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DETERMINANTS OF FINANCIAL PERFORMANCE OF COMMERCIAL BANKS LISTED AT NSE IN KENYA

Kenneth Njihia Ndungu and Dr. Joshua Bosire
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1* Kenneth Njihia Ndungu
1Post Graduate Student: Jomo Kenyatta University of Agriculture and Technology, Kenya
*Corresponding Author’s E-mail: kellen.njihia@gmail.com

2 Dr. Joshua Bosire
Lecturer: Jomo Kenyatta University of Agriculture and Technology, Kenya

Abstract

Purpose: The purpose of this study was to establish the determinants of financial performance of NSE listed commercial banks in Kenya.

Methodology: A descriptive study design attributed to a census approach aiming at the eleven listed commercial banks in Kenya was applied. The research relied on secondary data obtained from the audited financial statements of the said banks to create the correlation between the research variables. The information on the financial effecting of the listed banks was collected using a data collection matrix. The data was analyzed by the assistance of SPSS and the outcome presented in tables using statistical aspects, which include means and standard deviations.

Results: The study established that government securities (r = 0.680) had a positive and strong correlation with financial performance. Similarly, Real estate (r = 0.738), Loans (r = 0.922) and, stocks (r=.469) had a positive and weak correlation with financial performance. The findings of study show loans (p=0.000) was most significant, followed by funds allocated to Government securities at p=0.149 then by funds allocated to stocks (p=.850) and least significant was real estate financing at p=0.972 at 95% confidence level. The findings show that there was a strong positive correlation (r=0.926) between Funds allocation and financial performance of commercial banks, according to the findings, 85.7% of financial performance of commercial banks could be attributed to the funds allocation to various assets. Adding another variable say, x5 will lower the strength of the model from 85.7 % to 84.6 %.

Unique contribution to theory, practice and policy: The study recommends that listed commercial banks should diversify their real estate finance schemes to make it reachable to more customers since real estate had a significant effect of their financial performance. A study should be conducted on other variables such as inflation, exchange rates and interest rates fluctuations. A study should also be conducted to investigate the low yield of investment in loans in contrast to investment in government securities.

Key words: Government Securities, Real Estate, Loans, Stock, Financial Performance, NSE
1.0 INTRODUCTION

A bank is a monetary foundation that gives banking and other money-related administrations to their clients. De Young and Rice (2004) characterize a bank as a legitimate association, which acknowledges stores that can be pulled back on request. It likewise lends cash to people and business houses that need it. Driga (2006) demonstrates that a bank can be related with a monetary administration aggregate ready to give essential money-related administrations and appropriately work inside the financial, political, legitimate, and global condition that decides its benefit and extensions opening, loans costs, trade rates, and specific assets a bank requires. Banks are imperative in the economy since they give the security to the investment funds of clients, control the supply of cash and credit and support open trust in the working of the money related framework, increment reserve fund quickly and proficiently. Banks additionally keep away from focal point of monetary powers in the hands of a couple of people and organizations. They set equivalent standards and conditions to a wide range of clients.

Heimler and Biggar (2011) show that control starts from microeconomic worries over the capacity of bank loan contributors to screen the dangers beginning on the loaning side and from small scale and macroeconomic worries over the security of the banking framework on account of a bank emergency. Money related establishments are consequently controlled on issues like market section, store protection, and holding necessities. Driga and Dura 2010 show that the components of financial condition is the totality of monetary variables, for example, business, salary, swelling, loan fees, profitability and riches that impact the purchasing conduct of buyers and organizations. Banks profit by loaning and charging premium. The cash bank loans come essentially from stores in checking and investments accounts, testaments of stores, currency advice accounts and other store accounts those buyers and organizations set up with the bank. As per Heffernan (2005), these stores frequently win enthusiasm for their proprietors, and records that offer checking, give proprietors a simple technique for making installments securely without utilizing money. Aside from loaning , De Young and Rice (2004) show that banks from exchange administrations like checking and money administrations, safe keeping administrations like safeguarded store records and wellbeing storeboxes, speculation administrations like trust accounts and long-run testaments of stores and protection administrations like annuity contracts.

For the most part, banks have two salary streams premium based pay and non-premium pay. Kiweu (2012) characterizes intrigue salary into: enthusiasm on advances, enthusiasm from government securities, enthusiasm from stores and position with different organization and other intrigue wage while charge based pay involves expenses and commissions on credits, exchange wage, remote trade exchanging pay and other wage (counting profit pay). Customary industry shrewdness predicts that consolidating distinctive kinds of exercises – non-enthusiasm acquiring and enthusiasm procuring assets – and rebalancing bank wage far from premium pay toward non-premium exercises may expand return and enhance dangers, in this manner boosting execution (Gamra & Philon, 1997)

Funds Allocation Strategies of banks

Every single commercial bank invests; this could be related with diverse exercises. However, the regular focus in these exercises is to utilize cash (assets) amid the day and age looking to improve the investors’ riches (Levisauskait 2010). Banks take the cash got from consistent
managing an account exchanges and place them in investments. To deal with the assets legitimately they require an investment portfolio so which enables them to use the assets in a powerful way and furthermore create enough benefits. Bank investment portfolios have along these lines turn into an inexorably imperative piece of bank accounting report administration (Ayre and Luciano, 2015).

Bank fund allocation strategies for the most part utilize brilliant settled wage investment with an end goal to give a wellspring of liquidity and pay - and to adjust the term and liquidity profile of their credits and liabilities (Ayre & Purani 2013). Fund allocation strategy is the spreading of hazard and reward inside its portfolio. Wagner (2010) shows that since it is hard to know which specific subset of a benefit class or part is probably going to beat another, diversification looks to catch the earnings of the majority of the areas after some time however with less unpredictability at any one time. In managing an account, expansion is done practically by consolidating into what is known as an aggregate such exercises as business saving money, security exchanging, protection and other budgetary administrations or shaping combinations of numerous banks through a bank holding organization or savings money gatherings (Baele et al.,2006). The banking business in the whole world has encountered huge enhancements levels prodded by the segment progression and deregulation over the most the most recent two decades. This is particularly so due to aggressive weight that has come about because of Non-bank organizations passage into the division and the subsequent decrease in cost efficiencies and net revenues prior related with intermediation business (Mulwa, 2015).

Diversification offers a few points of interest to banks. Galema et al., (2011) show that a more broadened mind portfolio enables banks to improve resource quality, execution and flexibility on the other; it limits portfolio hazards and lessens the requirement for outer financing alongside the high expenses related. The higher the quantity of non-corresponded resources classes in a portfolio, the lower the danger of bringing about huge money related misfortunes because of negative market occasions. As per Deyoung and Torna 2013, an enhanced portfolio that joins an assortment of advance items that have a place with various resource classes in an ideal way will enable a bank to survive significantly simpler to a monetary tempest that if it would give advances in a similar resource classification. Portfolio diversification can enable banks to control far from thickly populated industry segment and find underserved markets, for example, the optional market for fabricated home credits. Not exclusively will this open a bank to a bigger venture universe with a more extensive determination of advantages classes, yet it will likewise give more alluring and lucrative open doors for development. (Triad, 2016)

The Banking Sector in Kenya

The origins of commercial banking in Kenya identified with business associations in East Africa, which existed towards the finish of the nineteenth century (Sashoo, 2012). The adjustments in the Kenyan banking part since frontier times to a great extent to reflect the nation’s political and monetary change from a province into an autonomous country (Heyer & King 2015) . Amid the 1960s, the banking division in Kenya encountered another flood of vitality change and in 1968; the cooperative bank of Kenya opened its doors. The banking area was changed in 1995 and trade controls lifted (Kaberia, 2012). Budgetary progression in Kenya opened the banking business to various commercial Banks prompting for breakdown of a few. Accordingly, commercial Banks have changed their conduct of salary sources by broadening as a conceivable
method of enhancing execution (Maina, 2013). The Kenyan banking industry is presently the largest in the square and fourth largest in Sub Saharan Africa after South Africa, Nigeria, and Mauritius (Mulwa, 2018).

The banking part in Kenya presently comprises of 44 commercial Banks, one home loan back organization, nine microfinance banks, seven agent’s workplaces of outside banks, 94 remote trade departments, seven cash settlement suppliers and two credit reference authorities (KPMG, 2015). Out of the 44, 11 Commercial Banks are recorded at the Nairobi securities Exchanges (NSE). In 2016 the banking part showed proceeded with strength both in its residential and provincial activities, with the business aggregate resource base developing by 5.8 percent to an estimated Kshs 3.7 trillion Shillings from 3.5 trillion of every 2015 (Central bank of Kenya (CBK) 2016). The expansion in salary was largely credited to increment in enthusiasm on government securities which ascended by Kshs 19.9 billion occasioned by expanded interest in government securities. At that point, current examination tried to build up impacts of portfolio expansion on monetary associated effecting of the documented Kenyan Nairobi Stock Exchange commercial Banks.

1.1 Statement of the Problem

Efficient funds allocation decision results in good performance and performance has effect on value and survival of all firms including the monetary sector in our country. Worldwide the monetary sector have indulged market conditions which are turbulent, minimal trade barriers, cutthroat competition, advancements in technology, capping of interest and deregulation in markets leading to necessitation in banking product diversification. As such, many commercial banks have needed recourse to diversify their portfolios to remain alive and sustain or boost their profitability. However, bank performance remains a concern as not all banks have sustained or improved their performance dramatically recently (Otieno, & Moronge, 2014).

While a number of studies on the impact of fund allocation strategies on bank output have been performed in developed economies, limited empirical evidence exists for emerging economies like Kenya. There is evidence, however, that Kenya's banking sector has experienced negligible growth and weak financial output (Cytonn Investments, 2015). For example, Kenya's banking sector’s overall financial performance has been reported below industry estimates because in less than a year, some banks have registered poor performance, three banks have been put under receivership, and others have been acquired (CBK Reports, 2016). However, listed commercial banks have recorded a growth in the Earnings per Share (EPS) in 2016 fiscal year with a rate of 4.4% which is higher than that of 2015 rated 2.8% and a 5-year average of 13.9% still falling below the expected 14.6% growth rate (Nse Reports, 2017). Besides, the banks gross loans and advances as well as deposits grew at slower rates compared to the expected five-year average growth rate of 14.6% despite the attempts by the banking sector to resuscitate the banks’ financial performance through funds allocation strategies.

Although commercial banks have embarked on fund allocation strategies, available data shows that income from commercial banks investments has been decreasing. Data from Central bank of Kenya (2017) indicates that return on Assets decreased to 2.6% in September 2017 from 2.8 in June 2016. In addition, return on Equity decreased from 20.6% in September 2017, and from 22.3 % in June 2016.
Inconsistencies also exist in available literature, as some studies find no effect of diversification and performance while other find significant effects. The studies conducted in the sector have been inconclusive with contradicting results being obtained. The banks were established to have well diversified portfolios as evidenced by the studies conducted by Kamp et al. (2004) and Turkmen and Yigit (2012). On the relationship that exists, Acharya et al. (2002) established that diversification in the industry and sector caused diminished returns with riskier loans. Similarly, Hayden et al. (2007) established that diversification led to reduced returns in the German banks. While Makokha, Namusonge, and Sakwa (2016) investigated the extent to which the Kenyan commercial banks are impacted by the portfolio diversification established that they helped to improve how the banks performed. This contradicts Kipleting (2016) who investigated the overall impact of diversification of investment on the monetary performance of the Kenyan commercial banks and realized that there is no substantial impact of on the attributed fiscal performance. Similarly, Kiweu (2012) research on the impact of income diversification initiatives by Kenyan commercial banks established only minimal positive relationship with their financial performance.

There is also paucity in local studies on Fund allocation strategies among banks. Majority of available studies were carried out in Europe and North America. The findings of these studies cannot be wholly applied to Kenya due to disparity in advancement of the respective economies and banking systems. In addition, due to various regions are subject to varying regulation. It is also difficult to compare findings of available studies due to the use of varying indicators of performance. Some studies used profitability, others used ROA and ROE. As such, there is still a knowledge gap as to whether the diversification of banking products really improves the monetary performance of the commercial banks listed in Kenya or not, hence the need for this report. Therefore, this research pursued to explore on determinants of financial performance of NSE Kenyan listed commercial banks.

2.0 THEORITICAL REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Theoretical Review

2.1.1 Markowitz’s Modern Portfolio Theory (MPT)

The Modern Portfolio Theory (MPT) is also referred to as the “portfolio theory” or “portfolio management theory. Harry Markowitz advanced the model in 1952. Markowitz classifies portfolio as a gathering/set of securities. This hypothesis is a contributing model where the financial specialist endeavors to go out on a limb negligible level of moral hazard to catch most extreme level returns for a given arrangement of ventures (Bodie, Kane & Marcus 2004). The model was developed by Nobel Prize laureate (1990) US financial specialist Harry Markowitz. It discloses how to locate the ideal augmentation. In a situation whereby the off-chance that compels the financial specialist to be given two arrangements of equivalent esteem that offer the same expected return, MPT clarifies how the speculator will incline toward and choose less unsafe one (Saunders and Cornett, 2006). Resource allotment, enhancement, and rebalancing are all piece of a sound speculation system based upon the time tried financial ideas of Modern Portfolio Theory. MPT is a scientific plan of the idea of broadening in contributing, with the point of choosing an accumulation of venture resources that has overall lower hazard than any individual resource (Cohen & Natoli, 2003). This is conceivable can be seen naturally in light of
the fact that diverse kinds of advantages frequently change in inverse ways. It evaluates the benefits of expansion utilizing the thought of covariance and connection. The creators indicate how effective outskirts can be resolved from advancement of profits, volatilities and connections of an arrangement of speculation and portfolio requirements (Landi & Veturelli, 2012).

MPT expect that advantage returns are ordinarily conveyed arbitrary factors (Bodie et al., 2004). The model likewise accept that speculators endeavor to amplify monetary market returns, are balanced and maintain a strategic distance from chance when conceivable As per Menggen (2007), the hypothesis expects that expenses and business commissions are not considered and that financial specialists are not sufficiently expansive players in the market to impact cost. This theory is relevant to the current study, which tries to look into the impact of portfolio variation on monetary performance of NSE recorded commercial Banks in Kenya. Risk shy banks can invest in government securities in a bid to heighten the projected return founded on a particular market risk level by accentuating that threat is an intrinsic portion of higher incentive. MPT reflects that investment in government securities exhibits risk and return characteristics based on its composition and the way those components correlate with each other.

Despite the fact that modern portfolio theory is broadly acknowledged and connected by speculations establishments, it has been scrutinized too. Especially, the delegates of conduct financial matters, social back test the MPT presumptions on speculator sanity and return desires. Some have scrutinized MPT’s meaning of hazard and inquiries are raised whether unpredictability, estimated as fluctuations or standard deviation is a decent measure of chance. It has been brought that the supposition of difference being consistent after some time is not in every case genuine. The choice market is a decent precedent, where alternative merchants do not cite a similar instability consistently (Morien 2011). Another purpose of feedback lies in the supposition that financial specialist are sane and chance unfavorable. Commentators bring up that financial specialists are sincerely determined (Maehl, 2008). This can prompt speculators settling on silly money related choices in view of bits of gossip and hunches (Morien, 2005).

This Theory was relevant to the study as the study sought to explore the contribution of investment in government securities and real estate on fiscal execution of NSE recorded commercial Banks in Kenya.

2.1.2 Information Asymmetry theory

The information Asymmetry theory that was advanced in 1980s came out to be one of the most conceivable clarification about the ever-dynamic changes, which would not be interpreted and clarified by the standard general harmony, which the financial trajectory could not clarify. Three financial specialists were especially persuasive in creating and expounding on hypothesis of hilter kilter data: George Akrlof, Michael Spence and Joseph Stiglitz. Izquierdo (2007) clarify uneven information explicates a situation where only one meeting in an exchange has an advanced data compared to the other. This situation happens frequently in exchange where the agent understands more than the buyer, irrespective of the occurrence of turnaround does. This could be probably a painful situation because one gathering can lead to serious exploitation of the other individual particularly when information is scanty.

According to Brown, Hillegist & Lo (2004), the occurrence of the data symmetry is attributed to the ex post, particularly when only borrowers are available, but the lenders are not present. This
implies that genuine returns would be watched only after undertaking a fulfillment. Note that this issue would hasty for an ethical threat. When a borrower goes ahead to participate in the practices that reduce the chances of reimbursing a credit, then a moral threat emerges. For example, a case of worthy risk is either when an investor redirects reserves through legitimate or illicit processes for personal gain directly or through proxies by making misfortunes in contracts with associated firms.

The other big issue in the financial market is the awry data, particularly when accessing and loaning. In this business field, normally the borrower has in-depth information about the state of money compared to the moneylender. In such situations, the banks undergo serious financial speculations because of the borrower’s likelihood of defaulting (Izquierdo and Izquierdo, 2007). To some extent, the banks would want to solve this problem by considering the past account of the consumer and any aspect of confirmation of pay. However, such consideration normally present a superficial and constrained data, which results to a bank charging extremely high rates on the loans to compensate for the anticipated default risk. However, on the off chance, there would be a clear-cut information and this disqualifies the bank’s intentions of charging exorbitantly on the risk premium. This Theory was relevant to the study, as it tried to examine the effects of loans on Fiscal execution of commercial Banks listed in NSE.

2.2 Conceptual Framework

Figure 1 shows the conceptual framework. It illustrates the variables of the research and how they relate

**Government Securities**
- Treasury Bills
- Treasury Bonds

**Shares**
- Shares
- Corporate Stocks

**Real Estate Financing**
- Mortgage Financing
- Fixed Asset Financing

**Loans**
- Short term loans
- Long term loans

**Performance of banks**
- Net profit
- Return on assets

**Independent Variables**

**Dependent Variable**

**Figure 1: Conceptual Framework**
3.0 METHODOLOGY

The study adopted a descriptive research design. The target population was commercial Banks, which are listed in the NSE. A census of all the 11 banks was conducted. The research relied on secondary data obtained from the audited financial statements of the said banks to create the correlation between the research variables. The information on the financial effecting of the listed banks was collected using a data collection matrix. data was collected and analyzed using descriptive and inferential statistics. Descriptive statistics involves frequencies, percentages, mean and standard deviation while inferential statistics comprised of regression analysis. The statistical package for Statistical science (SPSS) was used to analyze data with the aid of a computer. Analysis of data was conducted at 95% confidence level. Presentation of the findings was done through tables and graphs.

4.0 RESULTS

4.1 Descriptive statistics

4.1.1 Funds allocated to Government Securities

Findings in Figure 2 show that participating banks had an upward trend in funds allocated to government securities from 37,889B in 2015 to 84,328, in 2019. The mean funds allocated to government securities was 61.362B.

Figure 2: Funds allocated to Government Securities

4.1.2 Funds allocated to Stocks

Funds allocated to stocks also showed a steady rise over the study period. Banks allocated 10.089B in 2019 compared to 5.775B in 2015. A sharp rise was seen between 2017 and 2019 as shown in Figure 3. The mean funds allocated to stocks was 7.054M.
An uneven trend was seen in fund allocated to real estate financing. Banks allocated 4.687B in 2015 which rose sharply to 4.820 in 2016, then dropped to 4.792 in 2017 and rose up to 5.870 in 2019. The mean allocation to real estate financing was 4.992B.


Figure 3: Funds allocated to Stocks

4.1.3 Funds allocated to Real Estate financing

An uneven trend was seen in fund allocated to real estate financing. Banks allocated 4.687B in 2015 which rose sharply to 4.820 in 2016, then dropped to 4.792 in 2017 and rose up to 5.870 in 2019. The mean allocation to real estate financing was 4.992B.


Figure 4 Funds allocated to Real Estate financing
4.1.4 Funds allocated to Loans

Funds allocated to loans was highest in 2019 at 194B and lowest in 2015 at 154B. The average allocation in loans over the study period was 171.1B.


Figure 5 Funds allocated to Loans

4.1.5 Financial Performance

Financial performance showed a steady trend as shown in Figure 6. There was growth between 2015 and 2016 from 6.809b to 8.662b then a drop in 2017 to 7.956b then growth was experienced up to 2019 9.284B. The highest performance was seen in 2019 at 9.284B while 2015 recorded the lowest performance at 6.809B. The mean profit was 8.277b


Figure 6 Financial performance

4.2 Diagnostic Tests

Diagnostic tests were performed to check the fitness of data in meeting the assumptions of regression.
4.2.1 Test for Normality

Findings in Table 1 show the skewness of data. Findings show that funds allocated to stock had the largest skewness value 2.584 while funds allocated to Government Securities had the lowest value at 0.539. This shows that the data was normally distributed. Curran, West and Finch (1997), West, Finch and Curran (1995) and Eiselen, Uys, and Potgieter (2007) state that a distribution can be considered normal if the absolute value of its skewness lies between -3 and 3.

Table 1 Skewness of Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Statistic</th>
<th>Std -Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Securities</td>
<td>55</td>
<td>0.539</td>
<td>0.012</td>
</tr>
<tr>
<td>Stock</td>
<td>55</td>
<td>2.584</td>
<td>0.052</td>
</tr>
<tr>
<td>Real Estate</td>
<td>55</td>
<td>0.847</td>
<td>0.209</td>
</tr>
<tr>
<td>Loans</td>
<td>55</td>
<td>1.458</td>
<td>0.007</td>
</tr>
</tbody>
</table>

4.2.2 Test for Autocorrelation

The study recorded a Durbin Watson statistic of 1.088. This shows there is partial autocorrelation as the value is not between 1.5 and 2.5 as recommended by Osborne and Waters (2002).

Table 2 Durbin Watson Test

<table>
<thead>
<tr>
<th>Model</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.926a</td>
<td>.857</td>
<td>.846</td>
<td>2.58182</td>
<td>75.078</td>
<td>4</td>
<td>50</td>
<td>.000</td>
<td>1.088</td>
</tr>
</tbody>
</table>

4.2.3 Multicollinearity

Table 3 shows the VIF values. The highest VIF value was 4.672 for fund allocation in loans and lowest was 1.353 allocation in stocks. This shows the absence of multicollinearity in the data as the values are all below 10 as recommended by Montgomery et al. (2001).

Table 3 Variance Inflation Factor

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Securities</td>
<td>1.870</td>
</tr>
<tr>
<td>Stocks</td>
<td>1.353</td>
</tr>
<tr>
<td>Real Estate</td>
<td>2.949</td>
</tr>
<tr>
<td>Loans</td>
<td>4.672</td>
</tr>
</tbody>
</table>
4.3 Correlation Analysis

Table 4 shows the correlation matrix. The correlation matrix shows that there was a strong positive correlation (r=0.680) between funds allocation in government securities and financial performance. There was a weak positive correlation (r=0.469) between funds allocation to stocks and financial performance, there was a strong positive correlation (r=0.738) between funds allocation to real estate financing and financial performance, there was also a strong positive correlation (r=0.922) between loans and financial performance. These findings therefore show that funds allocated to government securities, stocks, real estate, and loans enhanced financial performance of NSE listed commercial banks in Kenya. However, funds allocated to stocks had minimal effect on financial performance of NSE listed commercial banks albeit to a small extent. Findings in Table 4.4 also show that no two independent variables exhibited extreme correlation values as all the values are between +1-0.5. According to Field (2006), linear regression analysis requires that there is little or no autocorrelation in the data. The data is therefore fit for regression analysis.

### Table 4 Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Financial Performance</th>
<th>Government Securities</th>
<th>Stocks</th>
<th>Real Estate</th>
<th>Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Performance</td>
<td>1.000</td>
<td>.680</td>
<td>.469</td>
<td>.738</td>
<td>.922</td>
</tr>
<tr>
<td>Government Securities</td>
<td></td>
<td>1.000</td>
<td>.332</td>
<td>.485</td>
<td>.675</td>
</tr>
<tr>
<td>Stocks</td>
<td></td>
<td>.332</td>
<td>1.000</td>
<td>.342</td>
<td>.500</td>
</tr>
<tr>
<td>Real Estate</td>
<td></td>
<td>.469</td>
<td>.342</td>
<td>1.000</td>
<td>.806</td>
</tr>
<tr>
<td>Loans</td>
<td></td>
<td>.485</td>
<td>.342</td>
<td>.806</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Performance</td>
<td></td>
<td>.000</td>
<td>.007</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Government Securities</td>
<td></td>
<td></td>
<td>.000</td>
<td>.005</td>
<td>.000</td>
</tr>
<tr>
<td>Stocks</td>
<td></td>
<td></td>
<td>.007</td>
<td>0.005</td>
<td>0.000</td>
</tr>
<tr>
<td>Real Estate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.4 Heteroscedasticity

The study recorded a Breusch–Pagan & Koenker Sig value > 0.05 (BP SIG = 0.555 > .05 & Koenker Sig = .393 > .05) This shows there is no heteroscedasticity as the sig value is greater than 0.05 the data is homoscedasticity as recommended by Osborne and Waters (2002).
4.5 Regression analysis

Financial performance of commercial banks was regressed with funds allocated. The findings show that there was a strong positive correlation (r=0.926) between funds allocated and financial performance, according to the findings, 85.7% of financial performance of commercial banks could be attributed to the Funds allocation. Adding another variable say, x5 will lower the strength of the model from 85.7 % to 84.6 %

Table 6 Model Summary

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>.926</td>
<td>.857</td>
<td>.846</td>
<td>2.58182</td>
</tr>
</tbody>
</table>

Analysis of variances shows that funds allocated were significant (f (4,50) =75.095, p=.0000) signifying a significant relationship between funds allocation and financial performance of commercial banks

Table 7 Analysis of Variance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>2001.830</td>
<td>4</td>
<td>500.458</td>
<td>75.078</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>333.291</td>
<td>50</td>
<td>6.666</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2335.121</td>
<td>54</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The finding therefore shows that funds allocation is important for bank performance. This is consistent with Markowitz's Modern Portfolio Theory. This finding is consistent with Galema et al. (2011) who indicated that a more diversified portfolio allows banks to enhance asset quality, performance and resilience; on the other, it minimizes portfolio. The finding is also consistent with DeYoung and Torna (2013) finding that fund allocation strategy that combines a variety of loan products that belong to different asset classes in an optimal way will help a bank survive much easier to an economic storm than if it would provide loans in the same asset category.

The beta values in the regression output can be used to solve the model of the study as shown below.

Table 8 Coefficients Table

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Std. Error</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.036</td>
<td>.754</td>
<td>-2.581</td>
<td>0.013</td>
</tr>
<tr>
<td>Government Securities</td>
<td>0.107</td>
<td>0.012</td>
<td>1.467</td>
<td>0.149</td>
</tr>
<tr>
<td>Stock</td>
<td>0.012</td>
<td>0.052</td>
<td>0.190</td>
<td>0.850</td>
</tr>
<tr>
<td>Real Estate</td>
<td>0.003</td>
<td>0.209</td>
<td>0.035</td>
<td>0.972</td>
</tr>
<tr>
<td>Loans</td>
<td>0.842</td>
<td>0.07</td>
<td>7.289</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Y = 0.036 + 0.107 X1  + 0.012 X2 + 0.003 X3 + 0.842 X4

Where X1 = government securities, X2 = stocks, X3 = real estate and X4 = loans and advances

The new model shows that without fund allocation strategy, financial performance would be 0.036B. The findings also show that a unit change in funds allocation to loans would result in a 0.842 change in financial performance of commercial banks. The findings show that all variables increase financial performance of commercial banks.

4.5.1 Effect of funds allocation to Government Securities on Financial Performance of Commercial Banks

The study looked into the effect of funds allocation to government securities on financial performance of NSE listed commercial banks in Kenya. The study found that funds allocated to government securities was insignificant (p=0.149) at 95% confidence level. There was a strong positive correlation (0.680) between government securities and financial performance. A unit change in funds allocated to government securities was found to yield 0.107 change in financial performance of banks. The finding therefore shows that funds allocated to government securities enhanced financial performance of banks positively. This is in agreement with Muriithi (2013) that banks prefer government securities (Government bonds and Treasury bills) since they have low involved risk. It is in agreement with Sankale (2013) who found a strong, significant, positive relationship between Treasury bills rate and commercial paper yield. It is also in agreement with Rop et al. (2016) finding that there was a significant difference in government securities in different banks. This finding is however in disagreement with Munene (2015) finding that long years to maturity of Treasury bonds affect investments in the same issue.
4.5.2 Effect of funds allocated to Stocks on Financial Performance of Commercial Banks

The study sought to establish the effect of funds allocated to stocks on financial performance of NSE listed commercial banks in Kenya. Funds allocation to stocks was not significant (p=0.850) at 95% confidence level. There was a positive correlation (0.469) between funds allocated to stocks securities and financial performance. A unit change in funds allocated to stocks was found to yield 0.012 change in financial performance of banks. This finding therefore shows that funds allocated to stocks enhanced financial performance of commercial banks albeit to a small extent positively. The finding is similar that of Falato and Scharfstein (2015) who argued that stock market pressure to generate earnings encourages banks to increase risk. This finding is different to that of Rop et al. (2016) where there was a significant relationship buying shares and financial performance of commercial banks in Kenya. The finding is also different from that of Tan and Floras (2012) who showed that high level of stock market volatility can translate into higher return on equity (ROE) and excess return on equity (EROE).

4.5.3 Real Estate financing and Financial Performance of Banks

The study evaluated the effect of real estate financing on financial performance of NSE listed commercial banks in Kenya. Funds allocation to real estate was insignificant (p=0.972) at 95% confidence level. There was a positive correlation (0.738) between funds allocated to real estate and financial performance A unit change in real estate financing was found to yield a 0.03 change in financial performance of banks. This finding shows that real estate financing enhanced financial performance of commercial banks albeit to a small extent positively. This finding is in tandem with Rop et al. (2016) conclusion that there was a significant relationship between real estate financing and financial performance. It is also in tandem with Ojiambo (2014) finding real estate finance influence the financial performance of listed commercial banks in Kenya. The finding however differs from that of Zhang et al. (2013) who revealed a close connection between the growth of real estate financing and the NPLs among regional commercial banks, and its sensitivity to real estate market cycles.

4.5.4 Loans and Financial Performance of Commercial Banks

The study also sought to determine the effect of loans on financial performance of NSE listed commercial banks in Kenya. Loans were significant (p=0.000) at 95% confidence level. There was a strong positive correlation (0.922) between funds allocated to loans and financial performance A unit change in loans was found to yield a 0.842 change in financial performance of banks, this finding suggests that funds allocation to loans enhanced performance of banks to a large extent positively. This is in agreement with findings of Thiong’o et al.. (2016) that growth in loan portfolio had a positive effect on financial performance of commercial banks in Kenya, but the effect was not significant. It I also in agreement with Ugoani (2016) and Ozuminba (2016) that nonperforming loans portfolio has negative effect on bank profitability. It however disagrees with Lata (2014) that nonperforming loans portfolio does not explain bank profitability.
5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary
The findings showed that there was a strong positive correlation \( r=0.926 \) between funds allocation and financial performance of commercial banks. According to the findings, 85.7% of financial performance of commercial banks could be attributed to the funds allocation. Analysis of variances showed that funds allocation were significant \( f (4,50) =75.095, p=0.000 \) signifying a significant relationship between funds allocation and financial performance of commercial banks. Loans provision \( p=0.000 \) was significant, but allocation to Government securities \( p=0.149 \) was not significant, allocation to stocks \( p=0.850 \) and was insignificant and real estate financing at \( p=0.972 \) was insignificant at 95% confidence level. Beta values showed that allocation of funds to loans \( \beta=0.842 \) was the most significant followed by allocation to government securities \( \beta=0.107 \), allocation to stocks \( \beta=0.012 \), allocation to real estate \( \beta=0.003 \) and have a constant \( \beta=0.036 \).

5.2 Conclusion
The study concludes that funds allocation to government securities is vital for Financial performance. The study found that funds allocated to government securities was insignificant \( p=0.149 \) at 95% confidence level. The study concludes that funds allocated to stocks is important for Financial performance. The study found that funds allocated to stock enhanced financial performance of commercial banks albeit to a small extent. The study concludes that funds allocated to real estate financing enhances financial performance to a small extent. The study also concludes that loans provision enhances financial performance to a large extent. Loans were the most affecting on performance of banks of the four variables selected for this study. Loans were significant \( p=0.000 \) at 95% confidence level.

5.3 Recommendations
The study recommends that banks should vigorously pursue Funds allocation strategy. This is because funds allocation was found to explain a large part of bank performance \( r=0.927 \). The management of the banks should institute appropriate internal policies to ensure that there is constant review of existing products, development of new products and overall alignment of all product decisions with the expected earnings and wealth maximization objectives of the organizations. The study recommends that banks should increase funds allocation to government securities, stocks and real estate despite their low significance so that they get better results from these investments. The study recommends that the regulatory authorities should come up with policies on funds allocation strategies, client segments and product managers who will be entrusted with the management of specific product lines. By so doing, the banks will ensure maximization of benefits from products and enhance their overall earnings.

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