

# Financial Management Efficiency and Financial Performance of Commercial Banks Listed on the Nairobi Securities Exchange

Omete Francis Ikapel<sup>1</sup>, G.S Namusonge<sup>2</sup>, M. Sakwa<sup>3</sup>

<sup>1</sup> University of Eldoret, Kenya

<sup>2,3</sup> Jomokenyatta University of Agriculture and Technology, Kenya

**Abstract:** - Banks, as financial intermediaries play a significant role in the economic development of a country, by facilitating the flow of funds from surplus economic units to deficit income units. The efficiency of the intermediation function carried out by these institutions aims at ensuring stability of the financial system, and guarantee economic development. This study sought to examine the effect of financial management efficiency on financial performance of commercial banks in Kenya. The study targeted commercial banks listed on the Nairobi Securities Exchange for the period 2006 to 2017. The dependent variable of this study was financial performance, measured by the return on assets and return on Equity. The predictor variables were financial management efficiency, inferred from capital adequacy, liquidity, financial leverage and market capitalization. Bank specific, industry specific and macroeconomic factors influence banks' intermediation efficiency, thus affecting bank efficiency and performance. This study adopted the descriptive research design, which involved collection and analysis of both primary and secondary data to infer the relationship among the variables under investigation. Statistical analysis was done with the aid of Statistical Package for Social Sciences (SPSS) software. The results showed that there is a strong and positive relationship between financial performance of commercial banks proxied by return on assets (ROA) and return on equity (ROE). The study rejects the null hypothesis that there is no significant relationship between financial management efficiency and financial performance of commercial banks in Kenya. We recommend that commercial banks in Kenya should adopt efficient financial management mechanisms to improve their performance. Specifically, banks should comply with capital requirements, maintain adequate and optimal liquidity, and leverage on the existing opportunities offered by technology to ensure efficiency. The results of this study are of great benefit to various stakeholders including but not limited to bankers, researchers, regulatory authorities and academicians.

**Key Words:** Financial Management, Banking Efficiency, Capital Adequacy, Liquidity

## I. INTRODUCTION

The financial system, through financial institutions, plays an increasingly important role in directing financial resources to their most productive use in the economy; providing facilities to make and settle financial transactions, linking surplus economic units (savers) & deficit economic units (borrowers) and management of risk and uncertainty

(Bloor and Hunt, 2011). Therefore, if these functions are well performed, it will lead to economic growth through financial system stability, in which case, the financial system will be said to be efficient, otherwise inefficiency is realized. The symptoms of inefficiency could range from high transaction costs, poor quality financial services and products, lack of receptiveness to customer needs and misallocation of resources. Financial efficiency can be argued to refer to the bank's ability to generate revenue from a given amount of assets and to make profit from a given source of income. According to Sowlati (2001), performance evaluation and efficiency measurement is an important issue for managers since it facilitates identification and removal of inherent wastages in an organizations' operations.

Banks, as financial intermediaries, facilitate channeling of funds from savers to borrowers in the economy. The efficiency with which this intermediation function is executed is pertinent, yet it has inherent cost implications. The costs of financial intermediation, measured by interest rate spread; the difference between lending rate and deposit rate, are imperative in determining financial intermediation efficiency of banks. While interest rate spreads vary typically between two percent and four percent in developed financial systems, they often reach 10% and more in developing countries and over 30% in Brazil (Laeven and Majnoni, 2005). In Kenya in 2016, the government resorted to regulating interest rates charged by commercial banks on loans and deposits.

Similarly, the efficiency with which bank operating income is generated from the traditional intermediation activities and non-intermediation activities; net interest income and non-interest income is essential. The growing complexity of banking institutions notwithstanding, the key drivers of bank performance can be envisaged as earnings capability, efficiency, risk-taking and leverage. According to the market power hypothesis, concentrated banking sectors may make banks earn high profits through setting prices of financial products and services at levels which are un-favorable to customers. Similarly, the efficient-market structure hypothesis suggests that more efficient banks are able to generate higher market shares and earn high profits induced by competitive prices enabled by efficient performance rather than market

power practices. Beck, (2007) posits that less developed financial systems are typically characterized by high overhead costs and interest spreads, reflecting inefficient financial service provision. This study focuses on efficient-market structure paradigm to establish the extent to which various tenets of financial intermediation efficiency influences firm performance. Noteworthy, bank executives today ensure that the institutions they are managing are making profits, since a loss making entity will eventually deplete its capital base and put the jobs of the managers at risk.

The concept of banking efficiency draws interest from a wide range of stakeholders including regulators, customers, managers and shareholders who separately have divergent perspectives and goals. For regulators, inefficient banks are riskier and hence have a high risk of failure, yet the efficiency of banks is linked to economic growth. Therefore, without a sound and properly functioning banking system, economic growth is difficult to achieve. The concept of efficiency is used to characterize the utilization of input resources to produce a given amount of outputs. From the customers' perspective, only efficient banks can offer better services at affordable cost. Similarly, shareholders view efficient banks as those capable of offering better return on investment and thus create wealth. For bank managers, in a dynamic and competitive business environment, only efficient banks will survive and maintain their market share, and inefficient ones will eventually be eliminated. The efficient banks are better able to compete because of their lower operational costs and can steal business away from less efficient banks. Therefore, the relative efficiency of banks is always a matter of grave interest to the regulators, customers, shareholders and managers.

The Kenyan banking system has undergone significant transformation in the past decade due to a combination of various factors such as globalization, deregulation of financial systems and emergence of technological innovations such as mobile phone banking and internet or online banking. For improved economic performance to be achieved, bank competition and efficiency are vital components to the achievement of this goal. Economic development and financial development heavily rely on an efficient and fully functioning financial system. With a limited and under developed capital market, the banking sector plays pivotal role in intermediation process between savers and investors (Kamau, 2011). Efficiency measurement in the financial sector correlates with the substantial impact that an efficient financial system has on the microeconomic as well as the macroeconomic level of the economy. The standard view of efficiency measurement for commercial banks, by employing ratio analysis, can be misleading as the cross-sectional differences in input and output combinations and their prices are not properly defined (Zuzana and Tomas, 2010).

To this extent, the differences in the performance of banks could be attributed to their different efficiency levels. In a competitive business environment, such as the banking sector

in Kenya, competition forces commercial banks to reduce their operational costs leading to increased cost efficiency. This improved cost efficiency translates to efficient financial resource allocation to stimulate economic growth and development (Kofi, 2013). Therefore, cost efficient banks are also more likely to achieve high levels of profit efficiency, since a competitive environment stimulates banks to become more efficient by reducing operating costs, enhancing overall bank management, improving risk management, and providing new banking products and services (Denizer et al., 2000). Kamau (2009), using a sample of 40 commercial banks in Kenya for the period 1997-2006, analyzed factors that influence efficiency and Productivity of the banking sector in Kenya. The findings showed that foreign-owned banks influenced the performance of the local banking sector, a result attributed to the fact that foreign banks generally bring with them superior know-how and technical capacity (Technical Efficiency). The foreign banks inflict competitive pressure on domestic banks as they receive liquidity and other support resources from their parent banks because of their access to international markets.

Further, Kamau, (2011), argued that the efficiency of commercial banks in Kenya has not fallen below 40 percent in the period of the study. The findings further showed that, in terms of ownership structure and size, foreign banks were more efficient than local private banks, while local private banks were more efficient than local public banks; hence large size banks were more efficient than medium and small size banks. From this study, it can be noted that, if efficiency is anything to go by, the banking sector competition is aimed at maximizing efficiency levels for improved performance. Further, Wu, (2005), examined productivity and efficiency of banks in Australia during 1983-2001 and reported that efficiency increased in times of deregulation. Loukoianova (2008) made a comparison of the banking sectors in Western Europe, the U.S. and Japan depending on the specialization of banks.

The banking sector in Kenya has experienced high interest rate spread over the years, whereby the lending rates are more than double the savings rate. According to Sologoub, (2006), this is an indication of intermediation inefficiency. To the extent that the three pillars of efficiency, stability and access in the Kenyan vision 2030 blueprint are achieved, significant financial reform initiatives have been undertaken by the government because banking sector efficiency is the pillar for economic growth. The banking sector plays an essential role in the financial system of any country. Therefore, for a country to experience economic stability, the financial system must demonstrate stability and consistency in the provision of financial services to enhance economic growth and development. To this end, firms make heavy use of bank borrowings to finance their operations either on short or long term basis. Therefore, bank capital allocation efficiency can have significant practical consequences for the economy, since it is a significant determinant of economic growth based

on the fact that it directs the level of credit availability and access (Papaioannou&Dimelis2007). A stable financial system therefore means enhanced financial development and access.

According to Acosta and Loza (2005), the capital allocation path is closely dependent on a well-developed financial sector, the credit market and on fiscal sustainability. The significance of banking sector efficiency to macroeconomic stability and economic development is critical. So far, most studies on efficiency largely focused on developed countries. However, a few have been undertaken in African context and a handful in East Africa and Kenya in particular. Notably, the following studies on efficiency are significant; In Kenya, (Kamau, 2011), Tanzania (Aikaeli, 2008) and Namibia (Ikhide, 2008). Yet, although there is a growing body of literature focusing on efficiency and productivity and the performance of banking sector in other economies, no similar studies have been conducted in Kenya. Therefore, understanding financial intermediation efficiency and its effect on financial performance is critical so as to enable the setting up of appropriate policies to regulate and reform the banking sector in Kenya.

When a financial institution collapses, the economic consequences are usually very severe. The collapse or poor performance of a financial institution could arise due to myriad of causes; financial information efficiency which affects availability of critical information for decision making such as interest rates, credit reference bureau reports and the quality of such information; the resources allocation efficiency which drives away potential customers due to bureaucratic procedures that cause inconveniences to customers due the direction and amount of resource allocation; financial services efficiency which determine the level of innovation in financial services products, payment system reliability; financial management efficiency which relates to capital adequacy compliance, liquidity management & provision for loan losses, corporate governance structure efficiency which could potentially influence the policy of the institution in a certain manner in terms of investment decisions and thus expose the business to risk. The supply of credit to the private sector continues to be very low in most sub-Saharan African economies (World Bank, 2010). This is a typical capital allocation concern that arises due to certain actions or inactions by bank managers. When the central bank becomes 'the borrower of first resort', commercial banks reallocate their portfolio investments to government securities during high inflation (Rodriguez, 1992), thus constraining resource allocation efficiency since one sector of the economy is starved off the much needed resources for investment, while the same is concentrated in other sectors.

Further, Sawada (2008) indicates that in Japan, bank managers hesitated to invest in stocks because they were considered to be too risky to invest in. Financial fraud in the banking sector has grown to phenomenal levels in the recent past. Some could be internally instigated while others are

random thus impacting negatively on the intermediation efficiency and financial performance. Activities (banking products) of banking industry in the developed and developing countries have long been seen for its impact as a channel of monetary policy transmission. Firms in these countries rely heavily on bank lending to finance their business pursuits. Ennis and Keister (2010) argue that, given the nature of their operations, the financial intermediaries seldom hold sufficient balances to guarantee full withdrawals, a condition that exposes them to potential "runs." And because the investments of intermediaries are naturally opaque, it is difficult to distinguish the problems specific to one intermediary from problems affecting the industry as a whole, with the result that the observation of distress at one entity could lead to runs on another.

Therefore, financial intermediation activities carry a significant social risk, with the potential for systemic disruptions of the financial system and economic development (Cetorelli et al, 2012). The significance of banking sector in the economic and financial development of any nation is highly critical and cannot be overemphasized, since an efficient banking sector is necessary for better usage of financial resources of an economy through reallocation, risk transfer. For efficient financial intermediation, banks should be sound, dynamic and efficient in identifying the right set of opportunity-based products, have reliable and efficient information dissemination mechanisms, optimal and efficient in sectoral allocation of resources, have efficient product and service offerings, efficient in financial management and an appropriate corporate governance mechanism. Therefore, financial intermediation efficiency remains an important issue in developing countries and developed countries alike to guarantee the smoothness of the monetary policy transmission process and also to provide better pricing and services to the banking sector customers.

### 1.2 Objective

To evaluate the effect of financial management efficiency on financial performance of commercial banks listed on the Nairobi Securities Exchange.

### 1.3 Research Hypothesis

**H<sub>01</sub>:** Financial management efficiency has no significant effect on financial performance of commercial banks in Kenya such that the coefficient of financial management efficiency (FME) is not significantly different from zero.

*Mathematically:  $\beta_{FME} = 0$ .....1.1*

## II. LITERATURE

With respect to financial management efficiency, we focus on some internal attributes that depict financial propriety of a bank. Firstly, the size of the bank as measured by the bank's total assets is an important determinant of efficiency. The natural logarithm(ln) of the bank's total assets is used in this study, which is in line with Tan and Floros (2013) on bank

size as a determinant of efficiency. Large banks are considered efficient as they enjoy both economies of scale and scope. The large capital base, measured by the assets is able to absorb the shocks occasioned by economic and related business cycles. Similarly, Lee and Kim (2013) studied the effect of bank size on profitability in Japan, ostensibly to find out how bank size influenced profitability. The findings of this study and others, present conflicting results. Juxtaposed with the Kenyan context, the banking sector in Kenya has seen banks with larger asset bases being more profitable.

However, Bourkhis and Nabi (2013) concluded that smaller banks are less risky and more stabilized. Secondly, Capital adequacy and financial Leverage ratio, indicates the size of capital compared with the bank's total assets. Kosmidou (2008) defines capital adequacy ratio as the sufficiency with which the amount of equity is able to absorb any shocks that the bank may experience. Due to the complex nature of the capital structure of a bank, strict and tight regulation is imperative. According to Kamau, (2011), capital plays a crucial role in reducing bank failure and losses to depositors occasioned by the failure event. Beckmann (2007), observes that highly capitalized banks may realize low profitability since the high capital ratio renders them to be risk-averse, as they tend to ignore potential risky investment opportunities because investors demand a lower return on their capital in exchange for lower risk.

On the contrary, Gavilaet *al* (2009) argues that, although capital is expensive in terms of expected return, highly capitalized banks face lower cost of bankruptcy and lower need for external financing, and in particular, emerging markets where external borrowing is difficult, thus highly capitalized banks should be profitable than lowly capitalized banks. According to Neceur (2003), there is a strong positive relationship between capitalization and return on assets (ROA). Similarly, Sufian and Chong (2008) found the same results after examining the effect of capitalization on the performance of commercial banks in Philippines. Olweny and Shipho (2011) found that bank specific factors such as capital adequacy, asset quality and liquidity management had a positive and significant effect on the performance of commercial banks in Kenya. Apergis, (2014) avers that bank regulators attempt to ensure that banks maintain more than the minimum capital requirements so as to reduce the probability of insolvency.

Similarly, Gardener (2012), on investigating the capital adequacy ratio of commercial banks with respect to technical and cost efficiencies, showed that banks with higher capital were more efficient than those with lower capital. Williams (2014) contends that banks with higher capital adequacy ratios are more stable and are not exposed to the risk of insolvency. On the other hand, Financial leverage may be defined as the ability of a firm to use fixed financial charges to magnify the effects of changes in earnings before interest and tax (EBIT) on the earnings per share (EPS).

According to Abu Alkheilet *al.* (2012), financial leverage is the ratio of total assets to total shareholder equity. A firm's financial leverage involves the use of funds obtained at a fixed cost in the hope of increasing shareholders' wealth. Specifically, it is the use of long-term fixed interest bearing debt and preference share capital along with equity capital. Abu Alkheilet *al.* (2012) contend that the financial leverage ratio is used to determine the amount of assets financed by shareholder's equity and that the ratio has a negative correlation with bank efficiency. Financial leverage may be favorable or unfavorable. Favorable financial leverage occurs when the company earns more on the assets purchased with the funds, than the fixed cost of their use, a phenomenon known as positive financial leverage. On the other hand, Unfavorable financial leverage occurs when the company does not earn as much as the funds cost. Thirdly, Liquidity risk, also known as credit risk, is determined as the ratio of total loans to total deposits of the bank. As banks main business is accepting deposits and advancing loans, this ratio indicates the extent of risk of lending from bank deposits. According to Houet *al.* (2014), reducing the credit risk in banks leads to maximization of efficiency ensuring that clients can always be able to access their deposits on demand. From this argument, it follows that if a bank is exposed to higher liquidity or credit risk it means that banks use borrowed funds rather than deposits for lending, leading to cost inefficiency due to increased finance costs. Chitan (2012), found that liquidity risk had a significant negative impact on profitability, implying that bank efficiency is affected. Since banks accept demand deposits, liquidity becomes one single most important decision variable for many bank managers. According to Kamau (2009), the opportunity cost of holding high liquidity is the potential high return investments that the bank would otherwise have undertaken. Generally, a trade-off exists between profitability and liquidity risk management; an observed shift from short term securities to long term securities, or increase in loans and advances raises a bank's profitability but increases its liquidity risks at the same time. Consequently, high liquidity ratios are indicators of less risk and low profitability, putting the management of commercial banks at crossroads between liquidity risk management and profitability (Hempel et al, 1994). According to Myers and Rajan (1998), increased liquidity has adverse effects for financial institutions. They opine that, although more liquid assets increase the ability to raise cash on short-notice, they also reduce management's ability to commit credibly to an investment strategy that protects investors" which, finally, can result in reduction of the "firm's capacity to raise external finance" in (Uzhegova, 2010).

Therefore, the extent to which credit risk affects the general financial health of the bank and depends on the quality of assets held by the bank. Bank asset quality depends on largely the trends of non-performing loans and the nature of bank borrowers. Waweru and Kalani (2009), record that, many of the financial institutions that collapse, owe it to non-performing loans and extensive insider lending. The recent

closure of Chase bank (2016), imperial bank (2015) and Dubai bank (2015) may be largely attributed to liquidity and credit risk exposure. According to Kosmidou (2008), there is a significant negative correlation between asset quality and bank profitability, confirming that increased exposure to credit risk is associated with a decline in firm profitability, requiring that banks can improve profitability through increased screening and monitoring of credit risk.

Fourthly, ownership structure has been cited in literature of banking efficiency studies as a significant determinant of efficiency. Three main types of ownership structures can be identified; private, foreign and government (Gardener *et al.*, 2012). In a study of banking efficiency in the South East Asia region, Gardener *et al.*, (2012) determined that foreign banks are the most efficient banks compared to private and government banks. This finding may be attributed to the fact that foreign banks enjoy economies of scale and scope. Referring to profitability literature, according to Lee and Kim (2013), in a study of banking efficiency in Korea observed

that foreign international banks are capable of enhancing their performance than the domestic banks.

Fifthly, Vu and Nahm (2013), in a study of the relationship between stock market capitalization and bank efficiency observed that there was a positive relationship between market capitalization and bank efficiency. According to Nguyen *et al.* (2012), market capitalizations increases the strength of commercial banks and guarantees their steady performance over time. Similarly, exogenous variables are those that describe the environmental conditions within which the banks operate. These factors cannot be controlled or influenced by whichever management approach adopted. Finally, bank age is an important factor in determining bank efficiency. The age of banks is the number of years the bank has been in operation. Akhigbe and McNulty (2005) observed that older banks are more efficient than new banks in USA and stable (Lee and Kim, 2013). In Kenya, old banks which have been in existence for long are more profitable, an indicator of efficiency.

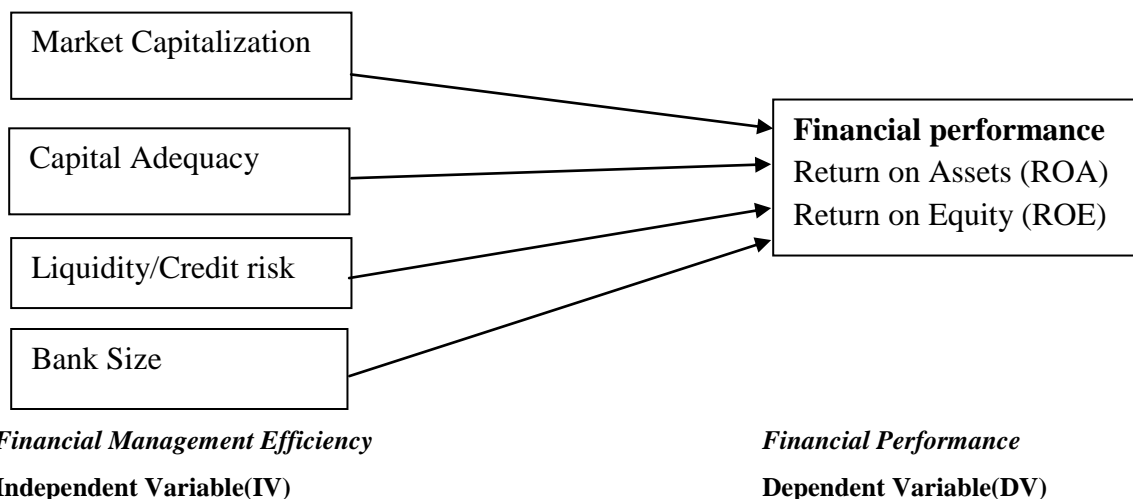


Figure 1 Conceptual Framework

### III. METHODOLOGY

This study adopted the descriptive research design. Descriptive design is the process of collecting data in order to answer questions regarding the current status of the subjects in the study (Mugenda & Mugenda, 2003). A descriptive survey design is one that seeks to portray accurately the characteristics of a particular individual, situation or a group (Orodho, 2003, Kothari, 2004). The descriptive research design has been applied in many studies. Ngumi (2013) used this design to study the effect of bank innovations on financial performance of commercial banks in Kenya. Therefore, descriptive research design was used because the approach targets a number of respondents who are geographically dispersed for ease of data collection. The design employed the use of various statistical tools to collect and analyze the data.

Further, the study employed multivariate regression for analysis to test the relationship between the response variable and the predictor variables of the study.

The data was collected for commercial banks listed on the Nairobi Securities Exchange (NSE) for the period 2006-2017. Both primary data and secondary data was used in this study. Primary data was collected using a structured closed ended questionnaires. Secondary data was collected from the annual financial statements of the banks. Content analysis was used to extract information from the financial statements to facilitate analysis.

#### 3.1 Econometric Model Specifications

The regression method was used to analyze the relationship between financial performance, as the dependent variable and

financial management efficiency. The objective of the study was to determine the effect of financial management efficiency on financial performance, proxied by ROA and ROE.

The general regression model is specified as follows:

$$Y = f(\text{Eff})$$

$$Y_{it} = \beta_0 + \beta_1 \text{FME}_{it} + \varepsilon_{it} \dots \dots \dots 1.2$$

Where  $Y_{it}$  = Financial Performance of Bank  $i$  at time  $t$ , using ROA and ROE as proxies

$\beta_0$  = Intercept

$\beta_1$  = Parameter or coefficient of FME

$\text{FME}_{it}$  = Financial Management Efficiency of bank  $i$  at time  $t$

$\varepsilon_{it}$  = Error term of bank  $i$  at time  $t$

#### IV. RESULTS AND DISCUSSION

With respect to financial management efficiency, we analyzed some internal attributes that depict financial propriety of a bank. These traits are; bank size, measured by the bank's total assets and described as large banks in the research instrument, Capital adequacy and financial Leverage ratio that indicates the size of capital compared with the bank's total assets, that determines the sufficiency with which equity is able to absorb shocks that a bank may experience hence mitigate the risk bank failure out of a bank run, financial leverage, that measures the ability of the bank to use fixed financial charges to magnify the effects of changes in earnings before interest and tax (EBIT) on the earnings per share

(EPS), Liquidity risk, also known as credit risk, ownership structure, Market capitalization, and bank age.

The desirability of the attributes and the extent to which the regulators monitor and control indicate that they are aimed at ensuring efficient utilization of financial resources of the bank. Some of these facets, depicted through the CAMEL ratios are closely monitored by the central bank to ensure strict compliance with financial management requirements of the law and other regulations.

From Table 4.1, Capital adequacy, budgeting & control, market capitalization and optimal liquidity presents the highest average rate of agreement as to influence positively the financial performance of the bank as measured by ROA and ROE. 42% of the respondents agreed that adequately capitalized banks are more profitable while 25% disagreed and 8.3% were in a dilemma presenting a mean of 3.7 with a standard deviation of 1.2. Budgetary planning and control returned 66.7% strong positive agreement. At an average of 4.7 and standard deviation of 0.5, proper budgetary planning and control proves to be a critical component of efficient financial management for banks in Kenya. As is the case with other parameters of financial management efficiency; routine financial management decisions, compliance with capital requirements by regulatory bodies such as the Central Bank of Kenya (CBK), optimal liquidity position is critical in the financial health strategy of the bank. It can further be inferred from the findings that financial management efficiency subsists in the management of receivables and payables. Short receivables duration is good for effective liquidity management and the converse is true for accounts payable.

Table 4.1 Financial management efficiency descriptive statistics

Financial Management Efficiency	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean	Std. Deviation
Adequately capitalized banks are more stable and profitable	0	25	8.3	41.7	25.00	3.6667	1.15470
Our bank adopts budgets and planning as a tool for improving financial management efficiency	0	0	0	33.3	66.70	4.6667	.49237
Our bank maintains optimal liquidity to meet on demand cash requirements of depositors	0	0	16.7	33.3	50.00	4.3333	.77850
Our bank management is effective in financial management decision making, contributing to better financial performance	0	0	0	33.3	66.70	4.6667	.49237
Our bank is adequately capitalized, hence growing profitability	0	0	16.7	50.0	33.30	4.3333	.49237
Our bank has complied with capital adequacy requirements of the central bank	0	0	0	33.3	66.70	4.6667	.49237
Our bank has a short receivables duration leading to better liquidity management	0	0	16.7	50.0	33.30	4.1667	.71774
Our bank obtains funds from the most cost effective source and utilizes it in the most profitable investments to enhance profitability	0	16.7	8.3	33.3	41.70	4.0000	1.12815

4.2 Multiple regression analysis for independent and dependent variables

The research used multiple regression analysis to determine the linear statistical relationship between the independent and dependent variables. The null hypotheses as stated was tested using the regression model.

**H<sub>01</sub>:** Financial management efficiency has no significant effect on financial performance of commercial banks in Kenya.

The linear regression model showed  $R^2 = 0.461$ . This implies that a 46.1% change in financial performance of commercial banks in Kenya can be explained by a unit change in financial management efficiency. The result is shown in Table 4.2. From the results there is an indication that one unit change in financial management efficiency translates to 46.1% change in financial performance of commercial banks in Kenya. There is therefore need by commercial banks to ensure efficient utilization of financial resources to achieve improved performance.

Table 4.2 Model Summary of financial management efficiency

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.680 <sup>a</sup>	.463	.461	3.25013
a. Predictors: (Constant), Financial management Efficiency				

Further, the test on ANOVA shows that the significance of the F-statistic (220.791) is less than 0.05 since p value,  $p=0.00$ , as indicated in Table 4.3. This implies that there is a positive

significant relationship between financial management efficiency and financial performance of commercial banks in Kenya.

Table 4.3 ANOVA of financial management efficiency

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2332.285	1	2332.285	220.791	.000 <sup>b</sup>
	Residual	2704.211	256	10.563		
	Total	5036.496	257			
a. Dependent Variable: Financial performance						
b. Predictors: (Constant), Financial management Efficiency						

On the test of the beta coefficients of the resulting model, the constant  $\beta = 3.903$ , if the independent variable of financial management efficiency is held constant then there will be a positive financial performance of commercial banks in Kenya by 3.903. The regression coefficient for financial management

efficiency was positive and significant ( $\beta = 14.859$ ) with a t-value= $14.859$  ( $p$ -value $<0.001$ ) as shown in Table 4.4

This implies that for every 1-unit increase in financial management efficiency, financial performance of commercial banks in Kenya is predicted to increase by 14.859 units and therefore  $H_{01}$  is rejected.

Table 4.4 Coefficients of financial management efficiency

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.903	1.157		3.373	.001
	Financial management Efficiency	.527	.035	.680	14.859	.000
a. Dependent Variable: Financial performance						

V. CONCLUSION

The objective of the study sought to determine the effect of financial management efficiency on financial performance of commercial banks listed on the Nairobi Securities Exchange (NSE). The gist of this objective was to assess the extent to

which prudent financial management impact on the overall performance of the bank which is explained by the level of managerial conformity with the existing regulatory frameworks governing banking operations. We also further analyzed the determinants of efficiency to identify the areas in

which the bank managers should put more emphasis when it comes to financial management propriety.

At an  $R^2$  of 0.461, the results indicate that 46.1% of the changes in financial performance of the bank can be explained by a unit change in financial management efficiency. Further, the test on ANOVA showed that the significance of the F-statistic (220.791) is less than 0.05 since p value,  $p=0.00$ . This implies that there is a positive and significant relationship between financial management efficiency and financial performance of commercial banks in Kenya. Similarly, the test of the beta coefficients, the constant  $\beta = 3.903$ , implying that if the independent variable, financial management efficiency is held constant, then there will be a positive increase financial performance of commercial banks in Kenya by 3.903. Therefore, the regression coefficient for financial management efficiency was positive and significant ( $\beta = 14.859$ ) with a t-value=14.859 ( $p\text{-value}<0.001$ ). This implies that for every 1-unit increase in financial management efficiency, financial performance of commercial banks in Kenya is predicted to increase by 14.859 units and therefore  $H_{01}$  is rejected. It is noteworthy that financial management efficiency parameters can be seen from the specific CAMEL ratios which are of keen interest to the regulators and were used in this study to obtain responses required in the research instrument. The ratios used included the capital adequacy, Liquidity risk, Market capitalization, Financial leverage and bank size among others. The secondary data on the ratios was also collected and X-efficiency of the banks were calculated for the banks for the period under review. The study in this part, focused only on the Technical Efficiency (TE) and Scale Efficiency (SE) to determine the factors influencing bank efficiency. These ratios were integrated in the research instrument to provide a basis for validating the results of the study.

## VI. RECOMMENDATIONS

From the foregoing conclusions, there is need to ensure financial management efficiency through a proper and structured policy framework. This will ensure adequate capitalization of banks to guarantee financial stability of the economy. In the 2007/2008 annual estimates, the government directed that commercial banks increase their capital from KSh 250 million to KSh 1 Billion by the year 2012 to increase the efficiency of the banks, boost their capacity to lend and to insulate banks in the event of a bank run or bank failure. Further, we recommend that banks should safeguard on other key sources of inefficiencies such as improper allocation and utilization of labour, implying that banks have human resource that is not productive or fully utilized. Here, it is recommended that banking activities are increased or the redundant human resource is rationalized to achieve optimal operational levels as this have a direct bearing on the financial resources of the bank. Banks should continue to innovate and leverage on the benefits of technology to facilitate efficiency improvement.

## REFERENCES

- [1]. Acosta, Pablo &Loza, Andres. (2005). Short and Long Run Determinants of Private Investment in Argentina. *Journal of Applied Economics*. VIII. 389-406. 10.1080/15140326.2005.12040634.
- [2]. Aikaeli, J. (2008). Commercial Banks Efficiency in Tanzania: A Paper Presented in a CSAE Conference on “Economic Development in Africa” Held at St. Catherine’s College, Oxford.
- [3]. Aikaeli, J. (2008). *Commercial bank efficiency in Tanzania*. A paper presented at a CSAE Conference on—Economic Development in Africa, held at St. Catherine’s College, Oxford, 16th – 18th.
- [4]. Abu Alkhalil, A.M., Burghof, H., Khan, W.A., 2012. Islamic commercial banking in Europe: a cross country and inter-bank analysis of efficiency performance. *International Business and Economics Research Journal*, 11(6), 647-676.
- [5]. Apergis, N. (2014). The long-term role of non-traditional banking in profitability and risk profiles: Evidence from a panel of U.S. banking institutions. *Journal of International Money and Finance*, 45, 61-73.
- [6]. Beck, T. H. L. (2007). Efficiency in financial intermediation: Theory and empirical measurement. In B. Balkenhol (Ed.), *Microfinance and public policy: Outreach, performance and efficiency*. (pp. 21). Basingstoke: Palgrave Macmillan.
- [7]. Beckmann, R. (2007). Profitability of Western European banking systems: Panel Evidence on structural and cyclical determinants. Series 2: Banking and Financial Studies. No. 17, 2007.
- [8]. Bourkhis, K. and Nabi, M.S. (2013) Islamic and Conventional Banks’ Soundness during the 2007-2008 Financial Crisis. *Review of Financial Economics*, 22, 68-77. <http://dx.doi.org/10.1016/j.rfe.2013.01.001>
- [9]. Cetorelli, C. Mandel, B. &Mollineaux, L. (2012). The Evolution of Banks and Financial Intermediation: Framing the Analysis. *FRBNY Economic Policy Review / July 2012*
- [10]. Chitan, G. (2012). Corporate governance and bank performance in the Romanian banking sector. *Procedia Economics and Finance*, 3, 549-554.
- [11]. Denizer, C.A., Dinç, M., Tarimcilar, M., 2000, “Financial liberalization and banking efficiency: Evidence from Turkey”, *Journal of Productivity Analysis*, 27 (3), 177-195.
- [12]. Ennis, H. M., and T. Keister. (2010). “On the Fundamental Reasons for Bank Fragility.” *Federal Reserve Bank of Richmond Economic Quarterly* 96, no. 1 (first quarter): 33-58.
- [13]. Gardener, E., Molyneux, P. & Nguyen-linh, H. (2012). Determinants of Efficiency in South East Asian Banking. *The Service Industries Journal*, 31(16), 2693-2719.
- [14]. Gavila, S. &Santabarbara, D. (2009). *What Explains the low Profitability in Chinese Banks?*
- [15]. Hou, X., Wang, Q. & Zhang, Q. (2014). Market structure, risk taking, and the efficiency of Chinese commercial banks. *Emerging Markets Review*, 20, 75–88.
- [16]. Ikhide, S. I. (2008). Measuring operational efficiency of commercial banks in Namibia. *South African Journal of economics*, 76(4), 586-95. <http://dx.doi.org/10.1111/j.1813-6982.2008.00214.x>
- [17]. Kamau, A. (2011), Intermediation efficiency and productivity of the banking sector in Kenya; *Interdisciplinary Journal of Research in Business* Vol. 1, Issue. 9, (pp.12- 26) September, October, 2011
- [18]. Kamau, A.W. (2009). *Efficiency in the Banking Sector: An Empirical Investigation of Commercial Banks in Kenya*. A thesis submitted in partial fulfillment of the Requirements of Nairobi University for the Degree of Doctor of Philosophy. Nairobi: University of Nairobi
- [19]. Kothari, C. (2004). *Research Methodology: Methods & Techniques*. 2nd edition. New age International Publishers, New Delhi, India.
- [20]. Kosmidou, K. (2008). The determinants of banks „profits in Greece during the period of EU Financial integration. *Journal of Managerial Finance*.



- [21]. Lee, Y.J. & Kim, D. (2013). Bank performance and its determinants in Korea. *Japan and the World Economy*, 27, 83-94.
- [22]. Loukoianova, E., (2008): Analysis of the Efficiency and Profitability of the Japanese Banking System, IMF Working Paper, WP/08/63, International Monetary Fund.
- [23]. Mugenda, O.M. & Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press
- [24]. Neceur, S. (2003): "The Determinants of the Tunisian Banking Industry profitability: Panel Evidence". [19]. [www.mafhoum.com/press6/174E11](http://www.mafhoum.com/press6/174E11).
- [25]. Ngumi, P.M (2013) Effect of Bank Innovations On Financial Performance of Commercial Banks In Kenya, (*Unpublished PhD thesis*), Jomokenyatta University of Agriculture and Technology
- [26]. Nguyen, M. Skully, M. & Perera, S. (2012). Market power, revenue diversification and bank stability: Evidence from selected South Asian countries. *Journal of International Financial Markets, Institutions and Money*, 22, 897-912.
- [27]. Olweny, T., Shipho, T. (2011). Effects of Sectoral Factors on the Profitability of Commercial Banks in Kenya. *Economics and Finance Review*, 1(5), 1-30.
- [28]. Orodho, A. J. (2003). *Essentials of Educational and Social Science Research Method*. Nairobi: Masola Publishers.
- [29]. Sotiris Papaioannou and Sophia Dimelis, (2007), Information Technology as a Factor of Economic Development: Evidence from Developed and Developing Countries, *Economics of Innovation and New Technology*, 16, (3), 179-194
- [30]. Sologoub, D (2006). —The determinants of bank interest margins and profitability: Case of Ukraine.
- [31]. Sowlati T. (2001) *Establishing the Practical Frontier in Data Envelopment Analysis*. An unpublished PhD. Thesis Submitted to the Graduate Department of Mechanical and Industrial Engineering, University of Toronto
- [32]. Tan, Y. & Floros, C. (2013). Risk, capital and efficiency in Chinese banking. *Journal of International Financial Markets, Institutions & Money*, 26, 378-393.
- [33]. Vu, H. & Nahm, D. (2013). The determinants of profit efficiency of banks in Vietnam. *Journal of the Asia Pacific Economy*, 18(4), 615-631.
- [34]. Williams, B. (2014). Bank risk and national governance in Asia. *Journal of Banking and Finance*, 49, 10-26.
- [35]. Wu, S. (2005) "Productivity and Efficiency Analysis of Australian Banking Sector under Deregulation", *ACE 05: Proceedings of the Australian Conference of Economists*, Blackwell, Carlton, Vic., pp. 1-43.