THE EFFECT OF INVESTMENT STRATEGIES ON THE VALUE OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

This research project is my original work and it has not been presented and submitted to any in university or college for examination.

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This research project has been submitted for examination with the authority and approval as the university supervisor.

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DEDICATION

This work is dedicated to my parents and my grandpa.

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I appreciate Allah for the grace that propelled me to complete this project. I am extremely grateful for my parents for their love, prayers, caring and sacrifice for

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ABBREVIATIONS

ALM   -   Asset Liability Management

APT   -   Arbitrage Pricing Theory

CBK   -   Central Bank of Kenya

KBA   -   Kenya Bankers Association

NSE   -   Nairobi Securities Exchange

ROA   -   Return on Assets

ABSTRACT

The banking industry is so dynamic and competitive. A total of 10 banks control the entire banking industry accounting for about 52.39 percent in market share. Although limited number of banks generate huge amount of profits, stability of the whole banking system in Kenya has been a challenge. This is evidenced by steps to place some of these institutions like Imperial and Chase under receivership. The concerns about financial performance of Kenyan commercial banks have raised attention by policy makers with regard to portfolio management. Thus, the motive of this study was to bring out the link between investment strategies and value of Kenyan banks. By leveraging descriptive research design with a focus on 42 banks, census was embraced. Information was sought from first hand and auxiliary sources and means, correlation and regression supported the processing of the information. SPSS version 24 helped in analysis and tables were utilized during presentation. It was established that although commercial banks in Kenya had embraced active investment strategy (M=3.71), passive investment strategy to a high extent (M=3.68), ladder investment strategy (M=3.63) to a high extent, only active investment strategy (β=.061, p<0.05) and passive investment strategy (β=.042, p<0.05) were significant. The study concludes that investment strategies have significant effect on firm valued controlled by size. Among the recommendations was that finance and treasury managers of the respective commercial banks in Kenya balance between active and passive investment strategies in order to enhance the value of their banks. Shareholders and investors of the commercial banks in Kenya should regularly observe the trends and remain relevantly informed on how the value of their banks remains growing through maximization of the wealth. The board of directors of the commercial banks in Kenya should carefully play their oversight role on behalf of the shareholders to ensure that investment strategies put in place by the management are geared towards maximization of the shareholder wealth.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Investment is among the relevant decisions that the firm a firm make and they have a bearing on the value. In vestment decisions will shape the value as well as risk perceptions in the firm (Alslehat & Altahtamouni, 2014). Important to note is that it is so risky to execuite investment decissions in the firm. The key concern that may arise when making investment decissions is whether the resultant gain from the projects will be able to meet the initial costs incured.   In going about their investments, firms must have the right investment strategies (Virlics, 2013). Rational investors will always work to ensure that their portfolios are optimally constituted and well diversified so as to counter possible risks (Cummins & Weiss, 2014; Citibank, 2014). Efforts should be in place by portfolio managers of managers to ensure that systematic risks have been increased and that yields from investments should be linked with firm specific attributes like size (Boose, 2013).

The key theory anchoring this study was the portfolio theory developed by Markowitzs (1952) it raises the need for firms to diversify their investments as a means of countering risk exposures. The other theory guiding this study is the Neoclassical Theory of Investment proposed by Jorgenson (1963). The theory draws its fundamentals from the maximization of utility and wealth of a firm over time. Ross (1976) advanced the Arbitrage Pricing Theory (APT). According to APT, the beta is critical in shaping the resultant returns from investments.

According to the Kenya Bankers Association (KBA), bank profitability thus value can be affected by the level of diversification practised (KBA, 2012). Evidence provides that about 68 percent variability in firm's value is accounted for by the need to diversify portfolio of investments (Makokha, Namusonge & Sakwa, 2016). On the contrary, there seems to have some discrepancies in portfolio diversification on the basis of the specific banks. This implies

that banks have different policies as to how they engage insurance investment in their operations. There are other inquiries that point out that the need to acquire shares and performance of banks are linked in significant terms (Rop, Kibet & Bogonko, 2017).

1.1.1 Investment strategies

In finance, portfolio is the process of grouping of financial assets in accordance with the risk associated and financial returns attached to each individual asset. Diversification is an act of risk management where it employs a technique of mixing different investment within a given portfolio (Donald & Ronald, 2013). Arora and Jain (2013) observe that diversification of portfolio arises when different assets are brought together with aim of lowering the overall risks linked with whole grouped investments in an entity.

In commercial banks in Kenya, some of the noticeable portfolios common across the industry are loans, term deposits, government bonds, real estate financing, banc assurance, safe custody, client segmentation and alternative delivery channels such as internet banking (Makokha, Namusonge & Sakwa, 2016). A good investment strategies realised on different kinds of investments will, most cases, yield higher returns with minimal risk than any individual investment creating a positive impact on the financial stability and performance. Therefore portfolio diversification is a strategy many institutions have adopted, in order to identify best set of investments which realised meaningful returns with low risk (Amediku, 2012). This study operationalized investment strategies into passive, active and ladder.

1.1.2 Firm Value

The value of the entity is viewed as the total worth of what the firm possesses as well as the associated benefits from taxes once debts have been factored in (Leland & Toft, 1991). Therefore, the worth of an organization encompasses equity together with long-term debt. Equity comprises of share capital paid up, share premium, retained earnings, or excess and

reverses. Modigliani (1980) is of the view that a combination of equities and the debts in an entity will shape the entity value.

The funds of an entity are managed to ensure that stated objectives are realized. This include the need to ensure that the wealth of owners have been optimized in a manner that is needed by managers. In essence, this wealth of the owners is equivalent to the value of the entity. For entities that operate as publicly listed, the value at the market is key measure of this wealth. This is because information on current prices of shares is already captured in the market related value (Cheng et al., 2011).

Different parameters are in place to represent the firm value, the common one being Tobin's Q as well as the market share of the entity (Tobin, 1969). In the present inquiry, Tobin's Q was used as a proxy of value. This was determined as a proportion of market value of firms' resources as represented by the marketplace value of the firms' unsettled stock together with debt, distributed by the standby cost of the organization's assets, which is the book price (Tobin, 1969).

1.1.3 Investment strategies and Firm Value

Most institutions have increasingly recognized the role of asset managers in creating value and thus they are being involved in all the stages of coming up with new products that are aligned with end users' needs and preferences. This is particular common in financial related firms. Festo (2014) established that financial services companies in South Africa secured and expanded their client base in this manner. This idea has also led to the development of a more sophisticated financial market environment.

Within the banking industry in Ghana, Amediku (2012) observe that the income sources have been greatly diversified. An analysis by Makokha, Namusonge and Sakwa (2016) showed that about 68 percent variability in firm's value is accounted for by the need to diversify portfolio

of investments. However, there seems to exists variatons in how portfolios are diversified among banking entities. The implication of this assertion is that banks have different policies as to how they engage insurance investment in their operations (Rop, Kibet, & Bogonko, 2017). As noted by Ongore and Kusa (2013), banking entities come up and execute strategies with the critical aim of realizing financial stability Kamwaro (2008) established that investment on different portfolio in a company such as bonds, asset size and also real estate definitely impacted firm value of unit trusts. Kimeu (2014) revealed that portfolio composition is direct proportional to the firm value.

However, some researchers had a contrary opinion to the conclusion that investment strategies have a positive significant relationship to firm value. Patrick (2012) shared that no consensus exists with regard to inverse ort direct link between value and diversification. Hayden, Porath, and Westernhagen (2007) believed that after undertaking diversification, returns of Germany banking entities got to reduce. While in some instances, research shows no relationship exists whatsoever, for instance, Kipleting (2016) established no significant effect of diversification on their firm value. Thus, the link between investment strategies and firm value still remains a debatable issue due to the diversity in research conclusions from different scholars. Hence, the relevant question remains whether the need to diversify can enhance or slow down the value of the entity and this deserves further inquiries to resolve.

1.1.4 Commercial Banks in Kenya

Banks are viewed as some establishments established to ensure idle funds are mobilized from savers and advanced to those in need (Githaiga, 2015). It is the Central Bank of Kenya (CBK) that provides regulation of the Kenyan banks. The responsibility of CBK is to ensure there is soundness and stability of the banking entities. In this manner, the interests of the customers will be well taken care of. A total of 41 banking entities are in place in Kenyan context.

According to the Kenya Bankers Association (KBA), bank profitability can be affected by the level of diversification practised (KBA, 2012). An analysis by Makokha, Namusonge and Sakwa (2016) showed that about 68 percent variability in firm's value is accounted for by the need to diversify portfolio of investments. However, there seems to exists variatons in how portfolios are diversified among banking entities. The implication of this assertion is that banks have different policies as to how they engage insurance investment in their operations.

1.2 Research Problem

On a global scale, the banking entities re characterized by forcers from deregulation and high competitive landscape. These forces have required banks to bring on board different strategies, including portfolio diversification to address such challenges in the quest for profitability (Cernas, 2011). In light of this, there is a lot of uncertainty and risks incurred when making decisions with regard to investment in a firm. In going about their investments, the commercial banks must have the right investment strategies (Virlics, 2013).

The banking industry in Kenya is so dynamic and competitive. A total of 10 banks control the entire banking industry accounting for about 52.39 percent in market share (CBK, 2019). Although limited number of banks generate huge amount of profits, stability of the whole banking system in Kenya has been a challenge. This is evidenced by steps to place some of these institutions like Imperial and Chase under receivership. The concerns about financial performance of Kenyan commercial banks have raised attention by policy makers with regard to portfolio management. Bodo (2015) shared that one of the hurdles experienced by Kenyan banks is in regard to portfolio management, where some entities invest with proper planning in unrelated securities like loans, mortgages as well as properties.

The available literature from global front includes Chang (2014) who focused on location diversification instead of income diversification. The study was conducted on the retail sector

instead of the banking sector, thus presenting a contextual gap that the current study endeavours to fill. Hayden, Porath and Westernhagen (2007) used Germany banks as the point of reference to explore portfolio diversification leading to a contextual gap.

Locally, Kiplenting (2016) analyzed the effect of portfolio diversification on commercial banks performance in Kenya where the link noted was significant. Kiweu (2012) explored the initiatives to diversify incomes and their implication on Kenyan banks where a direct relationship was registered. The conflicting findings present a conceptual gap that the current study is endeavouring to fill.

The link between investment strategies and firm value still remains a debatable issue due to the diversity in research conclusions from different scholars. Some studies focused on portfolio diversification (Kiplenting, 2016) and not investment strategies thus creating conceptual gap. Other studies were conducted in different contexts for instance in Germany (Hayden, Porath & Westernhagen, 2007) and not in Kenya thus creating contextual gap. In order to fill these gaps, the present study sought to provide answers to the following research question: what is the effect of investment strategies on the value of commercial banks in Kenya

1.3 Research Objectives

To establish the effect of investment strategies on the value of commercial banks in Kenya

1.4 Value of the Study

The research would provide a background for future research on investment strategies with their implication on value creation. It might also be used as a point of reference for future researchers on investment strategies. Future academic research would review information of this inquiry while suggesting more research activities that can be researched and explored to improve the study. The suitability of the present's regulations with regard to investments will

be reinforced by this inquiry. Regulators of financial institution can rely on the study in coming up with relevant policies on investment.

The findings of this research gave sound information that might enable banks to remain vibrant. This might enable banks in Kenya to exploit economy of scale leading to improved performance. Shareholders and owners of these firms benefit from the research by having confidence on the portfolio managers who have adopted this strategy and scaled the profits up with reduced risk and losses.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The concerns in this chapter include the review of the theories that anchor the variables. The past empirical studies are also reviewed, the variables are diagrammatically illustrated through conceptual framework and the gaps are well shown.

2.2 Theoretical Background

The relevant theories anchoring this inquiry are detailed in the subsequent sections. These include portfolio theory and the Neoclassical Theory of Investment as well as the arbitrage pricing theory.

2.2.1 Portfolio Theory

The proponent of this theory was Markowitz (1952) and it places emphasis on maximization of the returns from investment by minimizing the need to expose on risky activities. Markowitz observed that entities should come up with portfolios that would yield greater returns when the risks can easily be managed. In order to realize this, efforts should be made to ensure that ratios of different investments within the portfolio have been selected with a lot of precision (Fabozzi, Gupta & Markowitz, 2002).

In the portfolio theory, the ability of the asset to be dispersed is shaped by variance. The relevant tools of shaping risk when investing according to this theory is the standard deviation. More risky would denote greater returns if the investor commit funds in the investment. The behaviour of the investors when it comes to investment can be categorized as aversion, neutrality and risk taking. Investors should be rational when it comes to commitment of funds in portfolios (Bailey & Stulz, 1990).

The theory is relevant to the study as it greatly helps the banking industry in defining investment preferences in relations to the risks and expected returns. This is achieved through

allocation of resources among different levels of investments. This theory further contributes to the study in that it helps the portfolio managers to achieve an efficient frontier by ensuring that the portfolios selected have unsystematic returns and can be able to offset each other to maximise the returns at any given time.

2.2.2 Neoclassical Theory of Investment

The proponent of this theory is Jorgenson (1963) and its initial point the problem faced by the entity of optimizing returns. Optimal stock of capital in the firm is only yielded when profits generated across different periods have been maximized. The theory draws its fundamentals from the maximization of utility and wealth of a firm over time. There theory assumes that there is a single homogeneous output, which is produced by labour, and capital input, which is the rate of investment in durable goods.

The theory suggests that interest rate and the need to invest have an inverse link with each other. In this regard, capital as an input is assumed to be single in nature. Banks usually aim at maximizing returns from all their investments. It can achieve this by investing in optimal investment strategies. The single homogeneous output, which is the rate of return, can be produced by labour and capital input, which is the rate of investment in durable goods. The rate of return on the investment strategies can be the present value of discounted net receipts.

2.2.3 Arbitrage Pricing Theory

The theory was proposed by Ross (1976) and it argues that beta shape and inform the probable returns from the assets. It is this beta that measures the current link between interrelated constructs in the firm and which will inform performance. The theory suggests that there are some random variables whose covariance is directly connected with desired returns from the assets. The covariance obtained measures that risk that encountered because of diversification by investors and which is unavoidable. The gradient of the slope implies the linear association

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existing between the projected earnings while the covariance implies risk premium (Ross, 1976).

The theory argues that a high interplay between the rate of return from a give portfolio and the assets in place will need investors to require high premium on assets (Sciubba, 2006). The theory can aptly be utilized in economic systems where different assets exist. The APT is relevant to the current study because it reinforces the need to diversify the assets for optimal returns. The theory raises the need to invest on various strategies for creation of more value to the entity.

2.3 Determinants of Firm Value

The determinants included in the current study are: investment strategies, credit risk, capital adequacy, efficient management of firm resources, liquidity, and bank size.

2.3.1 Investment strategies

In finance, portfolio is the process of grouping of financial assets in accordance with the risk associated and financial returns attached to each individual asset. Diversification is an act of risk management where it employs a technique of mixing different investment within a given portfolio (Donald & Ronald, 2013). Arora and Jain (2013) share that diversifying portfolio helps to ensure that different assets have been brought in common so that relevant risk is lowered.

2.3.2 Credit Risk

Commercial banks generate more income from the issuance of loans. Loans are, therefore, a bank's main assets that aids in generating revenue. It is the portfolio determining whether banks make profit to a large extent. Dang (2011) shared that bad loans create losses to an institution that may hurt the resultant value. In as much the profits from lending activities can be utilized

by banks to create value, the risk of default need to be reduced by this entities (Dehejia, Montgomery & Morduch, 2012).

2.3.3 Capital Adequacy

Athanasoglou, Brismiss, and Delis (2013) noted that lending entities for instance banks should be adequate capital in place if their have to remain vibrant. Adequate capital allow these institutions to loan out to investors where income is generated in form of interest. In fact, the huge proportion of income generated by the banking entities arises from lending activities. Internal capacity of the banking entity is shaped by capital adequacy ratio.

2.3.4 Bank Size

The size of the banking entity is an indicator of how the institution finally performs. When an institution is deemed to be large, it may be well placed to invest huge amounts which generate greater returns. The base of customers signifies the revenues generated by the banking entity. This supports the need for banking entities to perform (Bakker, Schaveling & Nijhof, 2014).

2.4 Empirical Studies

Several studies have been conducted to investigate the effects of portfolio diversification on firm value with diverse conclusions and different findings. In the global arena, Hayden, Hagen and Finan (2007) did a study to understand if diversification improved Performance of German Banks. They looked at evidence from individual bank loan portfolios. In their paper they investigated the case study by looking at the choice of the sample and by calculation of the risk of given variables. The study established that there is little evidence of high firm value associated with diversification. Their study only focused on data from one portfolio, that is, information on loans only. This presents a conceptual gap, which can be filled by combining more of the portfolios so that it can bring out a clear impact of diversification on firm value.

Peng, Jeng, Wang, and Chen (2015) focused on banc assurance and its implication on value created by banking entity. The focus of the inquiry was Taiwanese banks. The emphasis of the inquiry was on the need to invest in bancassurance and its implication on performance. The horizon considered by the inquiry was 2004 all through to 2012. The inquiry shared a direct link between the need to invest in bancassurance and enhancing performance. The study only looked only at banc assurance as an investment, which commercial banks can diversify into. This presents a conceptual gap which can be filled by combining more of the portfolios so that it can bring out a clear impact of diversification on firm value.

Sibel and Ihsan (2012) conducted a study on diversification in banking and its effect on banks' firm value in Turkey. The objective of the study was to establish if diversification through sectoral and geographical credits had any benefits to banks. Their results showed that sectoral credit diversification is favourable for banks to advance their performance. The study was conducted in Turkey and this presents a contextual gap because the findings cannot be generalized in the Kenyan setting. The current study is intending to fill this contextual gap.

Yan, Talavera, and Fahretdinova (2016) focused on the need to diversify different products and the implication on profitability. The emphasis of this study was on banking entities with operations in Azerbaijan. The inquiry shared that diversification of loan portfolio and the need to remain profitable are inversely connected with one another. However, the need to diversify deposits and remaining profitable were seen to have a direct interaction with each other. The study only focused on data from loan and deposits. This presents a conceptual gap, which can be filled by combining more of the diverse portfolios so that it can bring out a clear impact of diversification on firm value.

Alkhatib and Harsheh (2012) used banking entities in Palestine as the point of consideration to explore their value. In total, 5 entities were covered and the horizon ranged from 2005 till 2010.

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It was noted that size and the need to manage assets properly have an interplay that is important with firm value. However, the question of whether there was diversification of the bank income or not was not explored by this inquiry. This creates a conceptual research gap where more research on this field of diversification is inevitable.

In the regional front, Oyedijo (2012) analyzed how diversification based on product markets is linked with the need for firms to grow and enhance value. The emphasis of the inquiry was on Nigeria as the context. A significant interplay was noted between the need to diversify and performance. However, the need to diversify and growth had no significant link with each other. The study was not conducted on the context of financial institutions thus presenting a contextual gap that the current study will endeavour to fill. Oyewobi et al. (2013) did an analysis of the need to diversify businesses and how it is linked with performance of construction entities in South Africa. The design embraced was case. The views from the participants were gathered from first hand sources. It was observed that the need to invest and performance are significantly connected with each other.

In the local scene, Maina (2013) did an analysis of the need to diversify in different products and the link with value of microfinance entities. The design embraced was descriptive survey and the horizon considered was 2008 all through to 2012. A significant interplay was registered by this study. The study was conducted in the microfinance institutions sector context.

Makokha, Namusonge, and Sakwa (2016) did an investigation on the need to diversify portfolio and its interlink with value. Kenyan banks were used as the emphasis. The approaches embraced where mixed. In sum, 42 banking entities were covered. A direct interaction was registered between diversification of portfolio and the value of the entity. However, the effect of investment strategies on firm value was unexplored by this inquiry thus presenting a conceptual gap. Rop, Kibet and Bokongo (2016) were keen to bringing out how diversification

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of portfolio and the value of the entity are linked with each other. The emphasis of the inquiry was on Kenyan banks. Mixed research design was also utilized where secondary data method was employed to collect data as well as structured interviews for primary data collection. Because the study utilized qualitative data collected by structured interviews, this presents a methodological gap. The current study will address this methodological gap by employing quantitative data collected by closed ended questionnaires.

Aduda and Gitonga (2011) evaluated credit risk management and its link with profitability. The study was guided by both qualitative as well as quantitative approaches. It was observed that credit risk in deed is significantly linked with profitability. Aduda and Kingoo (2012) focused on electronic banking and its link with financial performance Relying on information from auxiliary sources, the study documented that e-banking and financial performance are positively connected with each other. Aduda and Kalunda (2012) were interested at bringing out interplay between financial inclusion and the stability of the banking industry. The methodology adopted in this study was desk review and it was established that enhancing financial inclusion including usage and access are important towards realization of the financial stability.

2.5 Summary of Literature Review and Research gaps

The chapter has focused on review of relevant studies. Hayden, Hagen and Finan (2007) focused on the banking sector in Germany and not in Kenya. Peng, Jeng, Wang, and Chen (2015) did a study in Taiwan and not in Kenya. Sibel and Ihsan (2012) did a study focusing on Turkey. Yan, Talavera, and Fahretdinova (2016) used profitability as the dependent variable and not firm value. The study by Alkhatib and Harsheh (2012) focused on Palestine and not in Kenya. Oyedijo (2012) focused on product market diversification and not broadly on

investment strategies. Oyewobi et al. (2013) used performance as the dependent variable and not firm value.

Maina (2013) focused on microfinance institutions sector context and not on the context of commercial banks thus presenting a contextual gap. Makokha, Namusonge, and Sakwa (2016) focused on portfolio diversification as the independent variable and not investment strategies. Aduda and Gitonga (2011) evaluated credit risk management and its link with profitability as the dependent variable and not firm value. Aduda and Kingoo (2012) covered e-banking as the dependent variable and not specifically investment strategies. Aduda and Kalunda (2012) adopted desk review methodology unlike the present study that was quantitative in nature.

2.5 Conceptual Framework

Rocco and Plakhotnik (2009) consider a conceptual framework as a diagram that shares the variables and the associated constructs. The independent variables in this study was investment in; government securities, corporate bonds, equity securities, and real estate property. Bank firm value was the dependent variable. The control variable included in the study was the bank size.

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┌─────────────────────────────────┐        ┌─────────────────────────────────┐
│  Independent Variable           │        │  Dependent Variable             │
└─────────────────────────────────┘        └─────────────────────────────────┘

┌─────────────────────────────────┐
│  Active Investment Strategy     │
│    • Beat market returns        │
│    • Capitalize on short-term   │
│      price fluctuations         │────┐
│    • Qualitative and            │    │
│      quantitative analysis      │    │
└─────────────────────────────────┘    │

┌─────────────────────────────────┐    │
│  Passive Investment Strategy    │    │
│    • Long term investing        │    │   ┌─────────────────────────────┐
│      objective                  │    │   │  Firm Value                 │
│    • Limited Trading            │────┼──▶│    • Tobin's Q Ratio        │
│    • Buy-and-hold strategy      │    │   │                             │
│    • Index fund                 │    │   └─────────────────────────────┘
└─────────────────────────────────┘    │

┌─────────────────────────────────┐    │
│  Ladder Investment Strategy     │    │
│    • Investing in fixed income  │    │
│      securities                 │    │
│    • Diversify investments by   │    │
│      the maturity               │────┤
│    • Investing in high-quality  │    │
│      securities to avoid        │    │
│      default risk               │    │
│    • Monitoring                 │    │
└─────────────────────────────────┘    │

┌─────────────────────────────────┐    │
│  Control Variable               │    │
│                                 │────┘
│    • Firm size (Ln Total Assets)│
└─────────────────────────────────┘
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Figure 2.1: Conceptual Model

Figure 2.1 shows that aside from investment strategies which is the independent variable, the controlling effect of size will also be explored in light of the value of the firm. In measuring size, the natural logarithm of the assets in place of the banks in Kenya was embraced. Firm value was represented by Tobin's Q. This means that while information on investment strategies will be sought from first hand sources, firm, size and value were determined after obtaining information from auxiliary sources.

2.6 Summary of Research Gaps

Very few of the empirical literature reviewed have specifically focussed on how portfolio diversification has affected the firm value of commercial banks and thus it forms a big conceptual research gap for scholars to do more on the same field. Some studies utilized traditional bank revenue channels as diversification. This presents a conceptual gap, which can be filled by combining more of the diverse portfolios so that it can bring out a clear impact of diversification on firm value. Some studies were also not done in the Kenyan context. This presented a contextual gap because the study findings cannot be generalized in the Kenyan context.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The relevant design that was adopted, the targeted participants and how the information was gathered are all detailed in this chapter. The other concern of this chapter is on how the gathered information was processed for project reporting.

3.2 Research Design

The study applied a descriptive research design because it described the situation under the research study. The research employed it because it entailed gathering, analyzing, and presenting collected data. This design provided relevant insights on how information was to be gathered and processed. Relevant past inquiries that equally embraced this design includes Makokha et al (2016) as well as Rop, Kibet and Bokongo (2016).

3.3 Target Population

A total of 42 banks in Kenyan context were targeted in this study. Census was embraced as this was a small number. This allowed the researcher to obtain information from the entire banking institutions for generalization. Zikmund et al. (2010) argues that census is apt when elements are 200 or less.

3.4 Data Collection

Both first hand and auxiliary information was gathered in this investigation. Primary was gathered by use of a close ended questionnaire utilizing a five-point Likert scale, which is displayed in appendix III. The questionnaire entailed the investing strategies. The respondents will be individuals working in the treasury function of the respective commercial banks. One respondent was picked for each bank. The secondary data was gathered from the individual banks annual reports and financial statements. Data on total market value, book value, and liabilities was gathered. The data gathered was cross-sectional.

3.5 Data Analysis

SPSS supported the processing of the gathered data where descriptive analysis of data applied measures of central tendencies and standard deviations. The link between the study variables was correlated. Regressing was conducted to predict how value is shaped by investment strategies. Tables supported the manner which evidence was presented. Significance was informed by p-values interpreted at 5%.

3.5.1 The Model of Analysis

Below is the model for regressing firm value and investment strategies:

$$Y_{i(t+1)} = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \epsilon$$

Where:

$Y_{i(t)}$ = Firm value

α = Constant

$\beta_1 - \beta_4$ = Beta coefficients

X_{1t} = Passive Investing Strategy

X_{2t} = Active Investment Strategy

X_{3t} = Ladder Investment Strategy

X_{5t} = Bank Size

ϵ = error term

3.5.2 Diagnostic Tests

The need to validate the data before regressing emerged hence diagnostic tests. The specific tests that were conducted include autocorrelation, normality and multicollinearity. In gauging normality, Shapiro-Francia test was embraced. P-values were factored in during the interpretation. With regard to multicollinearity, the Variance of Inflation Factors (VIF) values were estimated. The VIF values of the range 1-10 were taken into consideration during

interpretation. Grewal *et al.* (2004) shared that multicollinearity can arise from limiting sample sizes. Durbin-Watson Statistic values were estimated to gauge autocorrelation in the data. The value close or equivalent to 2 was regarded as the threshold.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

From 42 commercial banks, 3 including Chase Bank were excluded as some had been placed under receivership hence 39 questionnaires were administered to each of these institutions. However, only 31 of the questionnaires were dully filled and returned giving a response rate of 79.5% and this was shown as adequate (Babbie, 2010).

4.2 Descriptive Statistics

The presentation is divided into two sections, covering primary data that focus on investment strategies structured on a 5-point Likert scale. Converting the Likert to a continuous scale yields the following figures: 1-1.4 implies very low extent, 1.5-2.4 mean low extent, 2.5-3.4 means moderate extent, 3.5-4.4 implies high extent while 4.5-5.0 shows very high extent. Thus, the values of means were interpreted alongside this continuous scale as presented in the subsequent sections.

4.2.1 Descriptive Statistics on Investment Strategies

Three investment strategies were covered in this study; these were passive investment strategy, active investment strategy and ladder investment strategy. Table 4.1 gives the findings of descriptive statistics on passive investment strategy.

Table 4.1: Passive Investment Strategy

Statement	Mean	Std. Dev
The goal of your organization's treasury function is to invest for the long haul	3.74	.630
The treasury function of your organization limits the amount of buying and selling within their portfolios	3.61	1.145
The treasury function of your organization employs a buy-and-hold strategy of portfolios	3.58	.807
The treasury function of your organization utilizes an index fund that follows one of the major indices like the NASI, NSE 20, and NSE 25 indices.	3.77	.668
Average	**3.68**	**.813**

Source: Research Data (2021)

Table 4.1 gives an average figure as 3.68; this implies that commercial banks in Kenya have embraced passive investment strategy to a high extent. All other statements under passive

investment strategy had values of mean above 3.5, an indication that respondents said they contributed towards passive investment to a high extent.   Table 4.2 gives a summary of the descriptive statistics on active investment strategy among the studied banks in Kenya.

Table 4.2: Active Investment Strategy

Statement	Mean	Std. Dev
The goal of your organization's treasury function is to beat the stock market's average returns	3.87	.718
The goal of your organization's treasury function is to take full advantage of short-term price fluctuations	3.51	.926
The treasury function of your organization has a team of analysts who look at qualitative and quantitative factors to determine intrinsic asset values	3.77	.883
The treasury function of your organization usually hedges their positions	3.70	.937
Average	**3.71**	**.866**

Source: Research Data (2021)

From Table 4.2, the value of average is given as 3.71; this is interpreted to imply that active investment strategy had been embraced by the studied commercial banks in Kenya to a high extent. In fact, Kenyan banks had implemented active investment strategy to a slightly higher extent as compared to passive investment strategy as supported by the differences in averages.

Table 4.3 is a summary of the descriptive statistics on ladder investment strategy.

Table 4.3: Ladder Investment Strategy

Statement	Mean	Std. Dev
The treasury function of your organization usually invests in various fixed income securities	3.51	.851
The treasury function of your organization usually diversifies its investments by the maturity	3.81	1.025
The treasury function of your organization usually invests in high-quality bonds to avoid default risk	3.67	.791
The treasury function of your organization usually employs consistent monitoring and effort to keep the ladder going	3.51	.992
Average	**3.63**	**.915**

Source: Research Data (2021)

From Table 4.3, the value of the average is given as 3.63; this infers that the commercial banks in question had adopted ladder investment strategy to a high extent. However, the implementation of active and passive investment strategies among commercial banks in Kenya was relatively higher as compared to the ladder investment strategy.

4.2.2 Descriptive Statistics on Secondary Data for Bank Size and Firm Value

Secondary data was gathered on firm value and bank size and the findings of the descriptive statistics are as pointed out in Table 4.4.

Table 4.4: Descriptive Statistics on Secondary Data for Bank Size and Firm Value

	N	Minimum	Maximum	Mean	Std. Dev
Firm value	31	.25	1.30	.597	.230
Bank size	31	4.50	5.84	5.06	.291

Source: Research Data (2021)

Table 4.4 shows that on average, Tobin's Q was .597 with the size being equal to 5.06. The average value of Tobin's Q is less than 1, an indication that the value of assets of the studied banks were above the market value.

4.4 Diagnostic Tests

A summary of the specific tests is detailed here

4.4.1 Test for Autocorrelation

Table 4.5: Test for Autocorrelation

Model	Durbin-Watson
1	1.853

Source: Research Data (2021)

The value of d from Table 4.5 is given as 1.853, which happens to be 2 when rounded off to the whole number. This is a strong indication that the data used in the study had no serial correlation.

4.4.2 Test for Multicollinearity

Multicollinearity test was conducted through the variance of inflation factors (VIF) with the findings as presented Table 4.6.

Table 4.6: Test for Multicollinearity

	Collinearity Statistics	
	Tolerance	VIF
Passive Investing Strategy	.875	1.143
Active Investment Strategy	.919	1.088
Ladder Investment Strategy	.948	1.055
Bank size	.848	1.179
Mean VIF	**.898**	**1.116**

Source: Research Data (2021)

Table 4.6 gives the mean VIF as 1.116 with all the values for the respective variables falling within the range 1-10. This infers that there was no multicollinearity thus it could support regression analysis.

4.4.3 Normality Test

Normality test was conducted using Kolmogorov-Smirnov and Shapiro-Wilk with the findings as specified in Table 4.7.

Table 4.7: Normality Test

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Passive Investing Strategy	.319	5	.108	.816	5	.109
Active Investment Strategy	.267	6	.200	.870	6	.227
Ladder Investment Strategy	.319	5	.108	.816	5	.109
Bank Size	.267	6	.200	.870	6	.227
Firm Value	.209	11	.196	.954	11	.700
Mean	**.276**	**7**	**.082**	**.8652**	**7**	**.2744**

Source: Research Data (2021)

The results in Table 4.7 give the p-values of Kolmogorov-Smirnov and ^{Shapiro}-Wilk covering all the study variables. From the findings, all the p-values happen to be above the significance level ($p > 0.05$). This deduces that the data used in the study was normally distributed.

4.5 Correlation Matrix

Table 4.8 gives an overview of the correlation results indicating the relationship between investment strategies, bank size and the value of the firm.

Table 4.8: Correlation Matrix

		Firm value	Passive Investing Strategy	Active Investment Strategy	Ladder Investment Strategy	Bank size
Firm value	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	31				
Passive Investing Strategy	Pearson Correlation	.389	1			
	Sig. (2-tailed)	.031				
	N	31	31			
Active Investment Strategy	Pearson Correlation	.505	-.044	1		
	Sig. (2-tailed)	.004	.814			
	N	31	31	31		
Ladder Investment Strategy	Pearson Correlation	.327	.159	.147	1	
	Sig. (2-tailed)	.072	.392	.429		
	N	31	31	31	31	
Bank size	Pearson Correlation	.656	.117	.679	.469	1
	Sig. (2-tailed)	.000	.531	.000	.008	
	N	31	31	31	31	31

Source: Research Data (2021)

From the results in Table 4.8, it was observed that while active investment strategy (r=.505) had a strong and positive relationship with the value of commercial banks in Kenya, passive investment strategy (r=.389) and ladder investment strategy (r=.327) have moderate and positive relationship. Bank size (r=.656) had a strong and positive controlling effect. This means that investment strategy positively contribute towards the value of the commercial banks in Kenya.

4.6 Regression Results

Regression analysis was conducted to predict the effect of investment strategy on the value of the firm. Table 4.9 gives the findings of the regression model summary.

Table 4.9: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.678[a]	.460	.400	.17829	.460	7.655	3	27	.001
2	.740[b]	.548	.479	.16613	.089	5.096	1	26	.033
a. Predictors: (Constant), Ladder Investment Strategy, Active Investment Strategy, Passive Investing Strategy									
b. Predictors: (Constant), Ladder Investment Strategy, Active Investment Strategy, Passive Investing Strategy, Bank size									

Source: Research Data (2021)

Table 4.9 gives two models, the first one focuses on investment strategies and the value of the firm. From model 1, the value of R square is given as .460, this means that 46% change in the value of the commercial banks in Kenya is explained by investment strategies. Model 2 is after the controlling variable bank size has been introduced and the new R square rise to .548 giving the difference of .089. It is this difference in R square that signifies the controlling effect of bank size in the model. Table 4.10 gives a summary of the ANOVA findings.

Table 4.10: ANOVA Findings

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.730	3	.243	7.655	.001[b]
	Residual	.858	27	.032		
	Total	**1.588**	**30**			
2	Regression	.871	4	.218	7.886	.000[c]
	Residual	.718	26	.028		
	Total	**1.588**	**30**			
a. Dependent Variable: Firm value						
b. Predictors: (Constant), Ladder Investment Strategy, Active Investment Strategy, Passive Investing Strategy						
c. Predictors: (Constant), Ladder Investment Strategy, Active Investment Strategy, Passive Investing Strategy, Bank size						

Source: Research Data (2021)

Table 4.10 gives the value of F calculated for model 1 as 7.655 and that of model 2 is 7.886 with respective p-values ($p<0.05$). This shows that the overall regression models were significant and thus relevant. Table 4.11 gives the findings of the regression beta coefficients and significance.

Table 4.11: Beta Coefficients and Significance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.286	.404		3.184	.004
	Passive Investing Strategy	.042	.016	.379	2.640	.014
	Active Investment Strategy	.061	.018	.493	3.436	.002
	Ladder Investment Strategy	.026	.019	.195	1.341	.191
2	(Constant)	2.246	.568		3.955	.001
	Passive Investing Strategy	.037	.015	.338	2.502	.019
	Active Investment Strategy	.024	.023	.194	1.032	.312
	Ladder Investment Strategy	.003	.021	.023	.145	.886
	Bank size	.375	.166	.475	2.257	.033

Source: Research Data (2021)

From Table 4.11, model 1 shows that among the three investment strategies, passive ($p<0.05$) and active investment strategy ($p<0.05$) had significant contribution towards the value of commercial banks in Kenya. In fact, the contribution of active investment strategy ($\beta=.061$) was greater than passive investment strategy ($\beta=.042$). After introducing firm size in model 2, still passive investment strategy ($p<0.05$) and active investment strategy ($p<0.05$) were still significant. Besides, bank size itself ($p<0.05$) was significant, implying that it controlled the link between investment strategies and the value of commercial banks in Kenya.

4.7 Discussions

The study established that commercial banks in Kenya have embraced passive investment strategy to a high extent (M=3.68). This agrees with Jones (2009) who observed that passive investment strategy is not characterised by the need to forecast. It is a predetermined strategy of investment available to investors. Furthermore, active investment strategy had been embraced by the studied commercial banks in Kenya to a high extent (M=3.71). Consistent with this finding, Schoenfeld and Steven (2004) observed that in active investment strategy, specific projects are identified and funds are committed there by investors so that an investment benchmark is outperformed. Commercial banks in question had adopted ladder investment strategy to a high extent (M=3.63). This observation is supported by Jones (2009) who said

that the ladder investment strategy allows ensure that investors have staggered investment in bonds over a given horizon where dates for maturity are different. However, the implementation of active and passive investment strategies among commercial banks in Kenya was relatively higher as compared to the ladder investment strategy.

From correlation results, while active investment strategy (r=.505) had a strong and positive relationship with the value of commercial banks in Kenya, passive investment strategy (r=.389) and ladder investment strategy (r=.327) have moderate and positive relationship. Bank size (r=.656) had a strong and positive controlling effect. This means that investment strategy positively contribute towards the value of the commercial banks in Kenya and this is controlled by the size of the firm. The positive sign implies that an increase in any of the proxy of investment strategy would go a long way to enhancing the value of the listed firms in Kenya. Consistent with this finding, Alkhatib and Harsheh (2012) revealed that there is noticeable impact on firm size, credit asset risk rate, and efficiency on operation and asset management on firm value of Palestinian banks.

The results of regression analysis were that 46% change in the value of the commercial banks in Kenya is explained by investment strategies. This finding is strongly supported by Makokha, Namusonge, and Sakwa (2016) who established that 68 percent variability in firm's value is accounted for by the need to diversify portfolio of investments. Furthermore, among the three investment strategies, passive ($p<0.05$) and active investment strategy ($p<0.05$) had significant contribution towards the value of commercial banks in Kenya. In fact, the contribution of active investment strategy ($\beta=.061$) was greater than passive investment strategy ($\beta=.042$). After introducing firm size in model 2, still passive investment strategy ($p<0.05$) and active investment strategy ($p<0.05$) were still significant. This means that passive and active investment strategies are the heart of the value of the firm. Besides, bank size itself ($p<0.05$)

was significant, implying that it controlled the link between investment strategies and the value of commercial banks in Kenya. The implication of bank size being significant is that larger banks will benefit more from investment strategies as compared to smaller ones. This could be because of the fact that larger banks huge amount of resources available at their disposal that can enable them to heavily invest and thus gain greater returns.   The finding agrees with Alkhatib and Harsheh (2012) who revealed that there is noticeable impact on firm size, credit asset risk rate, and efficiency on operation and asset management on firm value of Palestinian banks.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

A summary of the study. The conclusion and recommendations of the study are also raised. The limitations and areas that require further research are also pointed out.

5.2 Summary

Based on descriptive statistics, the study established that commercial banks in Kenya have embraced passive investment strategy to a high extent. Furthermore, active investment strategy had been embraced by the studied commercial banks in Kenya to a high extent. Commercial banks in question had adopted ladder investment strategy to a high extent. However, the implementation of active and passive investment strategies among commercial banks in Kenya was relatively higher as compared to the ladder investment strategy.

From correlation results, while active investment strategy had a strong and positive relationship with the value of commercial banks in Kenya, passive investment strategy and ladder investment strategy have moderate and positive relationship. Bank size had a strong and positive controlling effect. This means that investment strategy positively contribute towards the value of the commercial banks in Kenya.

The results of regression analysis were that some change in the value of the commercial banks in Kenya is explained by investment strategies. Furthermore, among the three investment strategies, passive and active investment strategy had significant contribution towards the value of commercial banks in Kenya. In fact, the contribution of active investment strategy was greater than passive investment strategy. After introducing firm size, still passive investment strategy and active investment strategy were still significant. Besides, bank size itself was significant, implying that it controlled the link between investment strategies and the value of commercial banks in Kenya.

5.3 Conclusion

The value of the firm is a multi-faceted concept that can be determined by book value of the market forces. The value of the firm is important since averages the total debts and equities as well as other relevant assets. In fact, the value of the firm determines the price that investors would fetch if it was to be sold out at any particular date. Optimizing the value of the firm is done through the efforts to maximize the wealth of the shareholders which is among the topmost goals that guide existence of the firm.

In order to maximize the wealth of the shareholders and thus increase the value of the firm, finance managers should carefully invest the funds provided by the shareholders. This means that investment. It was demonstrated that commercial banks in Kenya have embraced active, passive and ladder investment strategies. In particular; the findings of correlation analysis have demonstrated that while active investment strategy has a direct and strong reaching implication on the value of the commercial banks, passive and ladder investment strategies on the other were found to have a moderate relationship with firm value.

Regression results provide more robust prediction of how the investment strategies affect the value of the firm. Based on p-values of regression, active and passive investments strategies have a significant contribution towards the value of the firm. More specifically, active investment was seen to the greatest contribution towards the value of the firm followed by passive investment. The role played by firm size in the relationship between investment strategies and the value of the firm can also not be ignored. In fact, size was found to have a significant controlling effect in this relationship. The possible explanation of this could be the fact that large firms have greater asset base that may have an implication on value as compared to small firms.

5.4 Recommendations

Finance and treasury managers of the respective commercial banks in Kenya balance between active and passive investment strategies in order to enhance the value of their banks. The finance managers of these commercial banks should growth the existing assets as this may increase the size that should not be ignored when making investment decisions. The management team of the commercial banks in Kenya should support active and passive investment strategies so as to enhance the value of their institutions.

The policy makers at the CBK should regularly conduct an assessment of the suitability of the current investment regulations for commercial banks in Kenya. Relevant policies and regulations regarding investment strategies should be formulated by regulators in Kenya. The policy makers at the KBA should come up with relevant policies for commercial banks that would guide their investment strategies.

Shareholders and investors of the commercial banks in Kenya should regularly observe the trends and remain relevantly informed on how the value of their banks remains growing through maximization of the wealth. The board of directors of the commercial banks in Kenya should carefully play their oversight role on behalf of the shareholders to ensure that investment strategies put in place by the management are geared towards maximization of the shareholder wealth. Without carefulness from the board, conflicts of interest would arise thus affecting firm value maximization of the commercial banks in Kenya.

5.5 Limitations of the Study

Concept wise, this study was limited to investment strategies, bank size and the value of the firm. In this regard, investment strategies was the broad independent variable, bank size was the controlling while firm value was the dependent variable. Three investment strategies were studied covering active, passive and ladder investment strategies.

Contextually, the focus of the study was on the banking sector in Kenya. The study covered commercial banks licensed by CBK. In total, 42 commercial banks were covered in this study. The limitation stemming from this observation is that the sample size was small to allow more robust generalization of the findings.

Methodologically, the study was supported by information obtained from both first and second hand combined. The study was limited to a period from 2016 to 2020 giving a total of 5 years. Ordinary least square (OLS) techniques were utilized during the analysis of the findings. This is a limitation because another similar study conducted but with the use of panel data could probably yield inconsistent results on account of the differences in methodologies used.

The time period (2016-2020) that was adopted in collection of secondary data to determine firm value also limits this study. Given that past data was collected and analyzed, it limits generalization of the findings to the current period 2021 now that the same had not been factored in analysis.

5.6 Areas for Further Research

The focus of future studies should be on investment strategies and their contribution to other concepts like financial sustainability of the firm. There are other control variables like leverage or capital structure that future studies can use apart from bank size. Future studies should also introduce third variables being intervening or moderating variables for instance firm age.

Apart from covering commercial banks, future studies can be conducted in other contexts for instance the investment banks in Kenya. Insurance firms can also be a good area that the focus of future studies should pay emphasis on. Besides, the main focus of the future studies should be pension funds in Kenya.

To provide for more robust generalization of the findings, future studies should adopt advanced methods of analysis. This will require the use of advanced analytical software like stata to precisely determine whether to use fixed effect (FE) or random effect (RE) models. Of course, Hausman's test will be required for this determination and this will only be supported by advanced sofwates apart from SPSS.

Future studies should be conducted top cover the latest period being 2021. In such a case, quarterly data can be collected and analyzed systematically to include the latest period. This will allow accurate generalization of the findings across the relevant periods.

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APPENDICES

Appendix I: List of Commercial Banks in Kenya as at 31st December 2020

1. Absa Bank Limited

2. African Banking Corp. Ltd

3. Bank of Africa Kenya Ltd

4. Bank of India

5. Bank of Baroda (K) Ltd

6. Stanbic Bank Ltd

7. Chase Bank (K) Ltd (In Receivership)

8. Citibank N.A.

9. Consolidated Bank of Kenya Ltd

10. Co-operative Bank of Kenya Ltd

11. Credit Bank Ltd

12. Development Bank (K) Ltd

13. Diamond Trust Bank (K) Ltd

14. Dubai Bank Ltd (In Receivership)

15. Dubai Islamic Bank (Kenya) Ltd

16. Ecobank Limited

17. Spire Bank

18. Equity Bank Ltd

19. Family Bank Ltd

20. Guaranty Trust Bank

21. First Community Bank Ltd

22. Guardian Bank Ltd

22. Gulf African Bank Ltd

24. Habib Bank A.G. Zurich

25. HFC Ltd

26. Imperial Bank Ltd (In Receivership)

27. I & M Bank Ltd

28. Jamii Bora Bank Ltd

29. KCB Bank Kenya Ltd

30. Mayfair Bank Ltd

31. Middle East Bank (K) Ltd

32. M Oriental Bank Ltd

33. National Bank of Kenya Ltd

34. NCBA Bank Kenya

35. Paramount Universal Bank Ltd

36. Prime Bank Ltd

37. Sidian Bank

38. Standard Chartered Bank (K) Ltd

39. SBM Bank (Kenya) Ltd

40. Transnational Bank Ltd

41. UBA Kenya Bank Ltd

42. Victoria Commercial bank Ltd

Source: Kenya Bankers Association Website (2020)

Appendix II: Letter of Introduction

Dear Respondent

I am graduate student at the University of Nairobi. As part of my dissertation I am examining:

THE EFFECT OF INVESTMENT STRATEGIES ON THE VALUE OF COMMERCIAL BANKS IN KENYA

The following questionnaire will require approximately five minutes of your time to complete. This is an academic research and information provided will be used for academic purpose only. There will be no reference to your name and strict ethical principles will be observed to ensure confidentiality. Please do not indicate your name in the questionnaire.

CONSENT SECTION

- o   I agree to participate in this study- YES
- o   I do not agree to participate in this study

Appendix III: Study Questionnaire

This questionnaire is structured to collect information on the relationship between management control systems and financial performance of commercial banks in Kenya. Kindly read the questions carefully and tick against the asked question as per your position or understanding and relevance to the study. Utmost confidentiality is assured as the data collected from this questionnaire will purely be used for academic purposes.

PART A: BACKGROUND INFORMATION

1. Gender: Male ( )   Female ( )

2. Age: 20- 29 ( )   30– 39 ( )   40 – 49 ( )   50 and above ( )

3. Highest education level: Secondary ( ) Diploma ( ) Bachelor Degree ( )

    Postgraduate ( )

4. Working experience with the current employer: -

   5 and below ( )   6 – 10 ( )   11 – 15 (*)   16 – 20 ( )   21 and above ( )

PART B: INVESTMENT STRATEGIES

Passive Investment Strategy

5. Kindly indicate the extent to which you agree with each of the statements by using the following scale: Use 1 – Very Low Extent, 2 - Low Extent, 3 – Moderate Extent 4 – High Extent, 5- Very High Extent

Statement	1	2	3	4	5
The goal of your organization's treasury function is to invest for the long haul					
The treasury function of your organization limits the amount of buying and selling within their portfolios					
The treasury function of your organization employs a buy-and-hold strategy of portfolios					
The treasury function of your organization utilizes an index fund that follows one of the major indices like the NASI, NSE 20, and NSE 25 indices.					

Active Investment Strategy

6. Kindly indicate the extent to which you agree with each of the statements by using the following scale: Use 1 – Very Low Extent, 2 - Low Extent, 3 – Moderate Extent 4 – High Extent, 5- Very High Extent

Statement	1	2	3	4	5
The goal of your organization's treasury function is to beat the stock market's average returns					
The goal of your organization's treasury function is to take full advantage of short-term price fluctuations					
The treasury function of your organization has a team of analysts who look at qualitative and quantitative factors to determine intrinsic asset values					
The treasury function of your organization usually hedges their positions					

Ladder Investment Strategy

7. Kindly indicate the extent to which you agree with each of the statements by using the following scale: Use 1 – Very Low Extent, 2 - Low Extent, 3 – Moderate Extent 4 – High Extent, 5- Very High Extent

Statement	1	2	3	4	5
The treasury function of your organization usually invests in various fixed income securities					
The treasury function of your organization usually diversifies its investments by the maturity					
The treasury function of your organization usually invests in high-quality bonds to avoid default risk					
The treasury function of your organization usually employs consistent monitoring and effort to keep the ladder going					

Thank you for your co-operation

Appendix IV: Data Collection Form

Name of Commercial Bank					
	Year				
Data	2016	2017	2018	2019	2020
Total Market Value					
Total Book Value					
Liabilities					
Tobin Q Ratio					
Total Assets					
Bank Size					

Appendix V: Collected Data

Year	Bank	Tobin's Q	Size
2016	KCB Bank Kenya Ltd	1.366	5.008
2016	Equity Bank Kenya Ltd	1.599	5.810
2016	NCBA Bank Kenya PLC	0.082	6.995
2016	Co-operative Bank of Kenya Ltd	1.135	6.135
2016	Absa Bank Kenya Plc	0.397	5.963
2016	Standard Chartered Bank K) Ltd	0.430	5.092
2016	Diamond Trust Bank	0.133	5.793
2016	Kenya Limited	1.324	6.338
2016	I & M Bank Limited	0.020	6.308
2016	Stanbic Bank Kenya Ltd	1.711	6.160
2016	Bank of Baroda (K) Limited	0.909	5.162
2016	Prime Bank Ltd	0.470	6.419
2016	Citibank N.A. Kenya	0.730	6.229
2016	National Bank of Kenya Ltd	0.020	6.015
2016	Family Bank Ltd.	1.224	3.872
2016	Bank of India	1.624	6.546
2016	Ecobank Kenya Ltd	1.057	4.551
2016	SBM Bank Kenya Ltd	0.480	4.168
2016	HFC Ltd	0.254	6.189
2016	Victoria Commercial Bank Limited	0.465	4.907
2016	Guaranty Trust Bank Limited	0.710	5.159
2016	Bank of Africa Ltd	1.696	3.497
2016	Gulf African Bank Limited	0.325	5.595
2016	African Banking Corporation Ltd	0.199	4.544
2016	Sidian Bank Ltd	0.525	5.797
2016	Habib Bank A.G Zurich	0.585	5.364
2016	Credit Bank Ltd	1.470	5.218
2016	First Community Bank Ltd	0.262	6.174
2016	UBA Kenya Bank Ltd	1.323	4.466
2016	Development Bank of Kenya Ltd	0.538	4.892
2016	Guardian Bank Limited	0.653	5.357
2017	KCB Bank Kenya Ltd	0.168	4.992
2017	Equity Bank Kenya Ltd	0.163	6.184
2017	NCBA Bank Kenya PLC	1.020	6.737
2017	Co-operative Bank of Kenya Ltd	1.386	4.736
2017	Absa Bank Kenya Plc	0.599	6.868
2017	Standard Chartered Bank K) Ltd	0.613	5.086
2017	Diamond Trust Bank	0.845	6.032
2017	Kenya Limited	0.023	5.558
2017	I & M Bank Limited	1.025	5.699

2017	Stanbic Bank Kenya Ltd	0.327	5.633
2017	Bank of Baroda (K) Limited	0.112	5.948
2017	Prime Bank Ltd	0.612	3.686
2017	Citibank N.A. Kenya	0.145	5.533
2017	National Bank of Kenya Ltd	1.693	5.336
2017	Family Bank Ltd.	0.060	5.657
2017	Bank of India	0.126	4.223
2017	Ecobank Kenya Ltd	1.223	6.717
2017	SBM Bank Kenya Ltd	0.062	5.204
2017	HFC Ltd	0.693	5.940
2017	Victoria Commercial Bank Limited	1.417	4.894
2017	Guaranty Trust Bank Limited	0.001	5.192
2017	Bank of Africa Ltd	0.002	5.747
2017	Gulf African Bank Limited	0.030	6.272
2017	African Banking Corporation Ltd	0.002	4.935
2017	Sidian Bank Ltd	1.305	4.715
2017	Habib Bank A.G Zurich	0.010	5.723
2017	Credit Bank Ltd	1.980	6.741
2017	First Community Bank Ltd	1.186	4.897
2017	UBA Kenya Bank Ltd	0.099	5.103
2017	Development Bank of Kenya Ltd	0.253	4.227
2017	Guardian Bank Limited	0.743	4.875
2018	KCB Bank Kenya Ltd	1.220	5.453
2018	Equity Bank Kenya Ltd	0.600	4.042
2018	NCBA Bank Kenya PLC	0.510	3.442
2018	Co-operative Bank of Kenya Ltd	0.035	4.700
2018	Absa Bank Kenya Plc	0.199	5.050
2018	Standard Chartered Bank K) Ltd	0.021	4.242
2018	Diamond Trust Bank	0.004	6.290
2018	Kenya Limited	0.485	3.985
2018	I & M Bank Limited	0.022	4.860
2018	Stanbic Bank Kenya Ltd	0.237	4.091
2018	Bank of Baroda (K) Limited	1.372	4.411
2018	Prime Bank Ltd	0.355	5.515
2018	Citibank N.A. Kenya	1.056	5.079
2018	National Bank of Kenya Ltd	0.212	2.990
2018	Family Bank Ltd.	0.776	6.179
2018	Bank of India	0.072	4.026
2018	Ecobank Kenya Ltd	0.212	5.633
2018	SBM Bank Kenya Ltd	0.209	3.844
2018	HFC Ltd	0.100	2.348
2018	Victoria Commercial Bank Limited	0.496	5.617

2018	Guaranty Trust Bank Limited	0.232	4.589
2018	Bank of Africa Ltd	0.002	5.390
2018	Gulf African Bank Limited	1.699	3.757
2018	African Banking Corporation Ltd	0.881	4.949
2018	Sidian Bank Ltd	0.342	6.586
2018	Habib Bank A.G Zurich	4.566	5.406
2018	Credit Bank Ltd	0.711	4.350
2018	First Community Bank Ltd	0.001	5.038
2018	UBA Kenya Bank Ltd	0.276	5.580
2018	Development Bank of Kenya Ltd	0.672	6.329
2018	Guardian Bank Limited	0.795	5.274
2019	KCB Bank Kenya Ltd	0.690	5.149
2019	Equity Bank Kenya Ltd	0.933	4.000
2019	NCBA Bank Kenya PLC	1.014	5.909
2019	Co-operative Bank of Kenya Ltd	0.324	3.667
2019	Absa Bank Kenya Plc	1.177	4.477
2019	Standard Chartered Bank K) Ltd	0.087	6.059
2019	Diamond Trust Bank	0.668	4.698
2019	Kenya Limited	0.464	4.301
2019	I & M Bank Limited	1.086	4.317
2019	Stanbic Bank Kenya Ltd	0.147	4.801
2019	Bank of Baroda (K) Limited	0.973	6.105
2019	Prime Bank Ltd	0.087	5.470
2019	Citibank N.A. Kenya	1.053	5.586
2019	National Bank of Kenya Ltd	0.171	4.399
2019	Family Bank Ltd.	1.446	5.029
2019	Bank of India	0.433	4.075
2019	Ecobank Kenya Ltd	0.079	5.025
2019	SBM Bank Kenya Ltd	0.270	6.129
2019	HFC Ltd	0.658	4.255
2019	Victoria Commercial Bank Limited	0.046	4.999
2019	Guaranty Trust Bank Limited	0.258	4.607
2019	Bank of Africa Ltd	0.448	4.114
2019	Gulf African Bank Limited	0.330	4.181
2019	African Banking Corporation Ltd	0.083	4.734
2019	Sidian Bank Ltd	0.285	4.995
2019	Habib Bank A.G Zurich	0.885	3.939
2019	Credit Bank Ltd	0.517	4.383
2019	First Community Bank Ltd	0.036	3.187
2019	UBA Kenya Bank Ltd	1.852	5.111
2019	Development Bank of Kenya Ltd	0.107	4.000
2019	Guardian Bank Limited	0.041	4.782

2020	KCB Bank Kenya Ltd	0.463	5.893
2020	Equity Bank Kenya Ltd	1.452	6.593
2020	NCBA Bank Kenya PLC	0.262	6.106
2020	Co-operative Bank of Kenya Ltd	0.138	4.706
2020	Absa Bank Kenya Plc	0.206	4.450
2020	Standard Chartered Bank K) Ltd	0.799	4.074
2020	Diamond Trust Bank	0.346	4.341
2020	Kenya Limited	0.218	4.608
2020	I & M Bank Limited	0.715	4.177
2020	Stanbic Bank Kenya Ltd	0.207	4.695
2020	Bank of Baroda (K) Limited	1.494	3.737
2020	Prime Bank Ltd	0.575	4.445
2020	Citibank N.A. Kenya	1.311	4.130
2020	National Bank of Kenya Ltd	0.172	6.210
2020	Family Bank Ltd.	0.212	4.885
2020	Bank of India	0.024	6.401
2020	Ecobank Kenya Ltd	0.280	5.837
2020	SBM Bank Kenya Ltd	1.239	5.000
2020	HFC Ltd	0.429	4.381
2020	Victoria Commercial Bank Limited	0.479	4.132
2020	Guaranty Trust Bank Limited	0.135	5.315
2020	Bank of Africa Ltd	0.329	3.732
2020	Gulf African Bank Limited	0.531	3.542
2020	African Banking Corporation Ltd	0.099	5.176
2020	Sidian Bank Ltd	0.522	5.165
2020	Habib Bank A.G Zurich	0.473	5.048
2020	Credit Bank Ltd	0.242	5.445
2020	First Community Bank Ltd	1.597	4.980
2020	UBA Kenya Bank Ltd	0.389	4.000
2020	Development Bank of Kenya Ltd	0.286	4.095
2020	Guardian Bank Limited	0.245	4.727

Appendix VI: Statistical Outputs

Histogram

Dependent Variable: Firm value

Mean = -2.55E-16
Std. Dev. = 0.931
N = 31
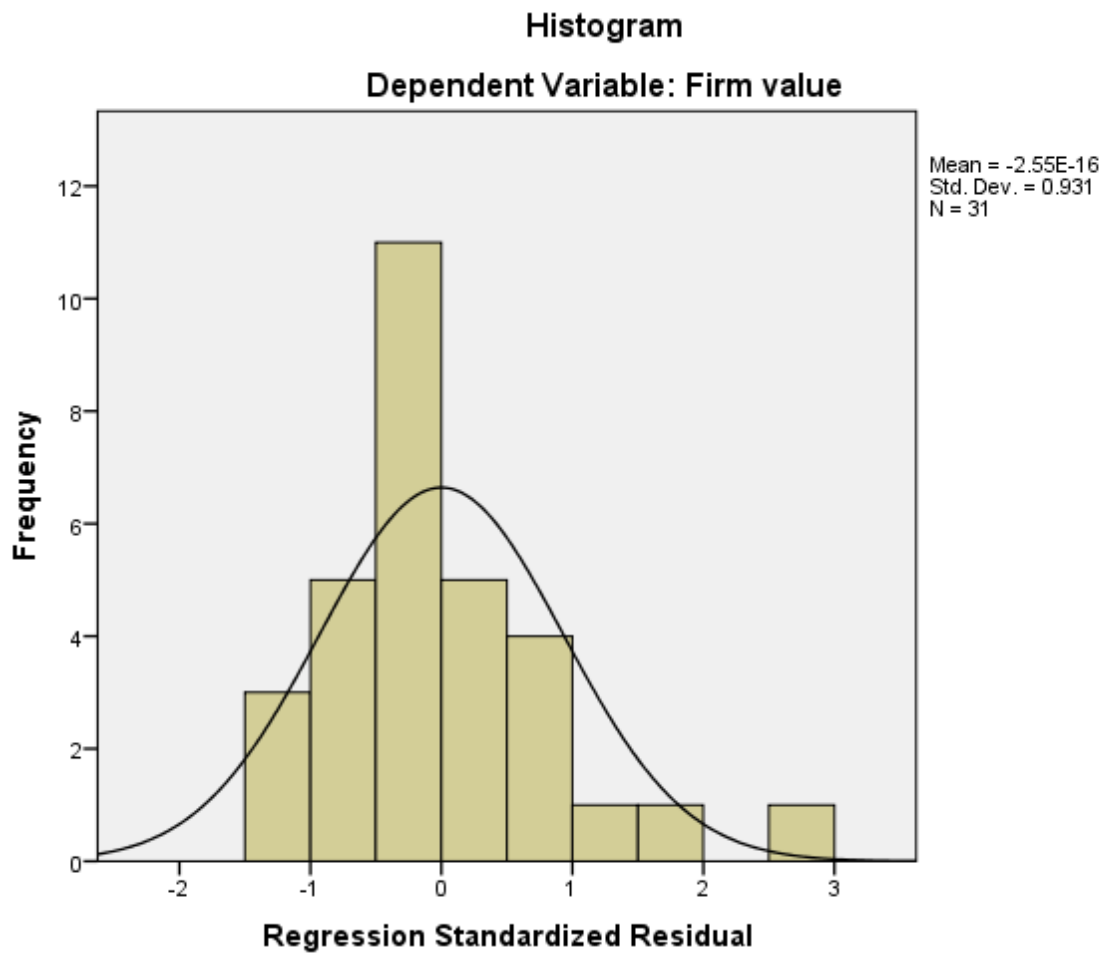
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Firm value
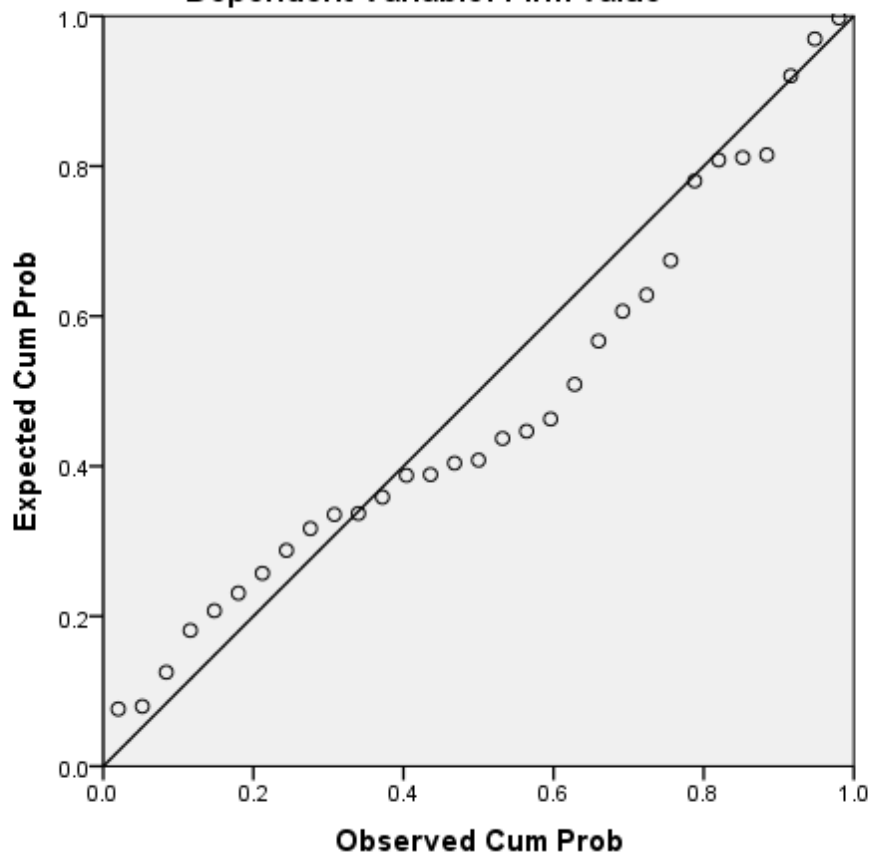
Scatterplot

Dependent Variable: Firm value