DETERMINANTS OF FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA: CASE OF LISTED BANKS ON THE NAIROBI SECURITIES EXCHANGE (NSE)

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Nalianya, S. N.,[1*] & Miroga, J.[2]

[1*] MBA Candidate, School of Business, Jomo Kenyatta University of Agriculture & Technology (JKUAT), Kenya
[2] Ph.D, Lecturer, Jomo Kenyatta University of Agriculture & Technology (JKUAT), Kenya

ABSTRACT

Kenya's banking environment is going through consolidation evidenced by the heightened mergers and acquisitions activities over the past years. Financial inclusion in Kenya has continued to rise, with the percentage of the population living within 3 kilometers of a financial services access point rising to 77.0% in 2016 from 59.0% in 2013. Despite great milestones that commercial banks have made in the past, they have also gone through turbulent times. This study was designed to examine the determinants affecting financial performance of listed commercial banks in Kenya with specific objectives on the effect of liquidity, capital adequacy, operational expense and leverage on performance of banks in Kenya. The research methodology adopted by the study was descriptive research design. The population of study was 244 bank staff in the finance and operations departments from 11 listed commercial bank licensed to operate in Kenya as at 31st December 2016. A representative sample of 71 respondents was drawn from the population. All the listed commercial banks formed the sampling frame. Census technique was used because of the small number in population. Descriptive analysis, correlation analysis and regression analysis were used to perform the data analysis. The study found out that all the independent variables; liquidity, capital adequacy, operational expense and leverage had a significant influence on financial performance of listed commercial banks in Kenya. Leverage had the highest significant positive influence on financial performance of commercial banks. The study thus recommended that managers of listed commercial banks should go for an aggressive credit policy to maximize the use of debt in capital spending activity to improve the financial performance of the firm. Further studies should consider other external/macroeconomic determinants of financial performance such as taxation and prudential regulation, which include interest rate capping, inflation rate and GDP growth rate.

Key Words: Liquidity, Capital Adequacy, Operational Expense, Leverage

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INTRODUCTION

According to Malakolunthu and Rengasamy (2012). Banks play an important role in the economic development of many countries as they largely influence control over the supply of money in circulation and are the main drivers of economic progress Bank financial performance reflects how the resources of a bank are utilized in a form, which enables it to achieve its goals. Reasons for evaluating the financial performance of banks are to measure their liquidity, financial leverage, operational expense, capital adequacy and achievement of their general objectives (Gichura, 2011).

Liquidity refers to the bank's ability to meet both long term and short term obligations, especially those of depositors. Adequate levels of liquidity are directly proportional to the bank's profitability. In measuring liquidity, management should use as a proxy variable the ratio of liquid assets that is cash and due from banks, available for sale securities, and government securities to the total assets (Ongore & Kusa, 2013). Commercial banks that hold a reduced level of liquid assets face the risk of not having the ability to finance their daily operations. Ratios are used to measure liquidity of banks and include customer deposit to total asset and total loan to customer deposits and cash to deposit ratio. In determining the financial stabilitry of businesses and personal investment portfolios, liquidity can be used as a measuring tool. Liquidity ratios used for this purpose, including the current ratio, the quick ratio and the capital ratio (Clementi, 2011).

Kosmidou (2009) stated that capital adequacy is the sufficiency of the amount of equity to absorb any shocks that the bank may undergo (Kosmidou, 2009). Capital plays a crucial role in reducing the number of bank failures and losses to depositors when a bank fails as highly leveraged firms are likely to take excessive risk in order to maximize shareholder value at the expense of finance providers. This is the main reason as to why the capital structure of banks is highly regulates (Kamau, 2009). Capital is a of the major bank specific factor since it has a direct impact on the bank profit margins. Capital represents the amount of own finances available to facilitate a commercial bank's business. A bank's capital plays the role of a buffer in cases where adverse situations occur within the institution. Additionally, capital establishes liquidity for a commercial bank because the deposits are more fragile and prone to bank runs. Good levels of capital reduces the chances of financial distress within a banking institution. Capital adequacy is measured using the capital adequacy ratio (Nyanga, 2012).

Operational efficiency indicates whether a bank uses all factors of production efficiently. Thus, the efficiency of a bank's operations will greatly affect the performance of the bank. Abera (2012) stated that operating expenses include costs of running a bank, including employee emoluments, rental expenses and other expenses such as office supplies, as a percentage of income.

Leverage is the use long-term debt to secure funds used in an organization. In the social investment world, often refers to financial involment by other private, public or individual sources (Rahman & Mazlan, 2014)

Globally, several developed countries including the USA have been experiencing a banking crisis for example Citibank group alone has written of more than 39 billion dollars in losses. Despite the problem facing global financial market, the Canadian banks have remained relatively stable. Elliot (2014) attributes this to a combination of regulatory discipline and cultural mindset among Canadian banks. In the last four years after the economic melt down from 2012 to 2016 commercial banks in the USA have engaged in the aggressive loan marketing, increasing in their lending to both corporate organizations and individuals which were negatively affected due to the problem.

The Nigerian financial system has been concerned about the performance of banks for a number of years now. Hamisu (2011) states that, the high level

of non-performing assets and general management hitches in the banking sector can also be attributed to poor corporate governance practices, poor credit management and lack of adherence to credit risk management practices. The witnessed poor performance has been linked to unprofessional ways the Nigerian bank managements manages its employee relations due to personal relationships with the clientele.

In the past two decades 1990-1999 and 2000-2009, Uganda commercial banking industry underwent significant restructuring. In the early 1990s, Uganda embarked on banking sector reforms, focusing on improving bank performance, through liberalization and strengthening prudential regulations, (Bategeka & Okumu, 2010). The reforms restructured the banking industry with regard to advances in computer technology, that led to electronic and internet based banking. Consequently, there are changes in internal bank operations; relationships with customers and inter-bank interactions. These improvements caused repercussions on the costs and revenue of commercial banks and ultimately performance differences between domestic and foreign commercial banks. The results of banking sector reforms suggest mixed outcomes. Whereas there was impressive improvement for the banking system as a whole, the performance of foreign commercial banks remained quite steady and even improved while domestic commercial banks suffered massive decline in their profitability and also accumulated more non-performing loans (Mpuga, 2002). The decline became a source of anxiety as domestic commercial banks are performing relatively poorly compared to foreign commercial banks

There are 43 commercial banks in Kenya that is according to Central Bank of Kenya report. Three of the banks are public financial institutions with majority shareholding being the Government and state corporations. The rest are private financial institutions. Out of the private banks, 24 are local commercial banks while 15 are foreign commercial banks and one mortgage finance institution.

Commercial banking was introduced in Kenya in the 20th Century with the partitioning of Africa by the European Imperial Powers. The first bank to establish operations was National Bank of India, which opened a branch in Mombasa in 1896. By 1972, there were 12 Commercial Banks operating in the Kenyan - market. As at December 2016, the banking sector comprised of 43 commercial banks, 1 mortgage finance company. (Central Bank of Kenya, 2016).

Commercial banks in Kenya play a major role in by contributing to the economic growth of the country by making funds available for investors to borrow as well as financial deepening in the country. Commercial banks therefore play a key role in the financial sector and the entire economy. Bank financial performance in the recent past has significantly improved since 2000. Data from the Central Bank of Kenya shows a significant growth in the industry in all areas including financial performance. While this is the case, some banks, especially the foreign banks, have been performing better than local ones. The factors leading to this needs an investigation as has been the focus of many studies in other countries such as China, Nigeria, Singapore, UAE, UK, USA, among others (Metropol, 2012)

As profit seekers, commercial banks are inclined to formulate policies that aim at diversifying their portfolio and thus guaranteeing some minimum rate of return. To achieve the objective of profit maximization, banks make decisions to invest excess cash in varying securities, involving not only the amount to invest but also the types of security in which to invest. These decisions are normally based on evaluation of expected net cash flows and the uncertainty associated with the cash flows (Metropol, 2012).

Statement of the Problem
The banking sector in Kenya is going through consolidation as evidenced by heightened mergers and acquisitions over the past years. Financial inclusion in Kenya has been on the to rise, with the percentage of the population living within 3

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kilometers of a financial services access point rising to 77.0% in 2016 from 59.0% in 2010. Despite great milestones, commercial banks have made in the last 6 years, they have also gone through difficult moments. Business environment for commercial banks in Kenya has been affected, with regulatory requirements having a major impact on it. This has banks to spend a substantive amount of their budget to be compliant, and on coming up with systems and processes to keep up with the ever-changing requirements. This has led to decrease in returns on investments, capital restructuring and layoffs making many banks go through a financial crisis (Schubert 2015). Concerns on the credibility of the banking sector's corporate governance structures and overall soundness point a possible widespread existence of systemic challenges (Njoroge 2016). Liquidity management is the most serious macro challenges facing Kenyan banks. With 43 registered banks, while seven accounts to 80% of all the cash in Kenya leaving depositors exposed (Lwande 2016). Policy recommendation from this study are targeted at stakeholders to enable them come up with better strategies and regulations to address some of these challenges.

Financial performance also depends on factors such as internal bank management (Sufian & Chong, 2008). These challenges specific for each county depending on the prevailing macro-economic conditions (Ongore & Kusa, 2013) hence determinants of financial performance in Kenya differ from one country to another (Lipunga, 2014). Since studies in the past focused more on global factors affecting the performance of the entire banking sector (Chantapong, 2005). According to KNBS (2016), there has not been a specific study on the financial performance of Kenyan banks based on its GDP. Therefore, this study focused on determinants of financial performance of commercial banks in Kenya.

Research Objectives

The general objective of this study was to examine determinants of financial performance of listed Commercial Banks in Kenya. The specific objectives were;

- To determine effect of liquidity on financial performance of commercial banks in Kenya
- To examine the effect of capital adequacy on financial performance of commercial banks in Kenya
- To determine the effect of operational expense on financial performance of commercial banks in Kenya
- To evaluate the effect of leverage on financial performance of commercial banks in Kenya

The research was guided by the following hhypothesess

- H_{01}: Bank liquidity has no significant effect on financial performance of listed commercial banks in Kenya
- H_{02}: Capital adequacy has no significant effect on financial performance of listed commercial banks in Kenya
- H_{03}: Operational expense has no significant effect on financial performance of listed commercial banks in Kenya
- H_{04}: Leverage has no significant effect on financial performance of listed commercial banks in Kenya

LITERATURE REVIEW

Liquidity Risk Theory

According to Acerbi and Scandolo (2007), financial institution like a bank should define and identify the liquidity risk to which it is exposed for all legal entities, branches and subsidiaries in the jurisdictions in which it is active.x A bank should consider the interactions between exposures to funding liquidity risk and market liquidity risk (Jean & Svensson, 2012). Banks that obtains liquidity from capital markets should recognize that these sources could be more volatile than traditional retail deposits. For example, under conditions of stress, investors in money market instruments may demand higher compensation for risk, require roll over at considerably shorter maturities, or refuse to extend financing at all.

Moreover, reliance on the full functioning and liquidity of financial markets may not be realistic as asset and funding markets may dry up in times of stress (Perera, Skully & Wickramanayake, 2012). Market liquidity may make it difficult for a bank to raise funds by selling assets and thus increase the need for funding liquidity. A bank should ensure that assets are prudently valued according to relevant financial reporting and supervisory standards. A bank should fully factor into its risk management the consideration that valuations may deteriorate under market stress, and take this into account in assessing the feasibility and impact of asset sales during stress on its liquidity position (Jenkinson, 2010).

Banks should recognize and consider the strong interactions between liquidity risk and the other types of risk to which it is exposed (Guglielmo, 2010). Various types of financial and operating risks, including interest rate, credit, operational, legal and reputational risks, may influence a bank's liquidity profile. Liquidity risk often can arise from perceived or actual weaknesses, failures or problems in the management of other risk types. A bank should identify events that could have an impact on market and public perceptions about its soundness, particularly in wholesale markets (Akhtar, 2011). This theory addresses the variable of liquidity as a factor affecting performance of banks in Kenya. It's not strategic in financial management terms to conclude that an analysis using descriptive design is sufficient to give a standard direction on influence of liquidity levels on performance of banks. Further study using diverse research designs and data collection tools is necessary.

Balanced Portfolio Theory

According to Nzongang and Atemnkeng (2006), the portfolio theory approach is the most relevant and plays an important role in bank performance studies. The Portfolio balance model of asset diversification indicates the optimum holding of each asset in a wealth holder's portfolio being a function of policy decisions determined by a number of factors like the vector of risks associated with the ownership of each financial asset, vector of rates of return on all assets held in a single portfolio and the size of the portfolio. It implies portfolio diversification and the desired portfolio composition of commercial banks are results of decisions taken by the bank management. Further, the ability to obtain maximum profits depends on the feasible set of assets and liabilities determined by the management and the unit costs incurred by the bank for producing each component of assets (Nzongang & Atemnkeng, 2006). This theory addresses the independent variable on capital adequacy of banks and is in agreement with acceptable financial management practices.

The Market Power (MP) Theory

Market Power hypothesis when applied in banking states that the performance of bank is affected by the market structure of the industry. There are two distinct approaches within the MP theory; the Structure-Conduct-Performance (SCP) and the Relative Market Power hypothesis (RMP). According to the SCP approach, the level of concentration in the banking sector gives rise to potential market power by banks, which may raise their earnings. Banks in more concentrated markets are most likely to make "abnormal profits" by their ability to lower deposits rates and to charge higher loan rates due monopoly or collusion, than firms operating markets that are less concentrated, irrespective of their efficiency (Tregenna, 2009). Unlike the SCP, the RMP hypothesis, which indicates that bank profitability, is highly influenced by market share. Only large banks with differentiated products are thought to influence prices and increase profits. They can exercise market power and earn profits which are not competitive. This theory addresses among others, the variable of leverage and level of assets in banks.

Efficient Structure (ES) Theory

The efficient structure theory, states that banks earn high profits because they are more efficient compared to others. There are also two distinct approaches within the ES; the X-efficiency and

Scale–efficiency hypothesis. According to the X-efficiency approach, efficient firms are more profitable because of their low operational costs. Such firms tend to gain larger market shares, which can be manifested in concentrated markets, but without any causal relationship from concentration to profitability (Athanasoglou et al, 2006). The scale approach emphasizes economies of scale rather than differences in management or production technology. Larger firms can obtain lower unit cost and higher profits through economies of scale. This enables large firms to acquire market shares, which may manifest in higher concentration and then profitability. This theory addresses the variable of performance of banks but gives a narrowed viewpoint since managing profitability in a bank is a function of several factors that cant' be controlled by the internal market environment.
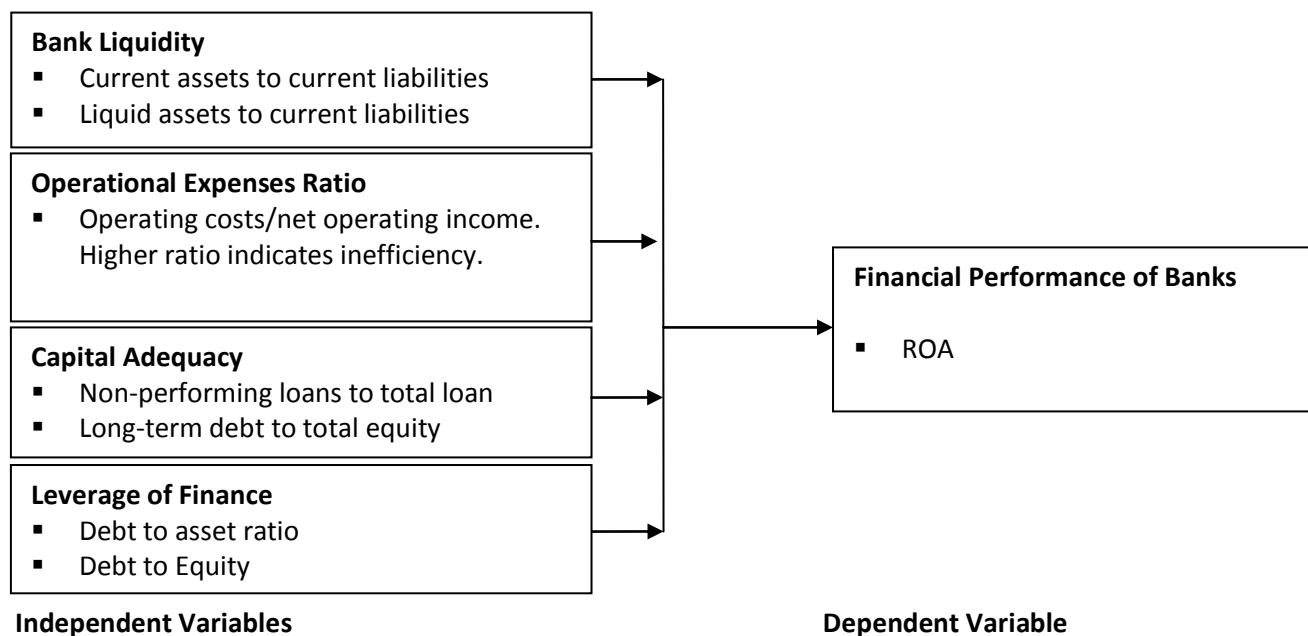
Bank Liquidity
- Current assets to current liabilities
- Liquid assets to current liabilities

Operational Expenses Ratio
- Operating costs/net operating income. Higher ratio indicates inefficiency.

Capital Adequacy
- Non-performing loans to total loan
- Long-term debt to total equity

Leverage of Finance
- Debt to asset ratio
- Debt to Equity

Financial Performance of Banks
- ROA

Independent Variables   **Dependent Variable**

Figure 1: The Conceptual Framework

Empirical Review

Liquidity cuts across all banks, therefore its importance goes beyond a single bank since, liquidity shortfall at an individual bank can have systemic consequences(CBK, 2009). There is an argument that when banks hold high liquidity, they do so at the opportunity cost of some investment, which could generate high returns (Kamau, 2009). The trade-offs that generally exist between return and liquidity risk are demonstrated by observing that a shift from short term securities to long term securities or loans raises a bank's return but also increases its liquidity risks and the inverse in is true.

Liquidity is also used to determine the financial health of a business or personal investment portfolio. Three liquidity ratios are used for this purpose, including the current ratio, the quick ratio and the capital ratio (Diamond & Rajan, 2015). When analyzing the financial health of a firm there is four different groups of ratios that the analyst will consider. The groups are liquidity ratios, financial leverage ratios, efficiency ratios, and profitability ratios. The most used liquidity ratios are: ratios concerning receivables, inventory, working capital, current ratio, and acid test ratio (Muranaga & Ohsawa, 2012).

Liquidity of the firm is a key determinant of the firm's performance, Liquidity risk can be measured by liquidity gap and liquidity ratios (Dang, 2011).The liquidity gap is the difference between assets and liabilities at both present and future dates. Liquidity is the amount of capital that is available for investment and spending. Capital includes cash, credit and equity. Most of the capital is credit

rather than cash. That's because the large financial institutions that do most investments prefer using borrowed money (Jeanne & Svensson, 2012).

Operational expense indicates whether a bank uses all factors of production optimally or efficiently. Thus, the efficiency of a bank's operations will greatly affect the financial performance of the bank. Abera (2012) stated that operating expenses show the overheads or costs of running the bank, including staff salaries and benefits, occupancy expenses and other expenses such as office supplies, as percentage of income. This ratio shows the bank's efficiency in running the business substantially, primarily loans, which until now the income of banks in Indonesia is still dominated by interest income from loans. The smaller operational efficiency ratio indicates more efficiency in carrying out its business activities. Almazari (2014), Dawood (2014), Onuonga (2014), Obamuyi (2013), Abera (2012), Sastrosuwito & Suzuki (2011), Curak, et al (2011), Pasiouras & Kosmidou (2007) found that better efficiency is associated with higher profitability. But Saunders & Schumacher (2000); Brock & Suarez (2000); Maudos & Guvera (2003); Lieberg & Schwaiger (2006) proved that operational efficiency has a significant positive effect on profitability.

In the literature on bank performance, operational expense efficiency is normally used to assess managerial efficiency in banks. Mathuva (2009) observed that the CIR of local banks is high when compared to other countries and thus there is need for local banks to reduce their operational costs to be competitive globally.

Capital adequacy refers to the sufficiency of the amount of equity to absorb any shocks that the bank may experience (Kosmidou, 2009). The capital structure of banks is highly regulated. This is because capital plays a crucial role in reducing the number of bank failures and losses to depositors when a bank fails as highly leveraged firms are likely to take excessive risk in order to maximize shareholder value at the expense of finance providers (Kamau, 2009).

In the banking industry, capital is usually regulated by an apex Bank to mitigate bank solvency problems (Bernauer & Koubi, 2012). In Kenya, the Central Bank of Kenya (CBK) regulates banks' capital. The theory of capital adequacy has its focus on measures and regulations from the apex Bank towards ensuring that banks have enough capital to take care of their numerous financial obligations. With capital adequacy, it is assumed that a bank will be able to absorb its losses and finance its business operations. Bank's capital therefore depends on a number of factors such as the bank's size, the level of risk involved in its operations, the market forces, the lending policy, its management capabilities, its portfolio (assets and cash), CBK requirement on reserves and its growth rate (Barrios and Blanco, 2010; Bernauer & Koubi, 2012).

Leverage refers to using long-term debt to secure funds for an organization. In the social investment world, often refers to financial participation by other private, public or individual sources (Rahman & Mazlan, 2014). The empirical result on the relationship between leverage and financial performance of Banks is mixed. A number of studies provide empirical evidence supporting a positive relationship between debt level and firm's financial performance (Harris & Raviv, 2010). Also some studies show a negative relationship between debt level and firm's financial performance (Fama & French, 2012). Kinde (2012) found that capital structure has an insignificant impact on the financial performance of commercial banks.

A study by Rhyne (2012) stated that financial institutions which have high capital structure with equity, tend to be more profitable. The financial viability does not mean that a bank depends on its own funds (Sanderatne, 2013). High leverage is related to higher profit efficiency (Berger, 2009) while Donhoe (2010) noted that, it is important for a bank to create a capitalization plan before looking for new shareholders. The capitalization plan is a great stride towards the process of issuing debt or equity.

METHODOLOGY

This study employed a descriptive survey design. The study targeted 244 employees in the finance and operations departments of these commercial banks. These included finance managers, operations managers, credit managers, accountants, credit officers and operations staff chosen as respondents. The listed banks include; Co-operative Bank of Kenya Limited, Barclays Bank of Kenya Limited, Diamond Trust Bank of Kenya, CFC Stanbic Bank,, Equity Group Holdings, Kenya Commercial Bank Limited, National Bank of Kenya Limited, Housing Finance Co. Kenya Limited, NIC Bank Limited, I&M Holdings Limited and Standard Chartered Bank Kenya Limited. A census of the commercial banks was carried out. Since this study was a survey of all listed banks on the NSE, a list of all the 11 commercial banks operating as at 31 December 2016 was obtained from the NSE website. This was the entire population of the study. The study employed primary data which was collected using structured questionnaires distributed to the selected respondents of listed commercial banks at the headquarters in Nairobi. The collected data was analyzed with the assistance of the Statistical Package for Social Sciences (SPSS) Version 23 software. Data analysis captured both descriptive and inferential statistics. The following multiple regression model was used.

$$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y = Financial performance of commercial banks

β_0 = Constant

X_1 = Liquidity

X_2 = Capital adequacy

X_3 = Operational expense

X_4 = Leverage

E = Error term

β_1, β_2, β_3, β_4 = Regression coefficients of Independent variable

FINDINGS AND DISCUSSIONS

Descriptive Statistics

The descriptive statistics presented in this section were summated responses on the statements measuring the study's independent variables (liquidity, capital adequacy, operational expense, Leverage) and dependent variable (financial performance) using Likert scale with values ranging from 5 to 1; that is; 5=Strongly Agree, 4=Agree, 3= Uncertain, 2=Disagree and 1= Strongly Disagree. The results were presented in the table form showing frequencies of responses as per each statement and its corresponding percentage score in brackets, means and standard deviations.

Liquidity and Banks' Financial Performance

These were summarized responses on whether liquidity influences financial performance of listed commercial banks in Kenya. The descriptive results were presented in table 1.

Table 1: Liquidity

Statement	5	4	3	2	1	Mean	Std. Dev
There is efficient utilization of cash and cash equivalents	6 (9.2)	32 (49.2)	19 (29.2)	5 (7.7)	3 (4.6)	3.51	0.94
There is efficient management of current assets and liabilities	14 (21.5)	29 (44.6)	15 (23.1)	5 (7.7)	2 (3.1)	3.74	0.99
All debts are dully settled in time	13 (20)	31 (47.7)	13 (20)	6 (9.2)	2 (3.1)	3.72	0.99
The bank adheres to minimum liquidity requirements	8 (12.3)	34 (52.3)	12 (18.5)	8 (12.3)	3 (4.6)	3.55	1.02
Stock levels are controlled at a set threshold	9 (13.8)	39 (60)	8 (12.3)	6 (9.2)	3 (4.6)	3.69	0.98
Valid list wise=65							
Grand mean =3.69							

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From table 1, most respondents agreed (49.2%) that there was efficient utilization of cash and cash equivalents while 9.2% strongly agreed to the statement. However, 29.2% of the respondents were undecided implying that there are banks which do not efficient utilization of cash and cash equivalents. More closely, only 44.6% of the respondents agreed while 21.5% of respondents strongly agreed that there is efficient management of current assets and liabilities.

Further, while 47.7% of respondents agreed that all debts are dully settled in time and 20.0% strongly agreed on the same while 20.0% were undecided revealing that not all debts are dully settled in time. More so 52.3% of respondents agreed that the bank adheres to minimum liquidity requirements, while 12.3% of respondents also strongly agreed that the bank adheres to minimum liquidity requirements. On the other hand, 18.5% of the respondents were undecided.

Lastly, most respondents agreed (60.0%) and strongly agreed (13.8%) that stock levels are controlled at a set threshold. However, 12.3% of the sampled respondents were undecided whether stock levels are controlled at a set threshold. This is supported by Janglani & Sandhar, (2013) who insisted that inadequate liquidity arising from liquidity mismanagement may be harmful to the smooth financial operations of commercial banks. Pour (2013) also indicated that there was a positive and significant relationship between comprehensive liquidity index and stock returns while there was no significant relationship between the index of cash conversion cycle as well as net liquidity balance and sock returns.

Capital Adequacy and Banks' Financial Performance

These were summarized responses on whether capital adequacy influence financial performance of listed commercial banks in Kenya. The descriptive results were presented in table 2.

Table 2: Capital Adequacy

Statement	5	4	3	2	1	Mean	Std. Dev
The bank has prudential policies on solvency	19 (29.2)	20 (30.8)	24 (36.9)	1 (1.5)	1 (1.5)	3.85	0.92
The bank adheres to minimum capital requirements	19 (29.2)	30 (46.2)	9 (13.8)	6 (9.2)	1 (1.5)	3.92	0.97
The bank adequately meets its liabilities on timely basis	18 (27.7)	30 (46.2)	7 (10.8)	9 (13.8)	1 (1.5)	3.85	1.03
The bank has efficient credit risk management mechanisms	11 (16.9)	39 (60)	5 (7.7)	9 (13.8)	1 (1.5)	3.77	0.95
The bank has effective market/operational risk assessments	13 (20)	35 (53.8)	5 (7.7)	8 (12.3)	4 (6.2)	3.69	1.12
Valid list wise=65							
Grand mean =3.82							

From table 2, most respondents agreed (29.2%) and strongly agreed (30.8%) that the bank had prudential policies on solvency. On the other hand, 36.9% of the sampled respondents were undecided implying that some banks may not have prudential policies on solvency. The results also revealed that 46.2% agreed and further 29.2% strongly agreed that bank adheres to minimum capital requirements. A mean of 3.92 indicated that most

of the banks adhered to minimum capital requirements.

More so, 46.2% of respondents agreed that the bank adequately meets its liabilities on timely basis and additional 27.7% strongly agreed on the same. However, 13.8% of the respondents disagreed on the same implying that some banks do not adequately meets its liabilities on timely basis. Further, most of the respondents (60.0%) agreed

and strongly agreed (16.9%) that the bank has efficient credit risk management mechanisms. However, 13.8% of the respondents disagreed indicating some banks do not have efficient credit risk management mechanisms.

Lastly, most respondents agreed (53.8%) and strongly agreed (20.0%) that the bank has effective market/operational risk assessments. On other hand, 12.3% of the respondents disagreed that bank has effective market/operational risk assessments. This deviation was also supported by a standard deviation of 1.12. These results are consistent with Kahuthu, Muturi and Kiweu (2015) examined the joint significant contribution of core

capital and membership growth on financial performance of commercial banks in Kenya. Results of the study revealed that there was a positive and significant relationship between capital adequacy and financial performance.

Operational Expense and Banks' Financial Performance

These were summarized responses on whether operational expense influence financial performance of listed commercial banks in Kenya. The descriptive results are presented in table 3.

Table 3: Descriptive Statistics; Operational Expense

	5	4	3	2	1	Mean	Std. Dev
Uniqueness of products or services offered to the customers increase the operational costs in the bank	30 (46.2)	25 (38.5)	6 (9.2)	1 (1.5)	3 (4.6)	4.20	1.00
Technological costs are too high for banks	9 (13.8)	39 (60)	9 (13.8)	5 (7.7)	3 (4.6)	3.71	0.96
The bank adopt restructuring cost management strategy to manage the bank's operational costs	7 (10.8)	8 (12.3)	16 (24.6)	25 (38.5)	9 (13.8)	2.68	1.19
Bank adopts outsourcing as a strategy to manage the operational costs	5 (7.7)	11 (16.9)	7 (10.8)	34 (52.3)	8 (12.3)	2.55	1.15
Bank adopt customer re-bank cost management strategy so as to manage operational costs	4 (6.2)	19 (29.2)	16 (24.6)	20 (30.8)	6 (9.2)	2.92	1.11
Valid list wise=65							
Grand mean =3.21							

From table 3, most respondents agreed (38.5%) and strongly agreed (46.2%) that the uniqueness of products/services offered to the customers increases the operational costs in the bank. A mean of 4.20 indicated that uniqueness of products/services offered to the customers increased the operational costs in the bank. Similarly, the results further revealed that 60.0% agreed that the technological costs are too high for banks and further 13.8% strongly agreed on the same.

However, 12.3% and 10.8% of respondents agreed and strongly agreed respectively that banks should adopt restructuring cost management strategy to

manage the bank's operational costs. On the other hand, 38.5% disagreed and 13.8% strongly disagreed that their bank adopt has being restructuring cost management strategy to manage the bank's operational costs. Similarly, 7.7% of strongly agreed that their bank has adopted outsourcing as a strategy to manage the operational costs and further 16.9% agreed on the same. Nonetheless, 52.3% disagreed and additional 12.3% strongly agreed that Bank adopts outsourcing as a strategy to manage the operational costs.

Lastly, most respondents agreed (29.2%) that bank adopt customer re-bank cost management strategy

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so as to manage operational costs and 6.2% strongly agreed. On the other hand, 30.8% disagreed that their bank has adopted customer re-bank cost management strategy so as to manage operational costs. This is also supported by Abera (2012) who stated that operating expenses show the overheads or costs of running the bank, including staff salaries and benefits, occupancy expenses and other expenses such as office supplies, as percentage of income. Mathuva (2009)

observed that the operation expense of local banks is high when compared to other countries and thus there is need for local banks to reduce their operational costs to be competitive globally.

Leverage and Banks' Financial Performance

These were summarized responses on whether leverage influences financial performance of listed commercial banks in Kenya. The descriptive results were presented in table 4.

Table 4: Descriptive Statistics: Leverage

	5	4	3	2	1	Mean	Std. Dev
The bank has viable financial leverage strategies	10 (15.4)	33 (50.8)	7 (10.8)	8 (12.3)	7 (10.8)	3.48	1.21
Debt & equity ratios influence bank performance	5 (7.7)	38 (58.5)	13 (20)	8 (12.3)	1 (1.5)	3.58	0.86
Capital from equity affects bank performances	4 (6.2)	38 (58.5)	10 (15.4)	12 (18.5)	1 (1.5)	3.49	0.92
The bank raises good capital from fixed-income securities	17 (26.2)	25 (38.5)	12 (18.5)	6 (9.2)	5 (7.7)	3.66	1.19
The bank has effective debt management mechanisms	9 (13.8)	38 (58.5)	13 (20)	4 (6.2)	1 (1.5)	3.77	0.82
Valid list wise=65							
Grand mean =3.60							

From table 4, most respondents agreed (50.8%) and strongly agreed (15.4%) that the bank had viable financial leverage strategies. However, 12.3% of the sampled respondents disagreed that the bank has viable financial leverage strategies implying that not all banks have viable financial leverage strategies. More so, 58.5% and 7.7% of respondents agreed and strongly agreed respectively that the debt and equity ratios influence bank performance; while 20.0% were undecided whether debt and equity ratios influence bank performance.

Further, most respondents agreed (58.5%) that the capital from equity affects bank performances and additional 6.2% strongly agreed. However, 18.5% of the respondents disagreed that capital from equity affects bank performances an indication that in some listed banks, capital from equity do not affect bank performances. The results also revealed that 38.5% and 26.2% agreed that their bank raises good capital from fixed-income securities.

Lastly, most respondents agreed (58.5%) and strongly agreed (13.8%) that their banks have adopted effective debt management mechanisms. On the other hand, 20.0% were undecided whether some banks have effective debt management mechanisms. This finding is supported by Song (2005) assertion that firms finances their assets and operations through debt; short term or long term and through issue of equity and also through reserves such as retained earnings; thus, an unlevered firm is one which does not have debt in its capital structure whereas a levered firm has debt component in its capital structure.

Financial Performance

The study collected secondary data for commercial banks for a period between 2014 and 2018. This entailed return on Asset. The results were as shown in Table 5.

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Table 5: Return on Asset

Statistics	2014	2015	2016	2017	2018	Average
Minimum	-1.59	-1.13	-2.05	-0.2	-3.9	-3.9
Maximum	28	17	23	16.27	19	28
Mean	5.52636	5.22364	5.20455	4.87227	4.45818	5.057
Std Dev	6.41152	4.78256	5.70343	4.83232	5.83209	5.45703

From Table 5, it was evident that return on asset decreased from 2014 (5.52) to 2018 (4.45). This wes an indication that listed commercial banks in Kenya were facing financial performance challenges during study period. The average return on assets ranged from -3.9% to 28.0% with a mean of 5.05% and standard deviation of 5.48%.

Inferential Statistics

Table 6: Correlations

		Lq	CA	OE	Lv	FP
Lq: Liquidity	Pearson Correlation	1	.326**	-.544**	.499**	.516**
	Sig. (2-tailed)		.008	.000	.000	.000
	N	65	65	65	65	65
CA: Capital Adequacy	Pearson Correlation	.326**	1	-.612**	.440**	.585**
	Sig. (2-tailed)	.008		.000	.000	.000
	N	65	65	65	65	65
OE: Operational Expense	Pearson Correlation	-.544**	-.612**	1	-.785**	-.708**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	65	65	65	65	65
Lv: Leverage	Pearson Correlation	.499**	.440**	-.785**	1	.704**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	65	65	65	65	65
FP: Financial Performance	Pearson Correlation	.516**	.585**	-.708**	.704**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	65	65	65	65	65
**. Correlation is significant at the 0.01 level (2-tailed).						

Multicollinearity tests whether two or more conceptualized independent variables are highly correlated with each other. This leads to problems with understanding which independent variable contributes to the variance explained in the dependent variable, as well as statistical problems in calculating a multiple regression model. This assumption was tested using correlation analysis. Most researchers insist that if correlation coefficient, (r) is close to 1 or -1, then there is multicollinearity but if correlation coefficient (r) is not above 0.9, then there is no multicollinearity In this study (table 6 on correlation analysis), the highest correlation coefficient between all pairs of independent variables (liquidity, capital adequacy, operational expense and leverage) is 0.785, which is below the threshold of 0.9, thus multicollinearity assumption was checked and met.

Multiple Regression Analysis
Multiple regression analysis was computed to assess the multivariate influence of the study's independent variables (liquidity, capital adequacy, operational expense, and leverage) on the dependent variable (financial performance of listed commercial banks in Kenya. This was after the compulsory assumptions of multiple regression analyses were checked and met. The multiple regression results were shown in table 7.

Table 7: Multiple Regression Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.787[a]	.619	.594	.4081158	.619	24.386	4	60	.000

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	16.247	4	4.062	24.386	.000[b]
	Residual	9.994	60	.167		
	Total	26.240	64			

a. Predictors: (Constant), Leverage, Capital adequacy, Operational expense, Liquidity

b. Dependent Variable: Financial performance

Multiple regression analysis showed the multiple regression results of the combined influence of the study's independent variables (liquidity, capital adequacy, operational expense and leverage). The model's R squared (R^2) is 0.619 which showed that the study explained 61.9% of variation in the financial performance of listed commercial banks in Kenya, while other factors not in the conceptualized study model accounts for 38.1%, hence, it is a good study model.

Furthermore, Analysis of Variance (ANOVA) showed the mean squares and F statistics significant (F = 24.386; significant at $p<.001$), thus confirming the fitness of the model and also implies that the study's independent variables (liquidity, capital adequacy, operational expense and leverage) have significant variations in their contributions to financial performance of listed commercial banks in Kenya.

Finally, the values of unstandardized regression coefficients with standard errors indicated that all the study's independent variables (liquidity; β = 0.164 (0.151) at $p<0.05$, Capital adequacy; β= 0.242 (0.091) at $p<0.05$; operational expense; β= -0.139 (0.102) at $p<0.05$, leverage;β = 0.315 (0.106) at $p<0.01$, significantly influenced financial performance of listed commercial banks in Kenya (dependent variable).

In this regard, the study's final multiple regression equation was;

(v) y= 0. 493+0.164X$_1$+0.242X$_2$-0.139X$_3$ + 0.315X$_4$
Where;
y= financial performance of listed commercial banks in Kenya
X_1= liquidity
X_2= capital adequacy
X_3= operational expense
X_4= Leverage

Table 8: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.493	.341		1.445	.154
	Liquidity	.164	.106	.149	1.553	.026
	Capital adequacy	.242	.091	.270	2.670	.010
	Operational expense	-.139	.102	-.157	-1.363	.035
	Leverage	.315	.106	.388	2.980	.004

a. Dependent Variable: Financial performance

Testing of Study Hypotheses

First, study hypothesis one (H_{01}) stated that bank liquidity has no significant effect on financial performance of listed commercial banks in Kenya. Multiple regression results indicated that liquidity significantly influence financial performance of listed commercial banks (β = 0.568 (0.106) at $p<0.05$). Hypothesis one was therefore rejected. The results indicated that that a single improvement in effective liquidity will lead to 0.164 unit increase in the financial performance of listed commercial banks in Kenya.

Secondly, study hypothesis two (H_{02}) stated that capital adequacy has no significant effect on financial performance of listed commercial banks in Kenya. Multiple regression results indicated that capital adequacy significantly influence financial performance of listed commercial banks (β = 0.242 (0.091) at $p<0.05$). Hypothesis two was therefore rejected. The results indicate that that a single improvement in capital adequacy will lead to 0.242 unit increase in the financial performance of listed commercial banks in Kenya.

Thirdly, study hypothesis three (H_{03}) stated that operational expense has no significant effect on financial performance of listed commercial banks in Kenya. Multiple regression results indicated that operational expense significantly influence financial performance of listed commercial banks (β = -0.139 (0.102) at $p<0.05$). Hypothesis three was therefore rejected. The results indicated that an increase in operational expenses will lead to 0.139 unit decrease in the financial performance of listed commercial banks in Kenya.

Fourthly, study hypothesis four (H_{04}) stated that leverage has no significant effect on financial performance of listed commercial banks in Kenya. Multiple regression results indicated that leverage significantly influence financial performance of listed commercial banks (β = 0.315 (0.106) at $p<0.05$). Hypothesis four was therefore rejected. The results indicated that that a single increase in leverages will lead to 0.315 unit increase in the financial performance of listed commercial banks in

Kenya. Therefore, leverage had highest effect on financial performance as compared to other variables in the study.

CONCLUSIONS AND RECOMMENDATIONS

Basing on first objective of the study, it was concluded that there is significant positive effect of bank liquidity on financial performance of listed commercial banks in Kenya. Therefore, the first research hypothesis was rejected. Most of the listed commercial banks stock levels are controlled; the cash flow and cash forecast is managed properly which drive bank liquidity. An increase in bank liquidity would make commercial banks to realize increase in their earnings. This also implies it would have adequate cash to meet both it short term and long term cash obligation.

It was also concluded that there is significant positive effect of capital adequacy on financial performance of list commercial banks. Thus, the second null research hypothesis was rejected. As capital adequacy of the commercial bank increases, its ability to absorb any shock in the market increases. Also highly capitalized commercial banks have less risk of bankruptcy and less dependency on external funding to fund its core businesses.

Basing on third objective of the study, it was found that there is significant negative influence of operational Expense on financial performance of listed commercial banks in Kenya. Thus the third research hypothesis was rejected. An increase in operational expense would make commercial banks less stable financially as it would make commercial banks unable to realize more profits. It was noted that listed commercial banks have adopted restructuring cost management strategy to reduce the bank's operational expense.

Lastly, it was concluded that there is significant positive influence of leverage on financial performance of listed commercial banks in Kenya. Therefore, the fourth research hypothesis was rejected. The guiding principle of leverage should be the course of action that maximizes the value of the firm. Highly leveraged listed commercial bank

may perform better by enjoying scale economies, enhancing their ability to boost profitability.

The following recommendations were made based on the conclusions as shown; Bank liquidity relationship with financial performance is a positive one hence managers of listed commercial banks should increase the levels of liquidity to take improve on their returns. Since the liquidity of a firm is a function of the amount of funds the firm can raise in a certain time and at specific cost, the sooner a firm can raise a given amount of funds in a certain period of time the more liquid it will be and this will improve performance

The study found that capital adequacy had significant positive relationship with financial performance of the banks listed on the NSE in Kenya. This means that an increase in capital adequacy enhances financial performance. The study therefore recommends that the managers of the banks listed on the NSE in Kenya should ensure that their banks have capital adequacy to ensure that they can meet any contingencies and to improve their banks's financial performance.

Operating costs negatively affect financial performance of listed commercial banks in Kenya. The study recommends that commercials banks need to reduce their operational expense to increase their profit margins. This can be achieved by adoption of appropriate information technology to automate various processes and restructuring cost management strategy to reduce the bank's operational expense.

Lastly, leverage has significant positive influence on financial performance of commercial banks. The study recommends that managers of listed commercial banks should go for an aggressive credit policy to maximize the use of debt in capital spending activity so as to improve the financial performance of the firm.

Areas for Further Studies
The study was able to identify four internal determinants of financial performance of commercial bank. However, there are other external/macroeconomic determinants, which further studies should consider. These are taxation, prudential regulation such as interest rate capping, inflation rate and GDP growth rate.

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