies that possess greater risks is a strategy that can be used to effectively manage forex exchange risk exposure. This is because it enables

quick analysis of all inherent risks hence enabling firms to appropriately devise strategies aimed at mitigating against such identified risks. This risk is inevitable especially where firms deal with foreign currencies. It would be absolutely beneficial if affected firms can undertake to adopt adequate forex risk management strategies in order to mitigate against negative foreign exchange rates movements on the firm (Jamal & Khalil, 2011). The usage of hedging techniques is widely adopted by many firms to manage forex risk. Hedging techniques can be classified into two groups including: internal techniques that comprises of various techniques aimed towards the attainment of a reduction or prevention of the arising position of exposure and external techniques that towards the minimization of exchange losses that are as a result of existing exposure.

According to Giddy and Dufey (2012), various financial instruments can be used by firms to carry out hedging. The various techniques include: option, issue of foreign debt, futures, forwards and swaps. Hedging is in turn broadly classified into both operational and financial hedging. Financial hedging is more cost-effective in comparison to operational hedging as it does not involve major resources redeployment in other countries. In essence, options, currency futures, swaps and forward contracts are examples of financial hedges used by firms to effectively stabilize current operating cash flows. Contractual hedging on the other hand uses financial contracts so as to hedge against forex exposure through futures, options, forward contracts and swaps (Nebart, 2010). Indicators fair value, Cash flow and net investment were determined in various studies. Fair value refers to a hedge of the exposure to changes in a recognized asset or liability or an unrecognized firm commitment, or a component of any such item, that is attributable to a particular risk and could affect profit or loss. Fair value hedges are hedges that reduce the risk of loss from declines in an asset's value. A fair value hedge is paired with the underlying asset it is protecting. When the value of the underlying asset falls, the value of the hedge goes up and reduces the loss in value to the asset owner.

Cash flow hedge refers to a hedge of the exposure to variability that is attributable to a particular risk associated with all, or a component of, a recognized asset or liability or a highly probable forecast transaction, and could affect profit or loss (Ferson, & Mo. 2016). Accounting standards require companies to record the fair value of each cash flow and the

financial derivative intended to cover it at each reporting date. In that way, changes in the fair value of the hedged item and hedging instrument are recognized in the same period.

A hedge of a net investment in a foreign operation refers to a hedge of the foreign currency risk of an unrecognized firm commitment that may be accounted for as a fair value hedge or as a cash flow hedge. A fair value hedge is a hedge of the exposure to changes in fair value of a recognized asset or liability or an unrecognized firm commitment, or a component of any such item, that is attributable to a particular risk and could affect profit or loss (Edelen, Ince, & Kadlec 2016). Fair value exposures arise from existing assets and liabilities, including firm commitments. For example, fixed-rate financial assets and liabilities have a fair value exposure to changes in market rates of interest and changes in credit quality. This is in support of what has been opined that hedging securities strategies and a firm's value have a positive relationship (Ferson, & Mo. 2016).

2.4 Summary of Reviewed Literature

This section of the chapter covered the theoretical literature and empirical reviews. It entailed the relationship between the theories guiding the study. The empirical literature review was revised based on the study objectives in relation to other existing studies. There are numerous studies that were undertaken by other researchers and were compared and contrasted to make an informed decision on the subject matter of this study. The researcher carefully searched for the study knowledge gap.

2.5 Knowledge Gap

The literature reviewed confirms increased exposure to risks arising from general changes in the cost of different currencies because of its effect on the payables and receivables denominated in foreign currencies. For instance, a study by Taggert and McDermott, (2000); Ayturk, Gurbuz, and Yanik, (2016); Gilje and Taillard, (2017) revealed that to cover risks exposure; firms may need to apply different instruments. The investigation affirmed that the lack of incorporation of instruments like Swaps, forwards, options, and holding foreign currency-denominated rates undermined the effective hedging influence on firm performance.

Nilsson, (2017), asserted that there is however a lack of documentation on how hedging influences the firm performance since it's a reactive activity on risks faced by firms and that hedging influence has no value to firms as investors increase value by holding well-diversified portfolios. Adoption of hedging influence eliminate duplication of efforts and resource wastage by harmonizing existing standards and legislation relating to strategies, and risk exposure in hedging securities. Kiptoo, (2018) had studied the nature of hedging in different sectors such as non-financial firms whereby reviewed the effect of hedging on the market value. The reviews showed the impact of strategies on the firms' performance especially on firms' value, but the studies fail to show whether the impacts are immediate or delayed. When there is risk exposure in hedging securities on financial performance and not effectively identified, assessed, and eliminated or minimized, the relationship between hedging securities and financial performance is disrupted.

The literature reviewed showed that even though there are records to show the impact of strategies on the firms' performance especially on firms' value, the studies fail to show whether the impacts are immediate or delayed. Further, there is no clearly documented literature available showing how the introduction of strategies used in hedging securities affects financial performance in commercial banks, the effect of risk exposure in hedging securities affects financial performance in commercial banks and the relationship between hedging securities and financial performance of commercial banks in Nairobi city county. That is why this study sought to establish the strategies used in hedging securities on financial performance; determine the effect of risk exposure in hedging securities on financial performance; and investigated the relationship between hedging securities and the financial performance of commercial banks in Nairobi City County, Kenya.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter discussed the methods to be used in undertaking the study. It contained research design, target population, sample size and sampling procedure. It also contained research instruments, data collection procedures and data analysis used.

3.2 Research Design

The study adopted descriptive research design to accurately portray the respondents in the various strata in the target population. The purpose of descriptive research design was to determine and report the way things are and produce statistical information about aspects of financial performance of commercial banks in Kenya. Research design is a systematic model that enables the researcher to draw conclusions concerning casual relationships amongst the variables under investigation (Kothari, 2008). Further, descriptive design can be used to collect information about people's attitudes, opinions or habits. The design was used to allow researcher gather, present and interpret information for this research. Quantitative approach was employed.

3.3 Research Site and Rationale

The study was conducted to investigate effect of hedging securities on financial performance of commercial banks in Kenya. A case of selected commercial banks in Nairobi City County. The findings of the study were used to determine hedging strategies, hedging risk exposure and hedging relationship on financial performance of commercial banks in Kenya. Informed decisions and conclusive remarks were made based on the verifiable and provable findings.

3.4 Target Population

McLead (2014) defined target population as the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. The target population usually has varying characteristics and it is also known as the theoretical population. The target population of the study involved the selected commercial banks in Nairobi City County, Kenya which include Kenya Commercial bank, Cooperative bank of Kenya,

Barclays bank of Kenya and Bank of Africa. This study target population operated under similar conditions and was easily accessible and easy to collect data and analyze.

Table 3.1 Target Population

		Target		Cumulative
	Grouping	Population	Valid Percent	Percent
Valid	Kenya	120	34.3	34.3
	Commercia l bank			
	Cooperativ e Bank	40	11.4	11.4
	Barclays bank of Kenya	90	25.7	25.7
	Bank of Africa	100	28.6	28.6
	Total	350	100.0	100.0

Source: Researcher (2021)

3.5 Study Sample

3.5.1 Sampling Procedure

The study used stratified random sampling procedure. In this sampling technique, the population was divided into smaller groups known as strata. The strata comprised of the selected commercial banks in Nairobi city County. In addition, the respondents were randomly sampled from each stratum. The stratum reduced the amount of tension and suspense of respondents towards the study hence provided honesty and reliable information. Orodho (2014) noted that stratified random sampling method involves dividing research population into homogenous sub group and then taking the simple random sample in each sub group. Orodho continued to say that the sample is selected in

such a way that certain sub groups in the population are represented in the sub group in proportions to their number in population.

3.5.2 Study Sample Size

The study adopted Nassiumas (2014) formula to calculate the size of the sample as illustrated below;

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

C= Coefficient variation (0.5)

N= Total number of populations

e= is the level of precision (0.05)

n =Sample Size

$$n = \frac{350 * 0.5^2}{0.5^2 + (350-1) * 0.05^2} = 87.5 / 1.1225$$

$$(87.5 / 1.1225) = 78$$

$$n = 78$$

n= Sample Size

Therefore n = 78 Sample Size

Table 3.2 Sample Size

		Target	Sample	Valid Percent	Cumulative
Valid	Grouping	Population	Size	(%)	Percent (%)
	Kenya	120	27	26.7	26.7
	Commercial bank				
	Cooperative bank of Kenya	40	9	11.5	11.5
	Barclays bank of Kenya	90	20	25.6	25.6
	Bank of Africa.	100	22	36.2	36.2
	Total	350	78.0	100.0	100.0

Source: Researcher (2021)

3.6 Data Collection

3.6.1 Data Collection Instruments

Data was collected from the selected commercial banks in Kenya where the respondents were issued with structured questionnaires to enhance the process of data collection. The structured questionnaire was subdivided into six main sections. Section one was collection of demographic information of the respondents. The rest of the sections collected data based on the independent and dependent variables of the study. Questionnaire as a method of data collection was preferred over the other methods due to its flexibility and easy to administer to the respondents.

3.6.2 Pilot Testing of Research Instruments

Pilot study was conducted to determine the feasibility of conducting a large-scale study. The pilot study helped to inform the researcher on the strength or weakness of the study. The prior testing was established to assist in determining accuracy, clarity and suitability of the research instrument. This involved 35 respondents (10% of the target population) who filled the questionnaires and its accuracy was tested. The 35 respondents were not involved in the final study to ensure non-compromise of the research data. The respondents helped to estimate the time needed to fill the questionnaires and identified errors to be corrected. Pilot of research instruments was done one week before actual data collection exercise and helped the researcher to make informed decision on what works and what doesn't. Research assistants were engaged to carry out the exercise.

3.6.3 Instrument Validity

Mugenda and Mugenda (2013) showed that validity is the degree through which results obtained from data analysis represent the phenomenon under study. To ensure validity of the study, the researcher conducted a pilot study through issuing a 10% of questionnaires to the study target population, other than the actual sampled respondents to allow for projection of the outcome of the study. This exercise was conducted one week before the actual sampled respondents and research assistants were engaged in the exercise.

3.6.4 Instrument Reliability

Reliability is a measure of the degree to which a research instrument yields consistent results after repeated trials. Reliability of the instrument was improved through revision of the questionnaire that were used in the prior testing on the 35 selected respondents that were not included in the final study. Mugenda and Mugenda (2013) pointed out that reliability is a measure of the degree to which a research instrument yields consistent results after repeated trials. The data obtained from the pilot study was used to ascertain the appropriateness and relevance of the questionnaire to the study. For effectiveness and efficiency, the exercise was conducted one week before the actual data collection and research assistants were engaged to carry out this activity.

3.6.5 Data Collection Procedures

The researcher obtained a research authorization letter from Africa Nazarene University. Thereafter, research permit was obtained from the National Commission for Science,

Technology and Innovation (NACOSTI). Research assistants were engaged in administering questionnaires to the respondents. Data was then analyzed through SPSS version 25. The output was presented in table form, explained and summarized in percentages, frequencies, descriptive statistics and Pearson correlation coefficient.

3.7 Data Analysis and Presentation

Data analysis began upon inspection of data collected to identify spelling errors, wrong responses and blank spaces left by the respondents. The data collected was coded and analyzed mainly by the use of descriptive analysis and inferential statistics to test relationship between dependent and independent variables through means of SPSS version 25 program and presented using tables from frequencies and percentages of responses.

Quantitative analysis was used and involved statistical analysis and interpretation of data by use of inferential statistics that relied on numerical values, which was computed. Data was coded and frequency tables were produced as well as other analysis processes with the help of SPSS version 25 computer program. This produced quantitative data values that were interpreted for meaning qualitatively and quantitatively. The data was synthesized into coherent description of what was found out. Correlation analysis was run and correlation coefficients (R) values were provided for understanding of the relationship that existed between the variables concerned. Qualitative analysis was also used to deduce meaning from written literature by the respondents.

3.8 Ethical Consideration

Informed consent was sought before administering the questionnaire and interviews scheduled. Confidentiality and privacy were observed by not having had to identify information on the questionnaire and allowed the respondents to fill the questionnaire in privacy. The study protected and kept information confidential and, before revealing any information, the consent of the respondent would be sought first.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter discussed major findings of the research project. The researcher utilized a quantitative approach to analyze data. The output was presented in table form, explained and summarized in percentages, frequencies, descriptive statistics and Pearson correlation coefficient.

4.2 Reliability Results

The study sought to ascertain the reliability of the research instrument. The results are as shown in table 4.1

Table 4.1 Reliability Results

Variable Alpha	N of Items Alpha	Cronbach's
Hedging strategies	4	.700
Hedging risk exposure	4	.742
Hedging relationship	4	.726
Financial performance of commercial banks	4	.808

Source: Researcher (2021)

The analysis comprised of 53 questionnaires that were successfully filled and returned by the respondents. Mugenda and Mugenda (2013) indicated that a coefficient of 0.6 as acceptable reliability coefficient while Cooper and Schindler (2010) maintaining that the alpha coefficient values were described as excellent (0.93–0.94), strong (0.91–0.93), reliable (0.84–0.90), robust (0.81), fairly high (0.76–0.95), high (0.73–0.95), good (0.71–0.91), relatively high (0.70–0.77), slightly low (0.68), reasonable (0.67–0.87), adequate (0.64–0.85), moderate (0.61–0.65), and satisfactory (0.58–0.97). From the table above it was observed that the individual Cronbach's alpha coefficients for each variable individually ranged from 0.700 to 0.808 revealing the high degree of reliability. Since all

the reliability results exceeded 0.70 threshold, the internal consistency reliability of the measures used for the study was considered very reliable to sufficiently measure the study variables.

4.3 Response Rate

The researcher sought to establish the response rate of the respondents. The results are as shown in table 4.2 below.

Table 4.2 Response Rate

	Grouping	Frequency	Valid Percent	Cumulative Percent
Valid	Response	53	67.9	67.9
	Non-Response	25	32.1	32.1
	Total	78	100.0	100.0

Source: Researcher (2021)

The researcher prepared 78 questionnaires for distribution to the respondents. From the table 4.2 the response rate obtained from the respondents was 53 which represented 67.9%. 25 out of 78 respondents did not respond to the questionnaires which represented 32.1%. Nachmias (2010) observed that a response rate exceeding 50% was believed to be sufficient for analysis and therefore a response rate of 67.9% was considered to be very good for this study.

4.4 Demographic Information of Respondents

The basic and general information of respondents concerning their gender, age, time served in commercial banks in Nairobi, academic qualifications and their respective banks of service were presented in this section.

4.4.1 Gender of Respondents

The study sought to establish the gender of the respondents. The results are as shown in table 4.3 below.

Table 4.3 Gender of Respondents

Grouping		Frequency	Valid Percent	Cumulative Percent
Valid	Male	33	62.2	62.2
	Female	20	37.8	100.0
	Total	53	100.0	

Source: Researcher (2021)

According to table 4.3 above, the number of male who responded to the questionnaires was 33 representing a response rate of 62.2% while the number of female who responded to the questionnaires was 20 representing a response rate of 37.8%. The number of male respondents therefore was greater than that of female respondents. This entails that majority of the respondents who took part in the data collection process and who work in the commercial banks in Kenya are male as opposed to their female counterparts may be because of the male dominated society.

4.4.2 Age of the Respondents

The study sought to ascertain the age of the respondents. The results are as shown in table 4.4 below.

Table 4.4 Age of the Respondents

		Frequency	Valid Percent	Cumulative Percent
Valid	below 25	5	9.4	9.4
	25-30	7	13.2	22.6
	31-35	8	15.1	37.7
	36-40	9	17.0	54.7
	41-45	8	15.1	69.8
	46-50	6	11.3	81.1
	51-55	5	9.4	90.6
	above 55	5	9.4	100.0
	Total	53	100.0	

Source: Researcher (2021)

Table 4.4 above, 9.4% of the respondents were below 25 years, 13.2% of the respondents were age between 25-30 years. Age between 31-35 years were 15.1% while 17.0% of the respondents were age between 36-40 years. 41-45 years of the respondents were 15.1% while 11.3% were age between 46-50 years. 9.4% of the respondents were age between 51-55 years while those respondents above 55 years were 9.4%. This indicated that the respondents were mature enough to provide honest and relevant information.

4.4.3 Time served in commercial banks in Nairobi

The study sought to establish the time served in commercial banks in Nairobi by the respondents. The results are as shown in table 4.5 below.

Table 4.5 Time served in commercial banks in Nairobi

Time in Years		Frequency	Valid Percent	Cumulative Percent
Valid	Below 2	11	20.8	20.8
	2-5	7	13.2	34.0
	6-9	13	24.5	58.5
	10-13	3	5.7	64.2
	14-17	2	3.8	68.0
	18-21	5	9.4	77.4
	22-25	8	15.1	92.5
	Over 26	4	7.5	100.0
	Total	53	100.0	

Source: Researcher (2021)

As shown in table 4.5 above, respondents who had served in commercial banks in Nairobi county for below 2 years were 20.8%. Those who had served for between 2-5 years were 13.3%. Respondents who had served for between 6-9 years were 24.5%. 5.7% of the respondents had served for between 10-13 years. Respondents who had served for between 14-17 years were 3.8%. 9.4% of the respondents had served in commercial banks in Nairobi for between 18-21 years. There were 15.1% of the respondents who had served between 22-25 years. 7.5% of the respondents had served in commercial banks in Nairobi for over 26 years. The majority of the respondents were at 24.5% who had served in commercial banks in Nairobi for between 6-9 years.

4.4.4 Highest Academic Qualification

The study sought to establish the highest academic qualifications of the respondents. The results are as shown in table 4.6 below.

Table 4.6 Highest Academic Qualification

Qualification		Frequency	Valid Percent	Cumulative Percent
Valid	KCPE	1	1.9	1.9
	KCSE	6	11.3	13.2
	Diploma	4	7.5	20.7
	Degree	32	60.4	81.1
	Master Degree	8	15.1	96.2
	PhD	1	1.9	98.1
	None	1	1.9	100.0
	Total	53	100.0	

Source: Researcher (2021)

Table 4.6 above, 1.9% of the respondents were KCPE holders, 11.3% were KCSE holders, 7.5% were Diploma holders, 60.4% were Degree holders, 15.1% were Master Degree holders, while 1.9% were PhD holders. There were 1.9% response rate which had none of the academic qualifications. The majority of the respondents therefore were degree holders at 60.4% representing 32 respondents.

4.4.5 Name of Commercial Bank Serving

The study sought to determine the name of commercial banks respondents are serving. The results are as shown in table 4.7 below.

Table 4.7 Name of Commercial Bank Serving

Commercial Bank		Frequency	Valid Percent	Cumulative Percent
Valid	Kenya Commercial Bank.	15	28.3	28.3
	Cooperative Bank of Kenya.	20	37.7	66.0
	Barclays Bank of Kenya.	8	15.1	81.1
	Bank of Africa.	10	18.9	100.0
	Total	53	100.0	

Source: Researcher (2021)

According to table 4.7 shown above, 28.3% of the respondents serve at Kenya commercial bank in Nairobi County. 37.7% of the respondents serve at Cooperative bank of Kenya in Nairobi County. Barclays bank of Kenya serving respondents were 15.1%. 18.9% of the respondents were serving at the bank of Africa. Therefore, the majority of the respondents were serving at Cooperative bank of Kenya at 37.7%.

4.4.6 Hedging Strategies

The study sought to get answers on the awareness of the respondents on the hedging strategies as a key variable affecting financial performance of commercial banks in Nairobi city County. The responses from the respondents were logged on a five-point Likert scale anchored by Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5). Table 4.8 displays the responses to statements regarding hedging strategies.

Table 4.8 Hedging Strategies

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
My commercial bank uses forward contracts strategy to mitigate hedging securities.	9(17.0)	4(7.5)	2(3.8)	17(32.1)	21(39.6)	3.6981	1.48822
Swap contract strategy is a tool used by my commercial bank to enhance financial performance.	9(17.0)	3(5.7)	4(7.5)	19(35.8)	18(34.0)	3.6415	1.44241
Diversification strategy is used to expand our operations and reduce volatility of financial performance in my commercial bank.	16(30.2)	9(17.0)	4(7.5)	11(20.8)	13(24.5)	2.9245	1.61542
My commercial bank uses put option strategy to mitigate hedging securities appropriately.	15(28.3)	14(26.4)	2(3.8)	9(17.0)	13(24.5)	2.8302	1.60211
Composite Mean and Standard Deviation						3.2736	1.53704

Source: Researcher (2021)

All measures were logged on a five-point Likert scales anchored by Strongly Disagree (1) to Strongly Agree (5). As illustrated in the table 4.8 above, response rate of 71.6% of the respondents agreed to the statement position that my commercial bank uses forward contracts strategy to mitigate hedging securities. This represented 32.1% of the respondents agreeing while 39.6% strongly agreed. 17.0% strongly disagreed and 7.5% disagreed with the statement position. There were 3.8% of the respondents who were neutral with the position of the statement. The response statement position represented a mean score of 3.6981 with a standard deviation of 1.4882. This was an indication that the statement was largely agreed and accepted by the respondents.

Responses at 69.8% from respondents agreed to the statement position that Swap contract strategy is a tool used by my commercial bank to enhance financial performance. This represented 34.0% strongly agreeing and 35.8% agreed. 17.0% strongly disagreed while 5.7% disagreed with the statement position. There were 7.5% respondents who were neutral with the position of the statement. The response statement position represented a mean score of 3.6415 and standard deviation of 1.4424. This was an indication that the statement was largely agreed and accepted by the respondents.

Responses at 47.2% disagreed to the statement position that diversification strategy is used to expand our operations and reduce volatility of financial performance in my commercial bank. This represented 30.2% strongly disagreeing and 17.0% disagreeing. 45.3% of the respondents agreed to the statement position representing 20.8% agreeing and 24.5% strongly agreeing. There were 7.5% respondents who were neutral to the statement position. The response statement position represented a mean score of 2.9245 and a standard deviation of 1.6154 indicating that the statement position was nearly agreed and disagreed on equal measure.

Responses at 54.7% disagreed to the statement position that my commercial bank uses put option strategy to mitigate hedging securities appropriately. This was a representation of 28.3% strongly disagreeing and 26.4% disagreeing. 41.5% agreed to the statement position representing 17.0% agreeing and 24.5% strongly agreeing. There were 3.8% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 2.8302 with a standard deviation of 1.6021. This showed that

the statement position was not largely agreed and accepted by the respondents. The composite mean of the hedging strategies was 3.2736 with a standard deviation of 1.53704. This indicated that hedging strategies was largely agreed by respondents as a variable influencing financial performance of commercial banks in Kenya.

4.4.7 Hedging Risk Exposure

The researcher sought to get answers on the levels of understanding on hedging risk exposure on financial performance of commercial banks in Nairobi city County. The responses from the respondents were logged on a five-point Likert scale anchored by Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5). Table 4.9 displays the responses to statements regarding hedging risk exposure.

Table 4.9 Hedging Risk Exposure

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Hedging interest rate risk approach is applied by my bank to enhance financial performance in due course.	10(18.9)	9(17.0)	4(7.5)	18(34.0)	12(22.6)	3.2453	1.46636
My commercial bank settles the foreign exchange rate risks in mitigating hedging securities.	19(35.8)	11(20.8)	2(3.8)	13(24.4)	8(15.1)	2.6226	1.54704
Credit risk is avoided by my commercial bank to enhance financial performance.	20(37.7)	15(28.3)	2(3.8)	6(11.3)	10(18.9)	2.4528	1.55125
My commercial bank realizes the inflation risk patterns and adjust appropriately beforehand.	15(28.3)	14(26.4)	2(3.8)	9(17.0)	13(24.5)	2.8302	1.60211
Composite Mean and Standard Deviation						2.7877	1.54169

Source: Researcher (2021)

The table 4.9 above, response rate of 56.6% from respondents agreed to the statement position that hedging interest rate risk approach is applied by my bank to enhance financial performance in due course. This represented 34% of the respondents agreeing while 22.6% strongly agreeing. Responses at 35.9% of the respondents disagreed to the statement position. This represented 18.9% strongly disagreeing and 17.0% disagreeing with the statement position. There were 7.5% of the respondents who were neutral with the position of the statement. The response statement position represented a mean score of 3.2453 with a standard deviation of 1.4664. This was an indication that the statement was nearly agreed and accepted by the respondents. Responses at 56.6% of the respondents disagreed to the statement position that my commercial bank settles the foreign exchange rate risks in mitigating hedging securities. This represented 35.8% strongly disagreeing and 20.8% disagreeing. Responses at 39.6% of the respondents agreed to the position of the statement represented 24.5% strongly agreeing and 15.1% agreeing. There were 3.8% respondents who were neutral to the position of the statement. The response statement position represented a mean score of 2.6226 with a standard deviation of 1.5470. This indicated that the respondents did not agree with the statement. Responses at 66% of the respondents disagreed to the statement position that credit risk is avoided by my commercial bank to enhance financial performance. This represented 37.7% strongly disagreeing and 28.3% disagreeing. Responses at 30.2% of the respondents agreed to the statement position representing 11.3% agreeing and 18.9 strongly agreeing. There were 3.8% respondents who were neutral to the statement position. The response statement position represented a mean score of 2.4528 with a standard deviation of 1.5513. Responses at 54.7% disagreed to the statement position that my commercial bank realizes the inflation risk patterns and adjust appropriately beforehand. This was a representation of 28.3% strongly disagreeing and 26.4% disagreeing. Responses at 41.5% agreed to the statement position representing 17.0% agreeing and 24.5% strongly agreeing. There were 3.8% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 2.8302 with a standard deviation of 1.6021. This showed that the statement position was not largely agreed and accepted by the respondents. The composite mean of the hedging risk exposure was 2.7877 with a standard deviation of 1.54169. This indicated

that the variable of hedging risk exposure approximately influenced financial performance of commercial banks in Kenya.

4.4.8 Hedging Relationship

The researcher sought to get answers from the respondents on the levels of understanding on hedging relationship of commercial banks in Nairobi city County. The responses from the respondents were logged on a five-point Likert scale anchored by Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5). Table 4.10 displays the responses to statements regarding hedging relationship.

Table 4.10 Hedging Relationship

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Fair value hedge approach is practiced by my commercial bank to protect and enhance financial performance.	8(15.1)	7(13.2)	1(1.9)	19(35.8)	18(34.0)	3.6038	1.45892
My bank interprets the cash flow hedge indicators and put necessary measures in supporting financial performance.	6(11.3)	5(9.4)	2(3.8)	20(37.7)	20(37.7)	3.8113	1.34531
Hedge of a net investment is an achievement in the financial year of a commercial bank.	1(1.9)	19(35.8)	2(3.8)	18(34.0)	13(24.5)	3.4340	1.26353
Hedge assessment on effectiveness of financial performance is a priority in my commercial bank.	6(11.3)	9(17.0)	4(7.5)	19(35.8)	15(28.3)	3.5283	1.36725
Composite Mean and Standard Deviation						3.5944	1.35875

Source: Researcher (2019)

Table 4.10 above is an illustration of hedging relationship responses. Response rate of 69.8% of the respondents agreed to the statement position that the fair value hedge approach is practiced by my commercial bank to protect and enhance financial performance. This represented 35.8% agreeing and 34.0% strongly agreeing to the statement. Responses at 28.3% respondents disagreed to the statement position representing 15.1% strongly disagree and 13.2% disagree. There were 1.9% respondents who were neutral to the statement position. The response statement position represented a mean score of 3.6038 with a standard deviation of 1.4589. This was an indication that the statement position was largely agreed and accepted by the respondents. Responses at 75.4% of the respondents agreed to the statement position that my bank interprets the cash flow hedge indicators and put necessary measures in supporting financial performance. This represented 37.7% strongly agreeing and agreeing respectively. Responses at 20.7% of the respondents disagreed to the statement position. These represented 11.3% strongly disagreeing and 9.4% disagreeing. There were 3.8% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 3.8113 with a standard deviation of 1.3453. This was an indication that the statement position was largely agreed and accepted by the respondents.

Responses at 58.5% of the respondents agreed to the statement position that hedge of a net investment is an achievement in the financial year of a commercial bank. This represented 34.0% agreeing and 24.5% strongly agreeing. Responses at 37.7% of the respondents disagreed to the statement position representing 1.9% strongly disagreeing and 35.8% disagreeing. There were 3.8% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 3.4340 with a standard deviation of 1.2635. This was an indication that the statement position was largely agreed and accepted by the respondents. Responses at 64.1% of the respondents agreed to the statement position that hedge assessment on effectiveness of financial performance is a priority in my commercial bank. This represented 35.8% agreeing and 28.3% strongly agreeing. Responses at 28.3% of the respondents disagreed to the statement position. This represented 11.3% strongly disagreeing and 17.0% agreeing. There were 7.5% respondents who were neutral to the statement position. The response statement position represented a mean score of 3.5283 with a standard deviation of 1.3673. This was an indication that the

statement position was largely agreed and accepted by the respondents. The composite mean of hedging relationship was 3.5944 with a standard deviation of 1.35875. This indicated that the variable of hedging relationship was not largely agreed by respondents affecting financial performance of commercial banks in Kenya.

4.4.9 Financial Performance of Commercial Banks in Kenya

The researcher sought to get answers from the respondents on the levels of understanding on financial performance of commercial banks in Nairobi city County in Kenya. The responses from the respondents were logged on a five-point Likert scale anchored by Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5). Table 4.11 displays the responses to statements regarding financial performance of Commercial banks in Kenya.

Table 4.11 Financial performance of commercial banks in Kenya

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
Hedging interest rate risk approach is applied by my bank to enhance financial performance in due course.	2(3.8)	3(5.7)	0(0.0)	19(35.8)	29(54.7)	4.3208	1.01477
My commercial bank settles the foreign exchange rate risks in mitigating hedging securities.	2(3.8)	2(3.8)	0(0.0)	23(43.4)	26(49.1)	4.3019	0.95242
Credit risk is avoided by my commercial bank to enhance financial performance.	5(9.4)	14(26.4)	3(5.7)	14(26.4)	17(32.1)	3.4528	1.42189
My commercial bank realizes the inflation risk patterns and adjust appropriately beforehand.	6(11.3)	12(22.6)	7(13.2)	18(34.0)	10(18.9)	3.2642	1.31779
Composite Mean and Standard Deviation						3.8349	1.17672

Source: Researcher (2021)

Table 4.11 above, response rate of 90.5% of the respondents agreed to the statement position that the performance of a commercial bank is determined by return on assets regardless of social standing. This represented 35.8% of the respondents agreeing while 54.7% strongly agreeing. Response at 9.5% of the respondents disagreed to the statement position. This represented 3.8% strongly disagreeing and 5.7% disagreeing with the statement position. None of the respondents were neutral to the statement position. The response statement position represented a mean score of 4.3208 with a standard deviation of 1.0148. This was an indication that the statement was largely agreed and accepted by the respondents.

Responses at 92.5% of the respondents agreed to the statement that net profit margin of my commercial bank is a sign of booming business in the market. This represented 43.4% agreeing and 49.1% strongly agreeing. Responses at 7.6% of the respondents disagreed to the statement. This represented 3.8% agreeing and strongly agreeing respectively. No respondents were neutral to the statement position. The response statement position represented a mean score of 4.3019 with a standard deviation of 0.9524. This was an indication that the statement was largely agreed and accepted by the respondents. Responses at 58.5% agreed to the statement position that the return-on-investment approach is used to evaluate and measure the efficiency of an investment on financial performance in my commercial bank. This represented 26.4% of the respondents agreeing and 32.1% strongly agreeing. Responses at 35.8% of the respondents disagreed to the statement position. This represented 9.4% of the respondents strongly disagreeing and 26.4% disagreeing. There were 5.7% respondents who were neutral to the statement position. The response statement position represented a mean score of 3.4528 with a standard deviation of 1.4219. This was an indication that the statement was consistently agreed and accepted by the respondents. Responses at 52.9% of the respondents agreed to the statement position that the management efficiency entails hedging securities on financial performance. This represented 34.0% of the respondents agreeing and 18.9% strongly agreeing. Responses at 33.9% of the respondents disagreed to the statement position. This represented 11.3% strongly disagreeing and 22.6% disagreeing. There were 13.2% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 3.2642 with a standard deviation of 1.3178.

This was an indication that the statement was consistently agreed and accepted by the respondents. The composite mean of financial performance of commercial banks in Kenya was 3.8349. However, the responses had some variation, hence a standard deviation of 1.17672. This indicated that the indicators of financial performance of commercial banks in Kenya were largely agreed by the respondents.

4.5 Correlation Analysis

The findings on correlation statistics were summarized and presented in table 4.13

Table 4.12 Variables Correlation Matrix

		Hedging Strategies	Hedging Risk exposure	Hedging relationship	Financial performance of commercial banks in Kenya	
Hedging Strategies	Pearson Correlation	1				
	Sig. (2-tailed)					
Hedging risk exposure	N	53				
	Pearson Correlation	0.000	1			
	Sig. (2-tailed)	0.925				
Hedging relationship	N	53	53			
	Pearson Correlation	0.000	0.000	1		
	Sig. (2-tailed)	0.178	0.523			
Financial performance of commercial banks in Kenya	N	53	53	53		
	Pearson Correlation	0.000	0.000	0.000	1	
	Sig. (2-tailed)	0.720	0.122	0.390		
	N	53	53	53	53	
	Pearson Correlation	0.000	0.000	0.000	0.000	1

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

Source: Researcher (2021)

From the results above, the most significant relationship was between hedging strategies and hedging relationship with a coefficient value of 0.925 (at significant level of 0.05). Financial performance also was shown to contribute up to 72% on hedging strategies. Also, a strong relationship existed between hedging risk exposure and hedging strategies with a coefficient value of 92.5% (at a significance level of 0.05). Hedging relationship and financial performance of commercial banks in Kenya exhibited a strong relationship at a coefficient value of 83.6% (at a significance level of 0.05).

4.6 Regression Analysis

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS Version 25) to code, enter and compute the measurements of the multiple regressions as shown in table 4.13 below.

Table 4.13 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842	.651	.641	.86510

a. Predictors: (Constant), Hedging Strategies, Hedging Risk Exposure, Hedging Relationship.

Source: Researcher (2021)

R-Square (coefficient of determination) is a commonly used statistic to evaluate model's goodness of fit. The adjusted R^2 , also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. According to the study findings, combined variables had a strong relationship with financial performance of commercial banks in Kenya, R^2 (0.651); $p < 0.05$. Adjusted R squared of 0.642 indicates that variability in effect of hedging securities on financial performance in commercial banks in Kenya is attributed to variability in hedging strategies, hedging risk exposure, and hedging relationship.

Table 4.14 ANOVA Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	86.951	4	33.317	55.206	.000
	Residual	60.027	115	.485		
	Total	146.978	119			

a. Dependent Variable: Financial performance of commercial banks in Kenya.

b. Predictors: (Constant), Hedging strategies, hedging risk exposure, hedging relationship.

Source: Researcher (2021)

The probability value of 0.000 indicates that the regression relationship was highly significant in predicting how hedging strategies, hedging risk exposure and hedging relationship influenced financial performance of commercial banks in Kenya. The F calculated at 5% level of significance was 55.369 since F calculated is greater than the F critical (value = 2.70), this shows that the overall model was significant.

Table 4.15 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.473	.521		9.828	.001
	Hedging Strategies.	.782	.231	.241	2.719	.005
	Hedging risk exposure.	.581	.203	.184	1.778	.008
	Hedging relationship.	.361	.193	.154	3.010	.004

a. Dependent Variable: Financial performance of commercial banks in Kenya.

Source: Researcher (2021)

Table 4.15 shows that when all variables were combined, the relationship between hedging strategies and financial performance of commercial banks in Kenya, $r (0.782)$; $p < 0.05$, the relationship between hedging risk exposure and financial performance of commercial banks in Kenya, $r (0.581)$; $p < 0.05$, the relationship between hedging relationship and financial performance of commercial banks in Kenya, $r (0.361)$; $p < 0.05$. Given the hypothesis tested with the help of the sample data, the sample did not oppose the hypothesis and the hypothesis was accepted comprehensively. All the variables were statistically significant.

CHAPTER FIVE: SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presented a summary of the findings of the study, conclusions and recommendations based on the findings. The study sought to examine the effect of hedging securities on financial performance of commercial banks in Kenya. The researcher examined three main variables including hedging strategies, hedging risk exposure and hedging relationship.

5.2 Summary of Major Findings

The findings of the study were established from fifty-three (53) respondents out of seventy-eight (78) sample size. The study found that gender of the respondents was well distributed with male being the majority followed by the female respondents. Majority of the respondents were degree holders. The respondents were mature enough to provide honesty and reliable information with the majority being between 36-40 years. The study established that the respondents were fairly distributed in selected commercial banks such as Kenya commercial bank, cooperative bank of Kenya, Barclays bank of Kenya as well as the bank of Africa.

Findings were recorded on a five-point Likert scale anchored on Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5). Statistically, the study indicated that there existed a significant relationship between hedging strategies and hedging relationship with a coefficient value of 0.925 (at significant level of 0.05). Financial performance also was shown to contribute up to 72% on hedging strategies. Also, a strong relationship existed between hedging risk exposure and hedging strategies with a coefficient value of 92.5% (at a significance level of 0.05). Hedging relationship and financial performance of commercial banks in Kenya exhibited a strong relationship at a coefficient value of 83.6% (at a significance level of 0.05).

5.3 Discussion

The financial performance evaluation of commercial banks is essential to provide information about commercial bank's operating performance and their net worth. In spite of the fact that understanding the bank-specific factors and their influence on bank profitability and performance is crucial to the management of commercial banks, stakeholders and the central bank, and the government, commercial banks are exposed to face risks. Commercial banks are facing challenges in interest rate risk in their role as financial intermediaries and general changes in the cost of different currencies because of its effect on the payables and receivables denominated in foreign currencies. To cover their exposure, firms apply different instruments like SWAPs, forwards, options, and holding foreign currency-denominated rates among others (Taggart & McDermott, 2000). Commercial banks listed at the Nairobi Securities Exchange have faced various forex challenges following unstable exchange rates which saw the Kenyan currency depreciate against major currencies. Unstable forex saw some of the firms' record huge losses as this meant that to protect their exposure, they needed to implement various forex exposure management strategies.

The goal of any organization is to continuously improve performance and increase shareholders' value. Despite the important role of hedging as a risk management strategy aimed at increasing firm performance, there is however a lack of documentation on how hedging influences the firm performance since it's a reactive activity on risks faced by firms.

5.3.1 How does hedging strategies affect financial performance of commercial banks in Kenya?

This objective was to establish the influence of strategies used in hedging securities on the financial performance of commercial banks. As illustrated in the table 4.8 in chapter 4, response rate of 71.6% of the respondents agreed to the statement position that my commercial bank uses forward contracts strategy to mitigate hedging securities. This represented 32.1% of the respondents agreeing while 39.6% strongly agreed. 17.0% strongly disagreed and 7.5% disagreed with the statement position. There were 3.8% of the respondents who were neutral with the position of the statement. The response statement

position represented a mean score of 3.6981 with a standard deviation of 1.4882. This was an indication that the statement was largely agreed and accepted by the respondents.

Responses at 69.8% from respondents agreed to the statement position that Swap contract strategy is a tool used by my commercial bank to enhance financial performance. This represented 34.0% strongly agreeing and 35.8% agreed. 17.0% strongly disagreed while 5.7% disagreed with the statement position. There were 7.5% respondents who were neutral with the position of the statement. The response statement position represented a mean score of 3.6415 and standard deviation of 1.4424. This was an indication that the statement was largely agreed and accepted by the respondents.

Responses at 47.2% disagreed to the statement position that diversification strategy is used to expand our operations and reduce volatility of financial performance in my commercial bank. This represented 30.2% strongly disagreeing and 17.0% disagreeing. 45.3% of the respondents agreed to the statement position representing 20.8% agreeing and 24.5% strongly agreeing. There were 7.5% respondents who were neutral to the statement position. The response statement position represented a mean score of 2.9245 and a standard deviation of 1.6154 indicating that the statement position was nearly agreed and disagreed on equal measure.

Responses at 54.7% disagreed to the statement position that my commercial bank uses put option strategy to mitigate hedging securities appropriately. This was a representation of 28.3% strongly disagreeing and 26.4% disagreeing. 41.5% agreed to the statement position representing 17.0% agreeing and 24.5% strongly agreeing. There were 3.8% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 2.8302 with a standard deviation of 1.6021. This showed that the statement position was not largely agreed and accepted by the respondents. The composite mean of the hedging strategies was 3.2736 with a standard deviation of 1.53704.

5.3.2 How does hedging risk exposure affect financial performance of commercial banks in Kenya?

As shown on table 4.9 in chapter 4, response rate of 56.6% from respondents agreed to the statement position that hedging interest rate risk approach is applied by my bank to enhance

financial performance in due course. This represented 34% of the respondents agreeing while 22.6% strongly agreeing. Responses at 35.9% of the respondents disagreed to the statement position. This represented 18.9% strongly disagreeing and 17.0% disagreeing with the statement position. There were 7.5% of the respondents who were neutral with the position of the statement. The response statement position represented a mean score of 3.2453 with a standard deviation of 1.4664. This was an indication that the statement was nearly agreed and accepted by the respondents. Responses at 56.6% of the respondents disagreed to the statement position that my commercial bank settles the foreign exchange rate risks in mitigating hedging securities. This represented 35.8% strongly disagreeing and 20.8% disagreeing. Responses at 39.6% of the respondents agreed to the position of the statement represented 24.5% strongly agreeing and 15.1% agreeing. There were 3.8% respondents who were neutral to the position of the statement. The response statement position represented a mean score of 2.6226 with a standard deviation of 1.5470. This indicated that the respondents did not agree with the statement. Responses at 66% of the respondents disagreed to the statement position that credit risk is avoided by my commercial bank to enhance financial performance. This represented 37.7% strongly disagreeing and 28.3% disagreeing. Responses at 30.2% of the respondents agreed to the statement position representing 11.3% agreeing and 18.9 strongly agreeing. There were 3.8% respondents who were neutral to the statement position. The response statement position represented a mean score of 2.4528 with a standard deviation of 1.5513. Responses at 54.7% disagreed to the statement position that my commercial bank realizes the inflation risk patterns and adjust appropriately beforehand. This was a representation of 28.3% strongly disagreeing and 26.4% disagreeing. Responses at 41.5% agreed to the statement position representing 17.0% agreeing and 24.5% strongly agreeing. There were 3.8% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 2.8302 with a standard deviation of 1.6021. This showed that the statement position was not largely agreed and accepted by the respondents. The composite mean of the hedging risk exposure was 2.7877 with a standard deviation of 1.54169.

5.3.3 How does hedging relationship affect financial performance of commercial banks in Kenya?

Response rate of 69.8% of the respondents agreed to the statement position that the fair value hedge approach is practiced by my commercial bank to protect and enhance financial performance. This represented 35.8% agreeing and 34.0% strongly agreeing to the statement. Responses at 28.3% respondents disagreed to the statement position representing 15.1% strongly disagree and 13.2% disagree. There were 1.9% respondents who were neutral to the statement position. The response statement position represented a mean score of 3.6038 with a standard deviation of 1.4589. This was an indication that the statement position was largely agreed and accepted by the respondents. Responses at 75.4% of the respondents agreed to the statement position that my bank interprets the cash flow hedge indicators and put necessary measures in supporting financial performance. This represented 37.7% strongly agreeing and agreeing respectively. Responses at 20.7% of the respondents disagreed to the statement position. These represented 11.3% strongly disagreeing and 9.4% disagreeing. There were 3.8% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 3.8113 with a standard deviation of 1.3453. This was an indication that the statement position was largely agreed and accepted by the respondents.

Responses at 58.5% of the respondents agreed to the statement position that hedge of a net investment is an achievement in the financial year of a commercial bank. This represented 34.0% agreeing and 24.5% strongly agreeing. Responses at 37.7% of the respondents disagreed to the statement position representing 1.9% strongly disagreeing and 35.8% disagreeing. There were 3.8% of the respondents who were neutral to the statement position. The response statement position represented a mean score of 3.4340 with a standard deviation of 1.2635. This was an indication that the statement position was largely agreed and accepted by the respondents. Responses at 64.1% of the respondents agreed to the statement position that hedge assessment on effectiveness of financial performance is a priority in my commercial bank. This represented 35.8% agreeing and 28.3% strongly agreeing. Responses at 28.3% of the respondents disagreed to the statement position. This represented 11.3% strongly disagreeing and 17.0% agreeing. There were 7.5% respondents who were neutral to the statement position. The response statement position represented a mean score of 3.5283 with a standard deviation of 1.3673. This was an indication that the

statement position was largely agreed and accepted by the respondents. The composite mean of hedging relationship was 3.5944 with a standard deviation of 1.35875

5.4 Conclusion

From the results of the study, it was concluded that hedging strategies and hedging risk exposure had the strongest correlation at a coefficient value of 0.925. On financial performance of commercial banks, the correlation was highest at hedging relationship at a coefficient value of 0.836. Hedging risk exposure was higher in correlation with hedging relationship with a coefficient value of 0.720. These variables were vital in determining the effect of hedging securities on financial performance of commercial banks in Nairobi city County in Kenya.

5.5 Recommendations

The study recommends that the beneficiaries of the findings to effectively make informed decisions based on the findings. Policy makers can use the findings to make informed policies for financial institutions especially on the hedging securities. Government stakeholders and other partners are recommended to evaluate their decision-making criteria based on the findings of the study. The study comes in handy to contribute in the body of knowledge. Researchers are therefore recommended to make inferences from the findings of the study.

5.6 Areas for Further Studies

Similar study should be carried out in other banks in Kenya to investigate if the effect of hedging securities on financial performance is comparable. Different variables on the same area should be used to determine the actual findings of the study.

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APPENDICES

APPENDIX 1: LETTER OF INTRODUCTION

Dear Respondent,

My name is Mediatrix Machio of admission number 18J03DMBA013. I am a Masters' student at Africa Nazarene University in Financial Accounting and currently undertaking an academic research project on *Effect of Hedging Securities on Financial Performance of Commercial Banks in Nairobi City County, Kenya*. This research is a requirement for the award of Master of Business Administration of Africa Nazarene University, School of Business.

I am requesting you to participate in the data collection process by filling out the questionnaires provided. The data collected will be used for academic purposes only and no violation of such data will be witnessed. Your identity and responses will be treated with a lot of confidentiality. Kindly provide as honest and correct answers as possible that will help the researcher to make informed decision during data analysis. This process of filling the questionnaire will take about 5 minutes of your time. Please do not write your name on the questionnaire. Kindly follow instructions provided for each section.

Thank you so much for your participation.

Mediatrix Machio

Diversification strategy is used to expand our operations and reduce volatility of financial performance in my commercial bank.					
My commercial bank uses put option strategy to mitigate hedging securities appropriately.					

Section C: Hedging Risk Exposure

To what extent do you agree with the following statements? Rate in a scale of 1 to 5 (1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree)

Statement	Rating				
	1	2	3	4	5
Hedging interest rate risk approach is applied by my bank to enhance financial performance in due course.					
My commercial bank settles the foreign exchange rate risks in mitigating hedging securities.					
Credit risk is avoided by my commercial bank to enhance financial performance.					
My commercial bank realizes the inflation risk patterns and adjust appropriately beforehand.					

Section D: Hedging Relationship

To what extent do you agree with the following statements? Rate in a scale of 1 to 5 (1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree)

Statement	Rating				
	1	2	3	4	5
Fair value hedge approach is practiced by my commercial bank to protect and enhance financial performance.					

My bank interprets the cash flow hedge indicators and put necessary measures in supporting financial performance.					
Hedge of a net investment is an achievement in the financial year of a commercial bank.					
Hedge assessment on effectiveness of financial performance is a priority in my commercial bank.					

Section E: Financial Performance of Commercial Banks

To what extent do you agree with the following statements? Rate in a scale of 1 to 5 (1 Strongly disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree)

Statement	Rating				
	1	2	3	4	5
The performance of a commercial bank is determined by return on assets regardless of social standing.					
Net profit margin of my commercial bank is a sign of booming business in the market.					
The return-on-investment approach is used to evaluate and measure the efficiency of an investment on financial performance in my commercial bank.					
Management efficiency entails hedging securities on financial performance.					

THANKYOU FOR PARTICIPATING

APPENDIX III: RESEARCH PERMIT



REPUBLIC OF KENYA

Ref No: **998168**



**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Date of Issue: **13/August/2020**

RESEARCH LICENSE



This is to Certify that Miss., MEDIATRIX N/A MACHIO of Africa Nazarene University, has been licensed to conduct research in Nairobi on the topic: EFFECT OF HEDGING SECURITIES ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN NAIROBI CITY COUNTY, KENYA for the period ending : 13/August/2021.

License No: **NACOSTI/P/20/6195**

998168

Applicant Identification Number



Director General
**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION**

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APPENDIX IV: ANU RESEARCH APPROVAL LETTER



4th, August 2020

E-mail: researchwriting.mba.anu@gmail.com

Tel.

0202711213

Our Ref: 18J03DMBA013

The Director.

National Commission for Science,
Technology and Innovation (NACOSTI),
P. O. Box 30623, 00100

Nairobi. Kenya

Dear Sir/Madam:

RE: RESEARCH AUTHORIZATION FOR: MEDIATRIX MACHIO

Miss. Machio is a postgraduate student of Africa Nazarene University in the Master of Business Administration (MBA) program.

In order to complete her program, Miss. Machio is conducting a research entitled: **“Effect of Hedging Securities on Financial Performance of Commercial Banks: A Case Study of Selected Commercial Banks in Nairobi City County, Kenya”**

Any assistance offered to her will be highly appreciated.

Yours Faithfully,

**For DR. Kimani Gichuhi,
MBA, Coordinator,
School of Business,
Africa Nazarene University.**

APPENDIX V: MAP OF STUDY AREA

