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Internal Factors, Bank Size, and Financial Performance of Commercial Banks in Kenya

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Abstract

This study sought to evaluate the effect of internal factors and bank size on financial performance of commercial banks in Kenya. Two objectives were identified and hypotheses developed. The internal factors were identified as; capital adequacy, asset quality, management quality, and liquidity. The study deployed bank size as a moderator. Explanatory research design was applied. Using panel data covering 13 years (2010-2022), secondary data were gathered of all the 38 commercial banks licensed in Kenya as at December 31st, 2022, from the annual published financial statements of commercial banks and from the Bank Supervision Annual Reports published by Central Bank of Kenya. Descriptive and inferential statistics analyses were deployed using Stata software version 17.0 and excel. Correlation and regression analyses were used to test the hypotheses. Tables and figures were used for data presentation. Based on the findings, the internal factors jointly and significantly contributed to financial performance of commercial banks. The influence of bank size was statistically significant. However, some internal factors (capital adequacy, management quality, and liquidity quality) did not contribute significantly to financial performance of commercial banks. The study recommends a strategic harnessing of internal factors by the management of commercial banks for optimal benefits. The research further proposes to the regulatory authorities the need to establish prudent controls and monitoring mechanisms that emphasises on CAMEL rating factors in assessment and ranking of banks. This study differs in scope by integrating bank size as a moderator and with a long period of coverage (13 years), a unique feature underexplored in most literature.

Keywords: *Bank Specific Factors, Bank Size, Financial Performance, Commercial Banks*

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1.1 Introduction

Growth is one of the defining factors of financial performance of any bank. A commercial bank that shows stagnation belies true performance. Growth can be in terms of geographical coverage—opening of branches, acquisition of assets or investment, increased revenue generation, etcetera, which ultimately results into large size and improved profitability. In Kenya, commercial banks (CBs) are classified in terms of tiers; one, two or three, or alternatively; large, medium or small, respectively (Chibole et al.,2022). Thus, a large commercial bank with adequate capital provides a buffer or safety margin to savers or long-term sources of funds. Capital adequacy requirement compels struggling or smaller banks to merge as an alternative to survival and to improve on their efficiency and effectiveness of operations. The need to merge has been supported and sanctioned by regulatory authorities such as Competition Authority of Kenya (CAK) and Central Bank of Kenya (CBK). In august 2020 Kingdom Bank (formerly Jamii Bora Bank) acquisition by Cooperative Bank of Kenya was officially sanctioned by CBK. A year before in 2019, Commercial Bank of Africa merged with NIC Group Plc after the approval by CAK. Mergers have saved financially struggling banks teetering on the brink of collapse which otherwise would have resulted into systemic risk in the sector. Basel III framework provides for regulatory reforms intended to address the vulnerabilities that may trigger a financial crisis by exposure to liquidity risk (CBK,2020). It aims at strengthening bank capital and liquidity standards and promoting a more resilient banking sector. The framework has necessitated a major reorganization in Kenya's banking sector with the main aim of enhancing safety and stability in the sector which requires banks to have a core capital of at least Ksh. 1 billion. Thus, economic stability of a bank is dictated by the size of the bank with the larger size reaping advantages of economies of scale (Chibole et al.,2022). Bank size is determined by the total assets a bank holds.

Internal factors also referred to as bank specific factors are known to determine financial performance of commercial banks (CBs). CAMEL rating framework is often used to proxy these factors (Ongore& Kusa,2013). CAMEL is an acronym for; capital adequacy, asset quality, earning ability, and liquidity. Capital adequacy refers to the capital that a bank controls and monitors closely to maintain solvency given unreliability of constantly fluctuating deposits which are often prone to bank run (Misra & Aspal, 2013). Banks depend upon the quality of loans they hold at any given time as this is their major source of income and hence reflects the quality of assets held (Al-Gazzar, 2014). Management quality in this scenario is about the overall efficiency of the bank under management's stewardship (Ongore & Kusa, 2013). This involves among others, the proper managerial control over loans given out of deposits to credit worthy clients (Youssef & Samir, 2015). Earning ability enables a bank to build a good capital base thus shielding it from inadequacy and increases its ability to seize investment opportunities and hence the desired performance (Misra & Aspal, 2013). Finally, liquidity determines bank's ability to discharge its debts as they become due and according to Jedidia and Hamza (2014), it affects profitability. Although CAMEL stands for; capital adequacy, asset quality, management quality, earning ability, and liquidity, of particular interest in this study are; capital adequacy, asset quality, management quality, and liquidity.

Studies have shown that bank size has a positive influence on financial performance of CBs (Ishmail et al.,2023, Hermuningsih et al.,2022, and Wuryani et al.,2021). Yet, many studies have been conducted using bank size as an independent variable (Hermuningsih et al.,2022, Wuryani et al.,2021, Abdulkabir et al.,2020, and Phan et al.,2020) while others have deployed bank size as a moderator (Ishmail et al.,2023 and Ngware et al.,2020). There are still conflicting outcomes that need to be settled but not yet. This study seeks to determine the moderating

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effect of bank size on the relationship between internal factors and financial performance of CBs in Kenya, in a concerted effort to bring a resolution to the existing disputes in prior studies.

1.1.1 Internal Factors

Internal factors or otherwise referred to as interbank management factors (Youssef & Samir, 2015) are factors which are amenable to management manipulation and consequently bring about differences in financial performance among CBs (Ongore & Kusa, 2013). They are also referred to as bank specific factors and usually derived from CAMEL rating model. Capital Adequacy is a specific factor that reflects the bank's ability to withstand unanticipated losses and avoid insolvency (Misra & Aspal, 2013). It is the capital holding as stipulated by the regulatory authority and normally stated as a fraction of "risk weighted assets" (Tanim-Ul-Islam and Ashrafuzzaman, 2015). It has been found that whenever equity goes down relative to bank's assets, the probability of bankruptcy intensifies (Al-Gazzar, 2014). The quality of loans that a bank gives out determines the quality of asset portfolio that it holds in its balance sheet. Management Quality is demonstrated by the management's ability to attract deposits and give out quality loans after proper vetting of prospective customers to lower probability of defaults or losses (Al-Gazzar, 2014 and Youssef & Samir, 2015). Liquidity reflects the ability of a bank to settle its immediate financial commitments without strain. The composition of bank's assets clarifies income sources and measures the liquid assets held in loans (Khan,Ijaz & Aslam,2014). Liquidity has been found by some studies to determine bank's profitability and hence its condition (Jedidia and Hamza,2014, Tanim-Ul-Islam and Ashrafuzzaman, 2015).

Capital Adequacy is derived as Equity to Total Assets (ETAR) (Javaid et al,2011 as cited by Al-Gazzar, 2014). The greater the ratio the better the outcome for the bank (Al-Gazzar, 2014). Different financial ratios have been used by researchers to measure Asset Quality. This study applied; Loans Loss Reserve to Total Loans (LLR) (Moin, 2008, Al-Gazzar, 2014 and Youssef & Samir, 2015). This ratio is used to represent credit risk and the higher the value the lower the danger but the poorer the financial performance (Johnes, Izzeldin, & Pappas,2012). To measure Management Quality, the study deployed; Loan to deposits ratio (LDR)(Al-Gazzar,2014). The higher the ratio, the efficient the management, however, that may also portend liquidity dangers should the depositors react adversely by mass withdrawals. On the other hand, liquidity was measured by: Loan to Asset Ratio (LAR) (Youssef & Samir, 2015). High ratio in this variable is associated with bank risk.

1.1.2 Bank Size

Bank size is determined by the total assets that a bank possesses (Wuryani et al.,2021). With large asset size, banks become more efficient and attractive to investors as they command positive public image. Therefore, large CBs are likely to have steady asset values, high stock prices, and low debt ratios among other quality attributes signalled to potential investors. Large banks are in a better position to manage credit risks by establishing rigorous credit policies and robust credit risk management framework capable of reducing non-performing loans and default levels and thus improving the quality of assets at their disposal (Ishmail et al.,2023). Large banks post better performance because they can leverage large amount of assets and huge amount of customer deposits at their disposal (Abisola ,2022).

Studies have also reported bank size as contributing positively to the earnings of CBs; for instance, Youssef and Samir (2015) and Getter (2014). Getter argues that because large banks do not depend on traditional lending activities common with small banks but instead engage in other fee-based activities, they tend to make profits even in lean periods and thus profitability depends upon bank size. Ngware et al. (2020) reaffirm that bank size has a positive significant

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moderating effect on financial performance of CBs. Their correlation analysis provides further evidence of a significant positive relationship between bank size and financial performance of banks in Kenya. However, Tigist (2014), Tesfaye (2013) and Mahmud, et al. (2016) as cited by Assfaw (2018) argue that bank size affects financial performance negatively and significantly due to diseconomies of scale arising from inefficient managerial controls once an organization grows out of control. This implies that size does not naturally lead to a better financial performance if not well managed. Abisola (2022) operationalised bank size in terms of; total assets, customer deposits, and number of employees. However, past studies have also explored the moderating effect of bank size on the relationship between bank specific factors and financial performance as represented by total assets only (Hermuningsih et al. ,2022; Ishmail et al.,2023). Therefore, this study expresses total assets as a natural logarithm to measure bank size.

1.1.3 Financial Performance

Iuliana and Maria (2016) declares that performance financial or otherwise is poly-semantic and thus a problematic concept to describe. It should be examined and defined bearing in mind the objectives to be achieved although such objectives could be "unpredictable, contentious and conflicting" (Pintea & Achim, 2013). Put in a different perspective, financial performance is an efficient use of a firm's scarce resources resulting into high outputs vis-à-vis inputs. Banks have a duty to ensure that their financial returns satisfy the value creation expectation of their shareholders and potential investors (Verweire and Berghe, 2004). Return on Equity (ROE) is the ratio relied upon by the potential investors on investment decisions about a firm's financial performance (Rani &Zergaw, 2017). It measures the monetary return consequent upon the investment outlay. ROE is taken to be profit after taxes divided by average owners' equity at book value over a reporting period (Van Horne,2005 as cited by Moin,2008). To Moin, higher ROE denotes managerial quality although it might also be due to financial leverage or above average return on assets. Furthermore, in the absence of debts, ROE and Return on Assets (ROA) are equal. The study zeroes in on ROE and avoids using ROA because bank size will be proxied by total assets and thus may result into multi-collinearity between the two.

1.2 Research Problem

In Kenya, studies have been conducted to tackle the effect of internal factors on financial performance of CBs using various approaches. Some studies incorporated all the bank specific factors (for example Kamande et al. 2016) but did not monitor the influence of bank size and consequently watered down their findings. The moderating influence of bank size on financial performance has been examined using different methods which did not address the effect of bank specific factors and thereby affected their outcome (Ishmail et al., 2023, Chibole et al., 2022, and Ngware et al., 2020). Subsequently, this study has a singular task to redeem the yawning gaps and try to settle the discrepancies, previously unattended. Besides, most of the studies were carried outside the Kenya's context with some potential uncontrollable; technological, economic, political, and demographic factors coming into play (Hermuningsih et al.,2022, Rahman et al. 2020, Gautam, 2018, and Youssef & Samir, 2015). It has therefore become imperative to seek to address the empirical gaps identified and to clarify the questions so far unanswered. Theoretical variances also exist. Free cash flow theory incorporated in this study also brings another twist in which agency problems lead managers of firms to invest excess funds in suboptimal projects rather than dividend pay-out to shareholders. Consequently, some firms grow in sizes beyond optimal levels which compromises their financial performance. Hence, the moderating influence of bank size as being examined in this study is pertinent. Consequently, the study poses this question: what are the relationships among; internal factors, bank size, and financial Performance of commercial banks in Kenya?

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1.3 Research Objectives

The general objective of this study was to establish the relationship among; internal factors, bank size, and financial performance of commercial banks in Kenya. The Specific Objectives are:

i. Ascertain the effect of internal factors on financial performance of commercial banks in Kenya.
ii. Assess the effect of bank size on the relationship between bank specific factors and financial performance of commercial banks in Kenya.

1.4 Value of the Study

The study contributes towards knowledge and theory building by providing evidence on the effect of bank specific factors and bank size on financial performance of commercial banks in Kenya. CAMEL rating model ensures that the bank's financial performance and health are regularly reviewed based on various information sources. CAMEL model helps to expose a bank's weaknesses and gives indications of the necessary interventions. Its parameters are useful in assigning bank rankings and overall standing in accordance with their financial performance and condition. Finally, Free Cash Flow theory presupposes the optimal size of the firm and the effect of size on financial performance. This underpins the study's objective that seeks to determine the interactive effect of bank size on the relationship between the explanatory variables and the dependent attributes. In addition, free cash flow represents excess liquidity which, as has been postulated in the theory, does not necessarily result into profits due to suboptimal assessment by managers that degenerates into agency cost.

The regulatory authority should gain a perspective on the effect of bank size on financial performance to help in reviewing the issue of capital adequacy requirement. The issue of asset quality and its impact to financial performance is borne out as it applies to loans. Central Bank of Kenya (CBK) is called upon to consider the ramifications and if necessary, strengthen the monitoring machineries to alleviate the risks of non-performing loans resulting into insolvencies of CBs. The study also delves into the liquidity aspect of CBs and its effect on financial performance which will be of interest to CBK since money circulation is in their province of control. Thus, the consequences of the amount of cash held by CBs on profitability should be determined and appropriate measures instituted to restore stability.

2.0. Literature Review

2.1. Theoretical Framework

Internal factors have been proven to affect financial performance of commercial banks (CBs) in various studies. These factors are represented by; Capital Adequacy, Asset Quality, Management Quality, and Liquidity derived from CAMEL rating model which is used as an underpinning model in this study. Another theory used in anchoring this study is Free Cash Flow Theory. The theory was propagated by Jensen (1986) to explain the conflict of interest attributable to agency problems between the managers and shareholders as to, among others; the ideal size of a firm and dividend outlays. Accordingly, this problem dominates in situations where the firm generates considerable "free cash flows" with little investment opportunities. Forces that drive takeover activities are many and varied according to Jensen. They include but not limited to; deregulations, synergies, economies of scale and scope, tax remissions, incompetence, and increased globalization. However, the major incentive of takeovers is normally agency problems between managers and principals over the treatment of free cash flow, with shareholders preferring dividend payout vis-à-vis resistance by the managers. Consequently, managers have incentives to grow the firms even beyond the perceived optimal sizes that maximizes shareholders wealth. The impressive growth of a firm is positively

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associated with management compensations in terms of promotions and salary increases. Managers are therefore motivated by firm sizes that lead to minimum average cost and hence efficiency to improve the likelihood of survival. Literature review revealed that internal factors do indeed affect financial performance of CBs in diverse ways and in numerous degrees. This aspect has been illustrated in our hypothesis H_{01}. The study monitored and estimated the moderating influence of Bank size on the relationship between internal factors and financial performance of CBs. Bank Size is indicated by logarithm of total assets. This factor has been shown to influence financial performance of CBs both directly and indirectly. CBs have been shown empirically and theoretically to perform depending on their sizes. Central Bank of Kenya (CBK) provides this evidence in their annual reports year in year out. However, Cash Flow theory alludes at an ideal size of a firm, beyond which the management engages in acts of self-sabotage whereby even suboptimal projects are considered to the detriment of the organization. The moderating aspect of bank size is depicted in hypothesis H_{02}.

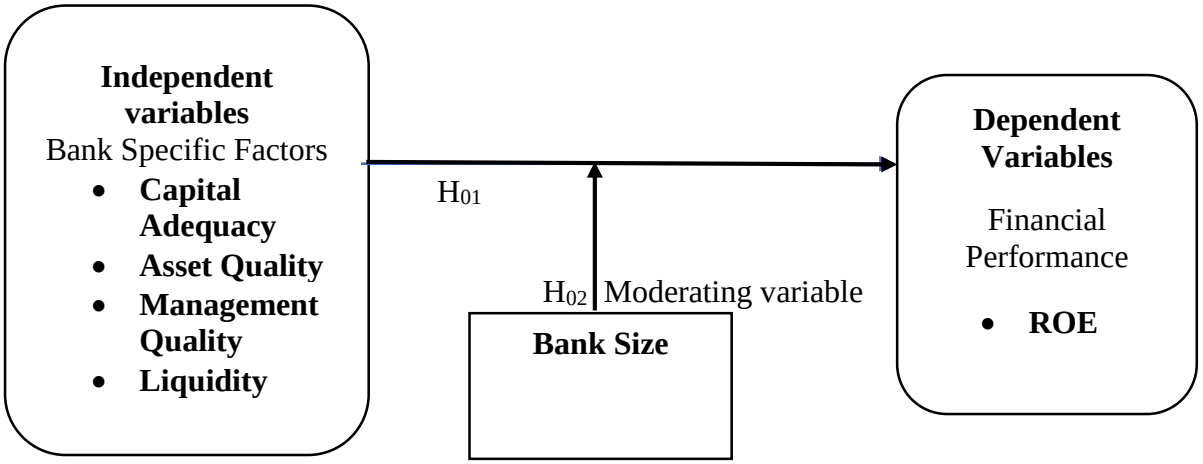

Figure1*: Conceptual Framework*

2.1.1. Null Hypotheses

H_{01}: Bank specific factors have no significant effect on the financial performance of commercial banks in Kenya

H_{02}: Bank size does not influence significantly the relationship between bank specific factors and financial performance of commercial banks in Kenya.

2.2. Empirical Literature Review

Chibole et al. (2022) conducted a study on the moderating effect of Bank Size on the link between financial distress factors and financial performance of CBs in Kenya. A census of 39 CBs was taken and the panel data were subjected to both descriptive and inferential analyses. The distress factors were represented by; Liquidity, Asset Quality, and Capital Adequacy as proxies. Bank Size was represented by the natural logarithm of total assets. Financial performance was measured using ROA. The study revealed a negative but significant association between ROA and Asset Quality as measured by non-performing loans versus operating income. Similarly, when approached from nonperforming loans as against total loans, Asset Quality still showed a negative association with ROA but insignificant. Negative link between Asset Quality and ROA in this study further corroborated several studies emanating from different financial jurisdictions (example; Gautam,2018 in Nepal, and Mbella & Magloire, 2017 in Cameroon). Capital Adequacy on the other hand indicated a significant association with ROA. The association between Liquidity and ROA was positive but weak.

Finally, the study revealed that Bank Size had no moderating influence on the relationship between financial distress factors and financial performance of CBs in Kenya. This was in complete departure from several studies that consistently established a moderating connection of the relationship between Bank Size and Financial Performance of CBs (Hermuningsih et al.,2022, Ishmail et al.,2023, Ngware et al.,2020). However, management quality was omitted.

Muhiudin and Jahan (2018) examined the parameters of profitability of Commercial Banks (CBs) in Bangladesh and zeroed in on; internal factors, industry precise features and the banking system as the major significant elements of financial performance. Specifically, they established that bank size, capital adequacy, management quality, asset quality, liquidity, and bank type had significant effect on financial performance of CBs in Bangladesh, though Islamic commercial banks (ICBs) performed financially better than conventional commercial banks (CCBs). However, macro-economic factors had no important role on the CCBs' profitability. Done in Bangladesh, the study has exposed a contextual gap as macro-economic variables might depend on country specific factors making localization viable for specific policy recommendations. Moreover, deployment of Bank Size as an explanatory variable has dominated many studies (Wuryani et al., 2021, Abdulkabir et al., 2020, Phan et al. 2020), a distinguishing factor integrated in the current study as a moderator.

In the analysis of Private CBs in Ethiopia, Assfaw (2018) discovered that Capital Adequacy, Management Quality, and Bank Size positively and significantly affected financial performance of private CBs in Ethiopia. Liquidity however, had a negative effect on financial performance measured by RAO, ROE and Net Interest Margin (NIM). Asset Quality also had no important consequence on earning ability of the CBs. The study recommended for due attention to; capital adequacy, optimal liquidity, efficient management, and ideal size to enable the CBs realise their full potentials. The findings in this study with regard to Asset Quality as having no bearing on earning ability supported Tibebe (2020) but differed significantly with many studies which consistently found a negative and sometimes a significant association between the factor and financial performance of CBs (Chibole et al., 2022, Gautam, 2018, Mbella and Magloire, 2017). This would necessitate further analysis to synthesise future research in this area.

Youssef and Samir (2015) conducted a study on the financial performance of Islamic commercial banks (ICBs) and conventional commercial (CCBs) in Egypt. ROE indicated that ICBs outperformed CCBs while the ROA was contradictory. Both ROE and ROA were positively correlated. Meanwhile, bank size and capital sufficiency had a significant positive relationship which proved that bigger banks had huge resources at their disposal contrary to smaller ones. The independent variables (CAMEL rating factors) when regressed did not influence the banks' performance differently and bank type was an insignificant variable. The research was conducted in Egypt against a backdrop of differing demographic composition where Muslims dominated and the regulatory environment might be in favour of ICBs. This could motivate a similar study in a different setting to explore disparities.

Al-Gazzar (2014) examined the variations in financial performance between ICBs and CCBs in the Mena and Gulf Council Countries (GCC) area between 2009 and 2013. Forty-five listed banks were investigated and descriptive statistics on CAMEL based ratios were applied. The empirical outcome revealed that the ICBs outperformed the CCBs in almost all sections of CAMEL variables save for Liquidity. The result also exhibited statistical differences in favour of ICBs in relation to Capital Adequacy, Management Quality and Asset Quality. Bank type had a strong influence on the connection between bank specific factors and financial

performance but was weak on moderating the relationship between financial performance and macro-economic factors, namely; Gross Domestic Product (GDP) and inflation. The research was limited to 5 years contrary to the current study which spans 13-year period and permits easier validation. Failure to adjust for the effect of bank size further watered down the otherwise robust research hence an inconclusive outcome.

3.1. Research Methodology

Positivism research philosophy is about unbiased acceptance of knowledge which is quantifiable in which hypotheses are developed and tested with empirical data in order to confirm if supported or otherwise (Antwi & Hamza ,2015). Accordingly, positivism jells well with reality of what is seen and can be estimated without uncertainty (Saunders et al., 2009). It leads to accurate data where cause and effect relationships can be established similar to scientific methods where generalizability is possible. Thus, the choice of this approach has been preferred. Explanatory (Causal) studies are appropriate where the aim is to discover the effect of variables on others (Cooper and Schindler,2014). It involves testing hypotheses and the production of inductive conclusions based on probability. Studies that engage in hypotheses testing and give explanations about the nature of relationships or establish differences or independence of factors or situations are categorized as explanatory designs (Sekaran & Bougie, 2010). Based on the explanation, the study has chosen the explanatory research design as being appropriate under the circumstances. The study conducted a census in which all the 38 commercial banks (CBs) licensed in Kenya according to Directory of commercial banks as at December 31st, 2022 would be accounted for. Secondary data were collected from the annual published audited financial statements of CBs in Kenya as well as from the Bank Supervision Annual Reports published by Central Bank of Kenya (CBK), covering a 13-year period from 2010 to 2022, an approach destined to improve on generalizability of outcomes. The data were collected in data sheets and processed before being captured in micro-soft excel for further regression analyses using stata software version 17.0. The explanatory variables in this study are internal factors namely; Capital Adequacy, Assets Quality, Management Quality, and Liquidity Quality (Al-Gazzar (2014 and Youssef & Samir ,2015). Bank size is used as a moderator in the relationship between bank specific factors and financial performance of CBs (Al-Gazzar, 2014 and Youssef & Samir ,2015). It is represented by Natural Logarithm of total assets. Financial performance of CBs is the dependent variable in this study. Financial performance was to be represented by ROE (Tanim-Ul-Islam and Ashrafuzzaman, 2015, Al-Gazzar, 2014, and Nakhaei & Hamid, 2013). Table 1 displays the variables, their indicators, and cited sources.

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Table 1: ***Operationalization of Variables***

Internal Factors	Variables	Metrics	Representations	Sources
Dependent Variables	Profitability Ratios	Return on Equity=PBT&EI/Total equity	ROE	Al-Gazzar, 2014
Independent Variables	Capital Adequacy (CA)	Equity /Total Assets	ETAR	Al-Gazzar (2014)
	Assets Quality (AQ)	Loans Loss Reserve/Total Loans	LLR	Youssef & Samir (2015)
	Management Quality (MQ)	Loans/Deposits	LDR	Youssef & Samir (2015)
	Liquidity Quality (LQ)	Loans/Assets	LAR	Al-Gazzar (2014) and Youssef & Samir (2015)
Moderating Variables	Bank Size	Natural Logarithm of Total Assets	TA	Youssef & Samir (2015)

4.0 Data Analysis and Interpretation

4.1 Descriptive Statistics

To ascertain the statistical properties of the data gathered, descriptive statistics were run and the output of the variables analysed which included measures of central tendency such as; mean, standard deviation, minimum, and maximum. The summary of the statistics generated is produced in table 2.

Table 2: ***Descriptive Statistics***

Summarize Variable	Observations	Mean	Std. dev	Min	Max
Year	414	16.73913	3.601797	10	22
PBTEI	414	4775046	8545292	-2929676	5.98e+07
Total Assets	414	1.30e+08	2.03e+08	261309	1.55e+09
Equity	414	1.97e+07	2.98e+07	-755786	2.06e+08
Total Deposits	414	9.56e+07	1.50e+08	213349	1.14e+09
Total Loans	414	6.94e+07	1.12e+08	118652	8.63e+08
Loan loss Reserve	414	4238567	8916345	0	7.15e+07
Bank Panel ID	414	18.80193	11.26779	1	38

Key: PBTEI- Profit Before Tax and Extra Ordinary Items

The number of observations under descriptive statistics table 2 is 414. Under year, the mean is 16.7±3.6 with a maximum and minimum of 10 and 22 respectively. On PBT&EI, the mean is 4,775,046 ±8,545,292 showing a wide variability around the mean as evidenced by the value

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of the standard deviation. The total assets show a mean of 130 million and a standard deviation denotes a significant spread of between 200 million to 1.55 billion. Equity shows a mean of about 20 million and a standard deviation of about 30 million. There is evidently a wide dispersion of data around the mean as exhibited by the standard deviation.

Total Deposits has a mean of about 96 million and a standard deviation of 150 million indicating a wide margin of dispersion. The Total Loans range from ksh. 118,652 to ksh. 863.3 million revealing how values are significantly spread as evidenced by a mean of 69 million and a standard deviation of 110 million. The table shows Loans Loss Reserve variable with a range of between 0 to 7.1 and this is proven by a mean of 4.2 million and a spread of ksh 8.9 million as shown by the standard deviation. In the table it is also observed that there is a minimum of 1 and a maximum of 38 banks with a mean of 18.80 and a standard deviation of 11.27.

The data was tested to gather information on the underlying assumptions of classical linear regression model. The relevant considerations included the assumption of; Linearity, Normality, no or less Multi-collinearity, Independence, and Homoscedasticity. Therefore, the data set was subjected to diagnostic tests to ensure that none of the assumptions were violated. Consequently, the diagnostic tests were conducted to confirm or dispute the presence of Linearity, Normality, Multi-collinearity, Independence, and Heteroscedasticity.

Multivariate Ramsey's Reset Test (MANOVA) was conducted to establish if linearity occurred amid the response and the predictor factors. This reset test is done to see if there are "no omitted variables" (Garson, 2012, p. 43). Table 3 shows the output.

Table 3: ***Linearity Result***

```
. regress roe etar_em llr1 lar ldr  ta
```

Source	SS	df	MS	Number of obs	=	39
				F(5, 33)	=	2.45
Model	.197052116	5	.039410423	Prob > F	=	0.0539
Residual	.530540052	33	.016076971	R-squared	=	0.2708
				Adj R-squared	=	0.1603
Total	.727592169	38	.019147162	Root MSE	=	.12679

roe	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
etar_em	-.5722327	1.363784	-0.42	0.678	-3.346872	2.202406
llr1	-2.124411	.9314906	-2.28	0.029	-4.019542	-.2292788
lar	-.3022529	.5494019	-0.55	0.586	-1.42002	.8155137
ldr	.2871232	.5191621	0.55	0.584	-.7691201	1.343366
ta	5.88e-11	2.30e-11	2.56	0.015	1.21e-11	1.06e-10
_cons	.2657616	.3214652	0.83	0.414	-.3882642	.9197874

Key: etar_em=Capital Adequacy, llr1=Asset Quality, lar=Liquidity Quality, ldr=Management Quality, ta=Total Assets, and cons= constant. The software used different codes instead of CA, AQ, LQ, MQ, and TA (ta) respectively.

F-test was conducted to evaluate whether the overall linear regression model was significant at p-value<0.05. The f (5,33) = 2.45 illustrates that the model explains 2.45 times of the variance than suspected. The value of R-squared at 0.2708 suggest that 27.08 % of inconsistency in ROE has been clarified by the independent variables in the model. Variables Total Assets (TA) and Asset Quality (AQ) appear to have strong effects in ROE while the other variables appear to

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be insignificant at p >|t|-values. TA and MQ (Management Quality) being the only variables with positive coefficients indicate that they are the only predictors with progressive effect on ROE. The p-value > f =0.0539 suggests that there is marginal significance at p > 0.05. The marginal significance does not provide sufficient evidence for nonlinearity. Therefore, the linearity assumption is upheld based on the overall *f*-test model results.

4.2.2. Normality Test

Normality test was conducted to ensure the presence of normal distribution. Shapiro -Wilk test was deployed and its results provided. To complement Shapiro -Wilk test, the test based on histogram was also conducted. The results of the tests are displayed in table 4 and figure 2.

Table 4: ***Normality Test results***

Shapiro-wilk w test for Normal Data					
Residuals	Observation	w	v	z	Prob>z
	39	0.96179	1.481	0.825	0.20457

The output from Shapiro-wilk tests comprise the test statistics (*w)* the variance (*v*), a *z*-score, and *p*-value. The *w* statistic results range from 0-1, with 1 indicating perfect normality. The *w* statistic 0.96179 provides enough evidence that the sample assumes normal distribution. The *p*-value is greater than 0.05 (0.20457) accordingly and therefore, insignificant. This implies that there is no sufficient evidence to reject the assumption that the data followed a normal distribution.

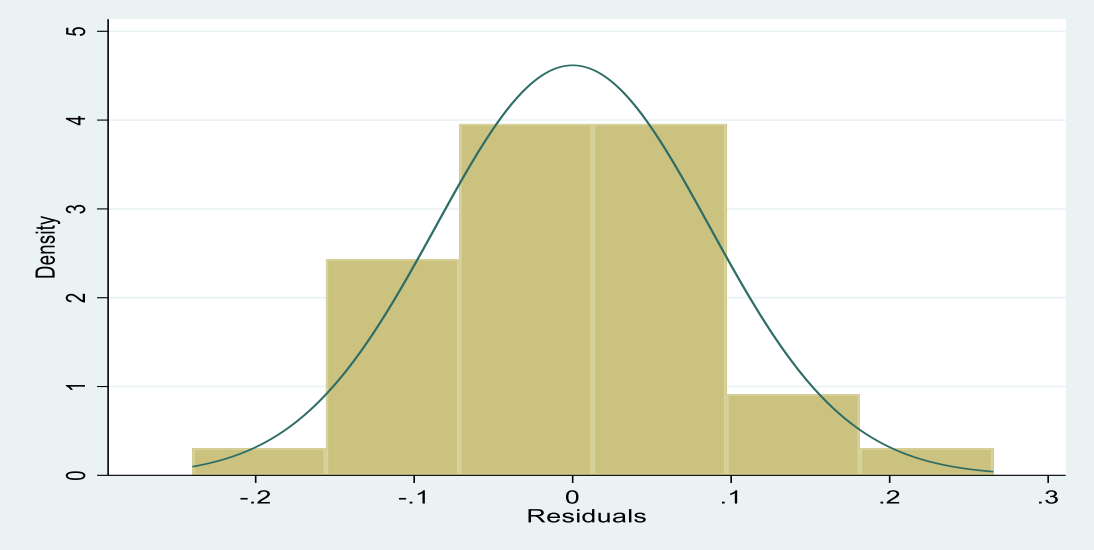

Figure 2: ***Normal Distribution- Histogram Output Residuals***

The histogram of the standardized residual also displays a single peak bell-shaped symmetric curve. This stands as evidence of normality in the data set. As in any predictive technique, the prediction is that there is a normal distribution of error with the larger number of predictions coalescing around zero and trailing off into either low or high prediction tails (Garson,2012). Therefore, as in Shapiro wilk test, the assumption of normal distribution is met.

4.2.3 Multicollinearity Test

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Multicollinearity occurs when independent variables are allied to each other and thus interferes with test results (Garson,2012). The tests should detect if there is too much inter-correlation among explanatory variables such that their effects are not isolated. Variance Inflation Factor (VIF) was used to assess the presence of multicollinearity. VIF values should be within the threshold of less than 10 to rule out the presence of multicollinearity. The reciprocal of VIF-tolerance test (1/VIF), should also be greater than 0.2 threshold. Table 5 displays VIF test result.

Table 5: ***VIF Test Result***

Variable	**VIF**	**1/VIF**
Liquidity Quality	3.16	0.315959
Management quality	2.54	0.394420
Total Asset	2.09	0.477877
Asset Quality	1.61	0.622008
Capital adequacy	1.32	0.759527
Mean VIF	**2.14**	

The VIF (Variance Inflation Factor) values are; Liquidity Quality =3.16, Management Quality =2.54, Total Assets =2.09, Asset Quality =1.61, and Capital Adequacy =1.32. All the values are within the threshold of less than 10. Consequently, the mean VIF is 2.14 implying that the data is valid for analysis. The tolerance (1/VIF) values are also greater than 0.2, another proof that multicollinearity poses no threat to the data destined for analysis.

Table 6: ***Pearson Correlations Matrix***

Variables	**Capital Adequacy**	**Asset Quality**	**Management Quality**	**Liquidity Quality**	**Total Assets**
Capital Adequacy	1				
Asset Quality	0.2521	1			
Management Quality	0.1846	-0.3868	1		
Liquidity Quality	-0.1314	-0.4512	0.7054	1	
Total Assets	0.2419	0.5495	-0.3783	-0.6457	1

Table 6 shows different linear relationships of the variables with each other. The highest correlation is between Liquidity Quality and Management Quality which is 70.54%. The lowest correlation is between Liquidity Quality and Capital Adequacy which is 13.14% and is negative. This is a further proof of the absence of multicollinearity as the interrelationships are below 0.80 as per the rule of thumb (Garson,2012). Thus, there is a proven existence of correlation between the variables at 5% significance level.

4.2.4 Independence Test

Linear regression model operates on the basic assumption that there is little or no autocorrelation. Autocorrelation is present when the residuals are not independent of each other. So, the data were subjected to Breusch-Pagan LM test of independence to evaluate the existence of independence or otherwise in the panel data. Details are in table 7.

Table 7*: Matrix display of Independent Test Result*

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```
Correlation matrix of residuals:

             |      __e1       __e2       __e3
-------------+---------------------------------
         __e1 |   .0066502
         __e2 |  -.0090674     .099264
         __e3 |   .0006768  -.0251255    .0699234

             __e1      __e2      __e3
__e1       1.0000
__e2      -0.3529    1.0000
__e3       0.0314   -0.3016    1.0000

Breusch-Pagan LM test of independence: chi2(3) =     2.814, Pr = 0.4212
Based on 13 complete observations over panel units
```

When Breusch-Pagan LM test of independence was performed, the following outcomes were observed; Chi2(3) =2.814, p-value 0.4212. From the foregoing, the test concurs and confirms that there is no evidence of cross-sectional dependence among the panel units.

4.2.5. Heteroscedasticity Test

To find out whether the data conformed to homoscedasticity, Breusch-Pagan/Cook-Weisberg test was conducted. This is a test of heteroskedasticity in the residuals of a regression model with the prediction being the presence of constant variance (homoscedasticity) and the alternative proposition being that there is heteroskedasticity (Garson,2012). Table 8 shows the results of the test carried out. Figure 3 provides further visual evidence of the test results.

Table 8: ***Heteroscedasticity Test Result under ROE***

```
. regress roe etar_em llr1 lar ldr  ta

      Source |       SS           df       MS      Number of obs   =        39
-------------+----------------------------------   F(5, 33)        =      2.45
       Model |  .197052116         5  .039410423   Prob > F        =    0.0539
    Residual |  .530540052        33  .016076971   R-squared       =    0.2708
-------------+----------------------------------   Adj R-squared   =    0.1603
       Total |  .727592169        38  .019147162   Root MSE        =    .12679

------------------------------------------------------------------------------
         roe | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
      etar_em |  -.5722327   1.363784    -0.42   0.678    -3.346872    2.202406
         llr1 |  -2.124411   .9314906    -2.28   0.029    -4.019542   -.2292788
          lar |  -.3022529   .5494019    -0.55   0.586     -1.42002    .8155137
          ldr |   .2871232   .5191621     0.55   0.584    -.7691201    1.343366
           ta |   5.88e-11   2.30e-11     2.56   0.015     1.21e-11    1.06e-10
        _cons |   .2657616   .3214652     0.83   0.414    -.3882642    .9197874
------------------------------------------------------------------------------

. hettest

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of roe

H0: Constant variance

         chi2(1) =    2.48
Prob > chi2 =  0.1152
```

Key. etar_em=Capital Adequacy, llr1=Asset Quality, lar=Liquidity Quality, ldr=Management Quality, ta=Total Assets, and cons= constant. The software used different codes instead of CA, AQ, LQ, MQ, and TA (ta) respectively.

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Table 8 provides the eventual test results that show; Chi2(1) =2.48, prob>Chi2=0.1152. The p-value is above the conventional threshold of 0.05 suggesting that there is no evidence to reject the null hypothesis, therefore there is constant variance (homoscedasticity). The scatter plot (fig. 3) provides further visualized evidence about a constant variance (homoscedasticity). It shows a residual plot which is a scatter plot of residuals on the y-axis and the linear predictions (or fitted values) on x-axis.

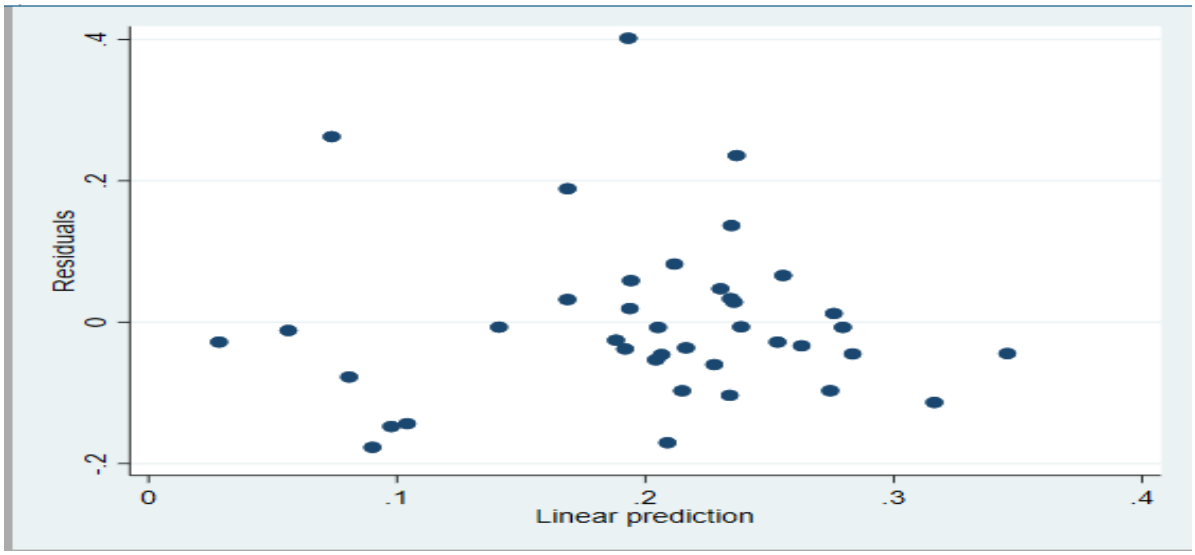

Figure 3: ***QQ plot--Heteroscedasticity Test Result***

The residuals in figure 3 appear to be somewhat randomly scattered around the horizontal axis, which is a sign of homoscedasticity. Some cases of residuals appear to be further from others indicating potential outliers. However, there is no obvious systematic pattern, which indicates that the assumption of linearity and homoscedasticity are reasonably met. The overall residual plot suggest that the linear regression model is a good fit for the data.

5.0 Hypotheses Testing and Discussion

5.1. Internal Factors and Financial Performance of Commercial Banks

The opening objective was to assess the effect of internal factors on financial performance of commercial banks in Kenya. The study hypothesised that internal factors had no significant effect on the financial performance of Commercial banks. Fixed effects regression models enable estimations within-individual or within-group effects. It is very useful for controlling for time-invariant confounding variables and obtaining more robust estimates on the effects of point of interest (Garson,2012). It is a technique used to account for unobserved individual or group heterogeneity. It is commonly used when working with panel or longitudinal data, where observations are made on the same individuals or groups over time. In the analytical model table 9, ROE has been used to measure financial performance.

The regression model is defined thus: $Xit=\alpha 1 + \beta 1CAit+ \beta 2AQit+ \beta 3\ MQit+ \beta 4\ LQit\ + \varepsilon$

Where; Xit represents performance as conveyed by (ROE) for bank *i* at time *t*
α=Intercept
CAit= Capital Adequacy of bank *i* at time *t*
AQit= Asset Quality of bank *i* at time *t*
MQit= Management Quality of bank *i* at time *t*
LQit= Liquidity of bank *i* at time *t*

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$\beta 1$- $\beta 4$=Coefficients of regression relations
εit= Error term where *i* is longitudinal and t time identifier

Table 9*: Regression Output*

```
Fixed-effects (within) regression               Number of obs      =        39
Group variable: banktype_                       Number of groups   =         3

R-squared:                                      Obs per group:
     Within  = 0.3842                                         min =        13
     Between = 0.6530                                         avg =      13.0
     Overall = 0.0016                                         max =        13

                                                F(4,32)            =      4.99
corr(u_i, Xb) = -0.4190                         Prob > F           =    0.0031

------------------------------------------------------------------------------
         roe | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
      etar_em |  -1.504849   .8718398    -1.73   0.094    -3.280728    .271031
         llr1 |  -1.529691   .5284478    -2.89   0.007    -2.606104   -.4532784
          ldr |  -.1709202   .3167309    -0.54   0.593    -.8160799    .4742395
          lar |   .2546167   .3688089     0.69   0.495    -.4966225    1.005856
        _cons |   .4800826   .1798219     2.67   0.012     .1137974    .8463678
-------------+----------------------------------------------------------------
      sigma_u |  .16026802
      sigma_e |  .07412778
          rho |  .82377188   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(2, 32) = 41.88                     Prob > F = 0.0000
```

Key. Etar_em= Capital Adequacy, llr1= Asset Quality, ldr= Management Quality, and lar= Liquidity Quality. The software used different coding as shown.

The linear regression model is therefore fitted thus: *ROEit =0.48-1.505CAit-1.530AQit-0.171MQit+0.255LQit*

Regression results point to strong within group variations --R-squared within =0.3842. This confirms that even within the same bank type, performance tends to vary. Between the groups or tiers there is a wider variation in financial performance as R-squared= 0.6530 indicates. This confirms that between the groups, financial performance variation is 65.30% of the time as measured and estimated by the model.

Table 9 indicates positive coefficients which suggest that as one variable increase so does performance (ROE). The negative coefficients show opposite movements between the variables and ROE. All the other variables (Capital Adequacy, Management Quality, and Liquidity Quality) have p-values greater than the critical 0.05 except Asset Quality with a p-value less than 0.05 but with a negative coefficient. On individual basis, Asset Quality which is represented by Loans Loss Reserve ratio (LLR) p-value=0.007, significantly affects financial performance under ROE. Thus, Asset Quality has an important effect on financial performance of CBs in Kenya and any mismanagement of loans automatically leads to incurrence of losses by the CBs.

The model shows that the variables affect financial performance negatively except liquidity whose effect is positive. Nevertheless, the overall effect was statistically significant as proven by *f*-statistic (*f* =4.99 and p= 0. 0031). This implies that internal factors have a significant joint influence on financial performance of CBs and so the null hypothesis was rejected.

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Bank specific factors were operationalized in terms of capital adequacy, asset quality, management quality, and liquidity quality, all being elements of CAMEL rating factors. Financial performance of CBs on the other hand was represented by return on equity (ROE). The study relied on multiple regression model to test the consequence of bank specific factors on financial performance of CBs in Kenya. The study exposed that in the overall, bank specific factors had a statistically significant effect on financial performance of CBs in Kenya. The study further found that asset quality had a negative statistically significant effect on financial performance of CBs. Therefore, as asset quality deteriorated, financial performance also went down. Other factors failed to meet the statistical test as the study revealed. This finding is in harmony with Kamande et al. (2016) who similarly found a significant influence of asset quality on financial performance of CBs in Kenya. Mbella and Magloire (2017) in Cameroon concurred with this study's finding as they found a statistically significant and negative influence of asset quality on ROA. Gautam (2018) on the other hand discovered that asset quality and management quality played a positive significant role in financial performance of CBs in Nepal. Contrary to this study, he established a negative significant connection of liquidity with financial performance of CBs in that country.

CAMEL framework proxy bank specific factors and many studies have proven that ROE is affected by CAMEL parameters which have been established improves financial performance of banks (for example; Al-Gazzar, 2014, Youssef & Samir, 2015, Ongore &Kusa, 2013, etc). As the overall model has shown, these factors have a combined statistical significance on financial performance. When these factors are harnessed efficiently, they can lead to improved financial performance. In this study, capital adequacy contributed negatively to financial performance but had no statistical significance. This implies that despite the best efforts by the CBs and the regulatory authority (CBK), there may still be a disconnect between the level imposed on capital and its effect on financial performance. Management quality similarly contributed negatively to financial performance of CBs and thus the utility of deposit outlays by the clients versus the loans created by the management seemed not to work in their favour. This study found a positive contribution of liquidity to financial performance though not statistically significant. Liquidity does not confer an automatic improvement in profitability if free cash flow is wasted in unviable projects with negative net present values as argued by Jensen (1986) in the free cash flow theory. Therefore, it boils down to striking a favourable balance amongst these factors in order to achieve the desired outcomes.

5.2. Moderating Effect of Bank Size on Internal Factors and Financial performance

The test here is to assess the effect of bank size on the relationship between bank internal factors and financial performance of commercial banks as measured by ROE. In order to test for the moderation effect, the study deployed multiple regression analysis extended model to estimate the moderating effect of bank size (TA). In a regression extended model, moderation is tested by including an interaction term in the moderation equation. Thus: (ROE) $Xit=\alpha 1 + \beta 1(CAit*TA) + \beta 2(AQit*TA) + \beta 3\ (MQit*TA) + \beta 4(LQit*TA) + \varepsilon.$ If the coefficient of TA is significant, then bank size (TA) moderates the relationship between bank specific factors and financial performance of CBs, meaning the effect of bank specific factors on financial performance may depend on bank size. In case the coefficient of TA is positive, then it means an increase in bank size enhances financial performance of CBs as a result of effective interaction with bank specific factors. On the other hand, a negative coefficient means bank size reduces financial performance as a consequence of its interface with bank specific factors. Table 10 shows the regression result.

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Table 10: ***Bank Size, Internal Factors, and Financial***

```
. //Principal Component Regression (PCR) for roe

. regress roe  pc1 pc2 pc3 pc4 ln_ta
```

Source	SS	df	MS	Number of obs	=	39
				F(5, 33)	=	9.66
Model	.432200356	5	.086440071	Prob > F	=	0.0000
Residual	.295391812	33	.008951267	R-squared	=	0.5940
				Adj R-squared	=	0.5325
Total	.727592169	38	.019147162	Root MSE	=	.09461

roe	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
pc1	.049891	.0139531	3.58	0.001	.0215033	.0782787
pc2	-.0632697	.0168318	-3.76	0.001	-.0975143	-.0290252
pc3	-.014281	.0214094	-0.67	0.509	-.0578388	.0292767
pc4	.0309457	.0357055	0.87	0.392	-.0416976	.1035889
ln_ta	.0754375	.0122284	6.17	0.000	.0505587	.1003163
_cons	-1.307972	.245151	-5.34	0.000	-1.806735	-.8092081

Key. pc1= Capital Adequacy, pc2= Asset Quality, pc3= Liquidity Quality, pc4= Management Quality, TA= Total Assets. The software used different coding.

R-squared (0.5940) indicates that the model can explain 59.40% variability and the adjusted R-squared value (0.5325) accounts for the number of predictors in the model. Capital Adequacy with a positive coefficient (0.0499) and statistically significant (p-value=0.002) suggests that an increase in capital is associated with an increase in bank financial performance. This is substantially true as big banks with enough financial muscles are the big leaders in profitability. It is further elucidated in Kenya through Basel III framework that requires all banks to have a core capital of at least ksh. 1 billion (CBK,2022) and consequently motivating small or struggling banks to resort to mergers and acquisitions.

On the contrary, Asset Quality has a negative coefficient (-0.0633) and statistically significant (p-value=0.001), implying that a deterioration in Asset Quality is correlated with a decrease in bank profitability. This is true as Asset Quality in the study is represented by loan loss reserve ratio (LLR) and thus an increase in reserve leads to a decrease in bank profits. Consequently, banks are called upon to pay keen attention on the management of bank loans since increases in non-performing loans necessitates corresponding increases in reserves in mitigation.

Liquidity according to the output does not play an important role in profitability. Its coefficient is negative (-0.0143) but not statistically significant (p-value=0.509) indicating that as it increases, profitability declines although its influence is not significant. This is true as too much liquidity is a sign of inefficiency in deployment of cash reserves. It may also mean that a bank has very few viable investment opportunities.

Management Quality in this study is represented by loan to deposit ratio (LDR). It shows how efficiently and productively the management is capable of deploying customers deposits. Management's key responsibility is to ensure that customers' deposits are well managed even as the management use it in advancing loans to their creditworthy clients. However, if customers deposits are not well managed it can lead to liquidity problems since most of the

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deposits may be tied up to non-performing loans. Management Quality according to the results has positive coefficient (0.0310) but not statistically significant (p-value=0.392), suggesting that it may not have a significant effect on profitability.

Total Assets (TA) has a positive coefficient (0.0754) and highly statistically significant (p-value=0.000), indicating that the bigger the banks the better the financial performance as measured by ROE. To put it differently, Bank Size has a significant moderating influence on the relationship between bank specific factors and financial performance of commercial banks in Kenya and thus the null hypothesis is rejected.

In the overall, f (5,33) =9.66 prob>f=0.000 indicates that the result is statistically significant at 5% level. In other words, we may conclude based on the results from the model that larger banks tend to have higher profitability ratios. Therefore, bank size has a significant moderating influence on the relationship between bank specific factors and financial performance of commercial banks in Kenya.

The equation as given:
$Xit=\alpha 1 + \beta 1(CAit*TA) + \beta 2(AQit*TA) + \beta 3\ (MQit*TA) + \beta 4(LQit*TA) + \varepsilon$
Where;
Xit: represents (ROE) for bank *i* at time *t*
α =Intercept
CAit= Capital Adequacy of bank *i* at time *t*
AQit= Asset Quality at of bank *i* at time *t*
MQit= Management Quality of bank *i* at time *t*
LQit= Liquidity of bank *i* at time *t*
TA= Natural Logarithm of Total Assets (Bank Size) of bank
$\beta 1 - \beta 4$=Coefficients of regression relations
εit= Error term where *i* is longitudinal and *t* time identifier
Can now be rewritten thus:
*ROEit= (-1.3080 + 0.0499CAit*0.0754TA) -(0.0633AQit*0.0754TA) +(0.0309MQit*0.0754TA) -(0.0143LQit*0.0754TA)*

The regression model indicates the multiplication of total assets (TA) and internal factors. While other factors have negative effect on financial performance, others contribute positively. The overall model is statically significant (f =9.66 p-value=0.000) and thus it is concluded that bank size has a significant moderating influence on the relationship between internal factors and financial performance of commercial banks in Kenya and therefore, the null hypothesis is rejected.

The second objective was to determine the effect of bank size on the relationship between bank specific factors and financial performance of commercial banks in Kenya. The hypothesis was that bank size did not influence significantly the relationship between bank specific factors and financial performance of commercial banks. Bank size was represented by total assets. Multiple Regression analysis extended model was used to estimate the moderating effect of bank size on the relationship between bank specific factors and financial performance of CBs. Based on the outcome, the study established that bank size statistically and significantly moderated the effect in the circumstances and hence, the rejection of the null hypothesis. This corroborated the findings of Youssef and Samir (2015) who also came to the same conclusion that bank size significantly moderated the relationship between bank specific factors and financial performance of commercial banks in Egypt.

The moderating influence of bank size is pervasive and extends to other areas beyond bank specific factors as can be seen in the subsequent studies. Ishmail et al. (2023) found a significant moderating effect of bank size on the relationship between credit risk and financial performance of commercial banks in Kenya. A study on the moderating effect of bank size on the relationship between portfolio diversification and financial performance of commercial bank was conducted in Kenya and discovered a significant moderating effect of bank size on the relationship between bank's portfolio diversification and financial performance (Ngware et al.,2020). Hermuningsih et al. (2022) on the other hand found that bank size accounted for the positive influence of both liquidity and financial technology on financial performance of CBs in Indonesia. Thus, bank size moderating influence is prevalent in many areas of bank operations and this motivates banks to embrace investment opportunities whenever it appears, diversify where feasible, improve market power, and boost the firm by taking advantage of economies of scale with the corollary benefit of improved bottom-line (Ngware et al.,2020).

Nevertheless, Assfaw (2018) argue that bank size affects financial performance negatively and significantly due to diseconomies of scale and hence declining financial performance. The empirical evidence by Rahman, Yousaf, and Tabassum (2020) also revealed that Pakistani banks did not benefit from economies of scale to enhance their profitability. This brings into play the proposition of an ideal size of a firm versus optimal return as propagated by Jensen (1986) in free cash flow theory. Jensen contends that when a firm generates considerable "free cash flows" with little investment opportunities, it becomes difficult to convince managers to pay out such monies to shareholders instead of wasting it in unviable projects or activities and thus automatically leads to agency problems with resultant reduced profits in the long run. Therefore, even bank size cannot be infinite but a balance has to be established between the two extremes of banks being too small to be viable or too big to manage.

6.1. Conclusion

The study focus was to establish the effect of internal factors and bank size on financial performance of CBs in Kenya. The study has established that internal factors are affecting financial performance of CBs and hence ought to be developed according to their individual potentials. The study concludes that capital is not being maintained at optimal levels considering that the higher the ratio, the better the prospects of financial performance of CBs. As a bank accumulates loans and as non-performing loans become an issue, the profitability and survivability of a bank is endangered. So proper management of assets is key to CBs viability. Asset quality has proven to be a critical factor in financial performance and therefore the study concludes that mismanagement of loans does affect financial performance of CBs negatively. Management quality implies that an ambitious generation of too much loans for a given outlay of deposits might be detrimental to a bank's survivability just as keeping too much idle deposits might impinge negatively to a bank's profitability. Consequently, it is found that the managements of banks have not ensured existence of equilibrium between the two opposing variables and that discrepancies are not being recognized and addressed accordingly. Too much loans as a fraction to total deposits may expose CBs to liquidity risk.

When money is left idle uninvested, it earns nothing to its keepers. This however, may occur due to lack of viable investment opportunities or where an entity has exhausted its options and is facing suboptimal projects with negative net present values. Liquidity quality in this study did not significantly affect the financial performance of CBs and hence the variable perhaps is not being managed optimally. Therefore, the study resolves that the mere presence of enough liquidity in a firm is necessary but not a sufficient reason for profitability in the absence of appropriate measures to harness its potentials.

6.2. Recommendations

The first objective was to examine the effect of internal factors on financial performance of commercial banks in Kenya and the study established that in the overall internal factors had a significant effect on financial performance of CBs. Based on the foregoing, capital adequacy, asset quality, management efficiency, and liquidity have important effect on financial performance of CBs considered either individually or in combination. The second objective was to establish the influence of bank size on the relationship between internal factors and financial performance of commercial banks in Kenya. The study confirmed that bank size enhanced the relationship between bank specific factors and financial performance of CBs and hence, an increase in bank size was associated with an improvement in financial performance. As alluded to in free cash flow theory, the forces that drive takeovers and merger activities are; deregulations, synergies, economies of scale and scope, tax benefits, incompetence, and increased globalization. The study has validated this theory as it established that bank size, singly or in concert with other variables, moderated financial performance of CBs. Nevertheless, the study recommends that growth in bank size must be optimal thus allowing for minimum average cost as postulated in the theory.

The study employed longitudinal research design which involves repeated observation of the same variables over a long period of time. The data were to be collected for thirteen years and 38 banks were to be considered. However, not all data for the banks were available as some had already phased out some prior years, consequently statistical adjustments were to be made on how to accommodate the gaps of unbalance data. Because of time lapse, few years, say 6 to 8, would have sufficed to obtain all the data reliably. Despite all that, by leveraging scientific study design solutions and adhering to strict methodological standards and basing on broad theoretical and empirical framework, the quality of the study outcome was maintained. This study covered four independent variables and one moderating variable which were represented using definite indicators. However, there were other indicators which were not considered hence, the study was only based on the indicators used.

The research concentrated on bank specific factors (internal factors) but studies designed to review both macroeconomic and political variables would be more useful to capture other exogenous dynamics likely to influence financial performance of commercial banks. By deploying the macroeconomic variables such as interest rates, inflation rate, GDP, etcetera, it would be possible to probe into the bigger national picture that could illuminate the current economic trends shaping the contemporary financial arena. An equivalent study should be initiated in a different setting defying economic borders and beyond demographic constraints to explore different scenarios obtaining elsewhere. Extending the study to include financial performance of commercial banks beyond the political borders to other areas such as the East African Countries or across the Sub-Saharan region would widen the scope and bring more insight into the existing literature. In addition, the study emphasis could be shifted to other areas of financial intermediaries such as; insurance companies, cooperative societies, etcetera, to investigate the contrasting features and thereby throwing more light into the nature of relationships that may exist and the cross-cutting lessons in diverse sectorial settings beckoning for bench marking.

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