

Original Article

The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on Financial Performance of Commercial Banks in Kenya

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Abstract - Sound Corporate Governance and effective Risk Management are accepted as a major cornerstone of bank management by academicians, practitioners as well as regulators. The Basel core principles for effective banking supervision, the Central Banks and Capital Market Authorities of different jurisdictions have, from time to time, issued guidelines on both Corporate Governance and Risk Management to ensure the comprehensive and proper functioning of the financial system that align the interest of all the stakeholders. In spite of these interventions, a number of banks have failed to operate above board, forcing the regulators to intervene to ensure sanity in the financial system. The main objective of the study was to establish the relationships among Corporate Governance, Risk Management, Firm Characteristics and Financial Performance of commercial banks in Kenya. Scholars have used different performance measures/indicators to evaluate the financial performance of Banks. This study used the CAMEL rating model that incorporates five indicators of the performance of banks; capital adequacy, asset quality, management quality, earnings, and liquidity. The CAMEL system was adopted due to its increasing importance as a tool for measuring the overall soundness and safety of banks in the light of global financial crisis and bank failures. Multiple regression analysis was used to test the joint effect of Corporate Governance, Risk Management, and Firm Characteristics on bank Financial Performance. The study was guided mainly by the Agency theory, adopted a positivism research philosophy and used a cross-sectional descriptive research design. The population consisted of 43 commercial banks registered in Kenya as of 31st December 2014. Descriptive statistics and diagnostic tests were conducted on the data. Thereafter inferential statistics, namely correlation analysis and regression analysis, were used to test the hypotheses. The findings of the study were that Corporate Governance, Risk Management and Firm Characteristics jointly significantly predicted all bank Financial Performance attributes/indicators except for Liquidity. The study recommends that regulators, boards and management of commercial

banks ensure congruence in their activities (oversight, implementation and monitoring) with corporate objectives to enhance improved bank Financial Performance and value maximization.

Keywords - Corporate Governance, Risk Management, Firm Characteristics, Financial Performance, Commercial Banks and Kenya

I. INTRODUCTION

Financial institutions exist to mobilize resources from savers to borrowers and thereby improve the efficiency of the financial markets. If savers and investors, as well as buyers and sellers, could locate each other efficiently, purchase any and all assets, at no transaction cost, and make their decisions with freely available perfect information, then commercial banks would have little or no scope for replacing or mediating these direct transactions. In the real world, market participants seek the services of commercial banks because of the banks' ability to provide market knowledge, transaction efficiency, and contract enforcement. Commercial banks discover, underwrite, and service investments made using their own resources or merely act as agents for market participants who contract them to obtain some of these services. In the process of undertaking such noble duties, banks face a number of risks that must be managed prudently to ensure sustainability and success (Oldfield & Santomero, 1995).

The complexity of Corporate Governance and Risk Management was articulated in a report prepared by the United States Senate's Permanent Subcommittee investigating the collapse of Enron, which stated in part as follows "based on an exhaustive review of evidence found, the Enron corporation's board of directors failed to monitor, ensure or halt the abuse, sometimes the board chose to ignore problems, other times it knowingly allowed Enron to engage in high-risk practices, the board also approved an unprecedented arrangement, in so doing, the board breached its duties to safeguard Enron shareholders", (Rosen, 2003).

Parreñas (2005) states that robust Risk Management practices in the banking sector are important for both financial stability and economic



development. Unsound Risk Management practices governing bank lending greatly contributed to the recent episodes of financial turmoil. The development of adequate capacity to measure and manage risks is therefore important for banks to effectively perform their roles in financing economic activities, most especially the task of continuously providing credit to a large number of enterprises whose activities underpin economic growth. The problem of Risk Management in the banking industry involves the identification, measurement and control of five major risks, namely liquidity risk, interest rate risk, market risk, credit risk and operational risk (Lukic, 2015).

Eng and Mak (2003) have identified other Firm Characteristics to include industry type, growth opportunities, analyst following, stock price performance, profitability, stock volatility, audit fee, audited by Big5/ Big4 audit firm, overseas listing, equity market liquidity, short term accrual, non-common law, change in stock price, political connection, reserves, product diversification, geographical diversification, market to book equity ratio, listing status, equity financing, liquidity, and high quality of accounting standard. The influence of these attributes on firm Financial Performance has received mixed results from previous scholars.

The applicability of the CAMEL rating system for evaluating the financial strengths of commercial banks has grown internationally, and several studies have been conducted to examine whether and to what extent private supervisory information is useful in supervisory monitoring of banks (Kabir & Dey, 2012). Barker and Holdsworth (1993) found evidence that CAMEL ratings were useful to predicting banks failure, even after controlling a wide range of publicly available information about the condition and performance of banks. Cole and Gunther (1998) found that the CAMEL rating contains useful information for predicting bank failure.

Scholars have investigated the influence of Firm Characteristics on Risk Management, Corporate Governance or bank Financial Performance. Boateng, Huang and Kufuor (2015) examined the determinants of bank Financial Performance and found that foreign banks appeared to have better Asset Quality and overall Financial Performance although lower profitability compared to domestic banks. The study also found that state-owned banks tended to be more profitable and had a better Liquidity position compared with other domestic banks and foreign banks. Phuong, Harvie and Arjomandi (2015) found that state-owned banks were more efficient and had a smaller technology gap compared with foreign and private banks.

The CBK Act (Cap 491), Banking Act (Cap 488), Companies Act (Cap 486) regulate the banking industry in Kenya, as well as the prudential guidelines issued by the CBK. The principal

objectives of the CBK are formulation and implementation of monetary policy directed to achieving and maintaining stability in the general level of prices in Kenya, fostering liquidity/solvency and proper functioning of a stable market-based financial system. In effect, the CBK enforces prudent Risk Management and Corporate Governance in the banking industry in Kenya. According to Prowse (1997), Corporate Governance in the banking sector is significantly different from corporations in other economic sectors since there is a conflict of interest between shareholders and depositors, with the former being willing to take high-risk projects that increase share value at the expense of the increased risk for latter. Although small bank deposits are insured, and banks are regulated to avoid a crisis of confidence and bank runs, this can increase the moral hazard problem.

II. RESEARCH PROBLEM

Corporate Governance, Risk Management, Bank Characteristics and Financial Performance are significant concepts among commercial banks due to their involvement in the financial intermediation process. Acknowledging this, several interventions, legal and regulatory, have been undertaken to address weaknesses in Risk Management and Corporate Governance mechanisms in commercial banks. The Basel Committee on Banking Supervision adopted several accords. In 1988, Basel I was issued focusing on credit/default risk. In 2004, Basel II was issued on guidelines on capital adequacy, Risk Management and disclosure requirements, and in finally 2010, Basel III issued an accord to promote a more resilient banking system by focusing on four vital banking parameters that are; capital, leverage, funding and liquidity. To address weaknesses in Corporate Governance and Risk Management practices of commercial banks in Kenya, the CBK has issued several prudential guidelines, created the Kenya Deposit Insurance Corporation (formerly Deposit Protection Fund) and made changes in both CBK Act (Cap 491) and the Banking Act (Cap 488) including progressively raising the minimum core capital requirement (to Ksh2 billion, by December 2017, Ksh3.5 billion by December 2018, and finally Ksh5 billion by December 2019).

Most of the studies on the four concepts have been conducted in developed economies that differ in terms of market efficiencies legal as well as regulatory environments. Further limited studies have evaluated the joint effect of Corporate Governance, Risk Management and Firm Characteristics on Financial Performance. Given the contextual and methodological differences the inconclusive and sometimes conflicting results, this is an area that requires current and further research.

The empirical analysis of relationships among Corporate Governance, Risk Management, Firm Characteristics and Financial Performance have not

provided an uncontested causal link among the variables. The previous studies pose theoretical and methodological as well as contextual gaps. Agency theory argues that separation of ownership from control creates conflicts of interests, whereas, in both Stewardship and Stakeholder theories, no such conflicts are envisaged. Most of the previous studies reviewed have evaluated the relationships among two or three of the variables with conflicting and inconclusive results.

Corporate governance, risk management, firm characteristics could jointly affect bank financial performance. From the past empirical studies, scholars to have some effect (positive, negative or none) on bank financial performance have documented each of these variables. Few scholars have also investigated the joint effect of the variables. This study evaluated the joint effect of corporate governance, risk management and firm characteristics on bank financial performance.

Methodologically previous empirical research has focused mainly on the direct effect of Corporate Governance on Financial Performance, with limited studies testing the joint effect of risk management and firm characteristics. Further, the previous studies have tended to focus on one aspect of bank financial performance (Earnings), ignoring other components of the CAMEL model that comprehensively evaluates bank Financial and managerial Performance.

III. RESEARCH OBJECTIVES

The study addressed the following specific research question: do Corporate Governance, Risk Management and Firm Characteristics jointly significantly affect the Financial Performance of commercial banks in Kenya?

The general objective of the study was to establish the relationships among corporate governance, risk management, firm characteristics and financial performance of commercial banks in Kenya.

The specific objective was to evaluate the joint effect of corporate governance, risk management and firm characteristics on the financial performances of commercial banks in Kenya.

IV. LITERATURE REVIEW

This section is a presentation of literature applicable to the study as presented by other scholars, researchers, and analysts.

A. Theoretical Review

The Agency theory (also called principal-agent theory) was originally proposed by Ross (1973) to explain relationships between two parties (such as those between an employer and its employees, between organizational executives and shareholders, and between buyers and sellers) whose goals are not congruent with each other. The theory was

expounded by Jensen and Meckling (1976), who argue that the separation of ownership from control creates an agency problem whereby managers operate the firm aligned with their own interests and not those of shareholders. This creates opportunities for managers to spend firm resources for the maximization of their own utilities rather than those of the shareholders. Agency conflicts may arise among shareholders versus bondholders, shareholders and independent auditors, shareholders and Government, dominant versus minority shareholders, as well management and subordinates.

Agency theory is concerned with resolving two problems that can occur in agency relationships. The first problem arises when the desires or goals of the principal and agent conflict, and the second problem arises when it is difficult or expensive for the principal to verify what the agent is actually doing. Based on this theory, prudent Corporate Governance mechanisms align the interests of directors and managers with those of shareholders translate into efficient Risk Management strategies, which, combined with optimal Firm Characteristics, translates into better Financial Performance and returns to the stakeholders. In agency relationships, the key role of the Non-Executive Directors in Corporate Governance include among others scrutinising the performance of management in meeting agreed on goals and objectives, monitoring the reporting of performance as well as satisfying themselves on the integrity of financial information and that financial controls and systems of risk management are robust and defensible. Thus effective involvement of Nonexecutive board members can greatly improve Risk Management and Financial Performance.

Transaction cost theory is applicable to Corporate Governance by viewing it as an alternative to the agency relationship by describing Corporate Governance as being based on the net effects of internal and external transactions, rather than as contractual relationships with parties outside the firm (like with shareholders). Transaction cost theory and agency theory essentially deal with the same issues and problems. Where agency theory focuses on the individual agent, transaction cost theory focuses on the individual transaction. Whereas Agency theory looks at the tendency of directors to act in their own best interests, pursuing salary and status, the Transaction cost theory considers that managers (or directors) may arrange transactions in an opportunistic way. Just like Agency theory, Transaction cost theory focuses on effective and efficient accomplishment of transactions by firms rather than the protection of ownership rights of shareholders.

Empirical Literature Review on Corporate Governance, Risk Management, Firm Characteristics and Financial Performance

The relationship between the core principles of Corporate Governance and Financial Performance in commercial banks of Uganda was analyzed by Rogers (2006). The study found that Corporate Governance predicts 34.5 % of the variance Financial Performance of commercial banks in Uganda. However, the significant contributors to Financial Performance included openness and reliability. Openness and reliability were used as measures of trust. On the other hand, credit risk had a negative relationship with Financial Performance. Trust had a significant impact on Financial Performance.

Tandelilin et al. (2007) investigated the relationships among Corporate Governance, Risk Management, and bank performance in the Indonesian banking sector using the generalized methods of moments. Both primary and secondary data were used in the analyses. The study examined whether the type of ownership had a moderating effect on the relationships among Corporate Governance, Risk Management, and Bank Performance. The study further investigated whether ownership structure was a key determinant of Corporate Governance. The study found that the relationships between Corporate Governance and Risk Management and between Corporate Governance and Bank Performance were sensitive to the type of bank ownership. However, ownership structure showed partial support as a key determinant of Corporate Governance. Foreign-owned banks had better implemented good Corporate Governance than joint venture-owned banks, state-owned banks, and private domestic-owned banks. Foreign-owned banks also depicted a significant relationship between Corporate Governance and risk management. They also found that state-owned banks underperformed the other types of bank ownership in implementing good corporate governance. The study further found an interrelationship between Risk Management and bank performance.

V. CONCEPTUAL HYPOTHESIS

The null hypothesis tested in the study was that the joint effect of corporate governance, risk management and firm characteristics on the financial performance of commercial banks in Kenya is not significant.

VI. RESEARCH METHODOLOGY

A research design is a blueprint for conducting the study with maximum control over factors that may interfere with the validity of the findings (Burns & Grove, 2010). According to Trochim (2005), research design “provides the glue that holds the research project together”. A design is used to structure the research, to show how all of the major parts of the research project work together to try to address the

central research questions. Research designs can be grouped into three main types: exploratory, descriptive, and explanatory (Bhattacharjee, 2012). A detailed discussion of each research design is provided in the section below:

An exploratory research design is a valuable means of finding out ‘what is happening; to seek new insights; to ask questions and to assess phenomena in a new light’ (Robson & McCartan, Robson, 2016). The design is useful to clarify the understanding of a problem, for example, if the researcher is unsure of the precise nature of the problem. The three principal ways of conducting exploratory research include a search of the literature, interviewing ‘experts’ in the subject and conducting focus group interviews.

Bhattacharjee (2012) states that exploratory designs are often used in new areas of inquiry, where the goals of the research are to scope out the magnitude or extent of a particular phenomenon, problem, or behaviour; to generate some initial ideas (or “hunches”) about that phenomenon, or to test the feasibility of undertaking a more extensive study regarding that phenomenon. Adams and Schvaneveldt (1991) liken exploratory design to the activities of the traveller or explorer with the advantage of flexibility and adaptability to change. They argue that in conducting exploratory research, the researcher must be willing to change direction as a result of new data that appear and new insights that occur. They argue that the flexibility inherent in exploratory research does not mean the absence of direction to the enquiry; it simply means that the focus is initially broad and becomes progressively narrower as the research progresses.

Burns and Grove (2003) define descriptive research as a design to provide a picture of a situation as it naturally happens. The design may be used to justify the current practice, make a judgment and also develop theories. Robson and McCartan (2016) state that the objective of descriptive research is to portray an accurate profile of persons, events or situations. A descriptive design can be an extension of, or a forerunner to, a piece of exploratory research or, more often, a piece of explanatory research. It is necessary to have a clear picture of the phenomena on which you wish to collect data prior to the collection of the data. Descriptive designs in management and business research should be thought of as a means to an end rather than an end in itself. Descriptive design is likely to be a precursor to an explanatory study design, known as descriptor-explanatory studies (Saunders et al., 2009).

An explanatory design involves studies that establish causal relationships between variables (Saunders et al., 2009). The emphasis of an explanatory design is to study a situation or a problem in order to explain the relationships between variables. This design attempt to clarify how and why there is a relationship between two or more aspects of a situation or phenomenon.

Zikmund, Babin, Carr and Griffin (2013) suggest that the degree of uncertainty about the research problem determines the research design. Since the key variables in the study were defined and the study had clearly stated hypotheses and investigative questions, the descriptive design was appropriate for this study. This position is supported by Cooper and Schindler (2003), who state that the descriptive design is appropriate for a study that has clearly stated hypotheses or investigative questions. The main advantage of descriptive research is the capacity to study change and development. As pointed out by Adams and Schvaneveldt (1991), "in observing people or events over time the researcher is able to exercise a measure of control over variables being studied, provided that they are not affected by the research process itself". Previous studies have used the descriptive approach (Tandelilin et al., 2007; Ndung'u, 2013; Mang'unyi, 2011).

Cooper and Schindler (2003) define a population as an entire group of individuals, events or objects having common characteristics that conform to a given specification. The population of the study were all the forty-three (43) commercial banks registered in Kenya as of December 31, 2014. A census was adopted; hence no sampling.

Commercial banks were selected for this study due to the uniqueness of Corporate Governance and Risk Management adopted by them. There are unique Corporate Governance and Risk Management challenges in commercial banks, as evidenced by the interventions by regulatory bodies through the issuance of prudential guidelines on Corporate Governance and Risk Management. In addition, commercial banks are involved in the financial mediation process, and problems in the banking industry can have a contagious effect on the entire financial factor and the economy as a whole.

According to Burns and Grove (2010), data collection is the precise, systematic gathering of information relevant to the research sub-problems, using methods such as interviews, participant observations, focus group discussion, narratives and case histories. The study used quantitative secondary data collected in Microsoft excel sheets for a five year period (2010 to 2014). Secondary data on Risk Management, Firm Characteristics and Financial Performance was collected from the annual reports and accounts of the commercial banks as well as the CBK Bank Supervision and Banking Sector Reports. Tandelilin et al. (2007) used both primary and secondary data in the analysis with consistent results.

Corporate Governance was measured using three attributes; board size, board composition and board independence obtained from the annual reports of the commercial banks. These measures were adopted from those used by Akhtaruddin, Hossain, Hossain and Yao (2009). Risk Management indicators (adopted from Jorion, 2001) were Credit Risk Management, Business Risk Management and

Liquidity Risk Management. Firm Characteristics indicators were adopted from Akhtaruddin et al. (2009), which were Size, Leverage and Nature of the Audit Firm. Bank Financial Performance indicators were based on the CAMEL model (Capital Adequacy, Asset Quality, Management Capacity, Earning Ability and Liquidity), which were adopted from those used by Reddy (2012).

The classical linear regression model is based on a number of assumptions, including linear relationship, multivariate normality, no or little multicollinearity, no auto-correlation and homoscedasticity. The following diagnostic tests were conducted on the data.

Linear regression analysis requires that there is little or no autocorrelation in the data. Autocorrelation occurs when the residuals are not independent of each other. The Durbin –Watson statistic ($1.5 < d < 2.5$), as proposed by Durbin and Watson (1951), was used to test the autocorrelation in the panel data. To ensure that the value of $y(x+1)$ is independent of the value of $y(x)$.

The ANOVA test of linearity was used to check for linearity of the relationships between the independent and the data of the dependent variable. The test computed both the linear and nonlinear components of a pair of variables. Nonlinearity was considered significant if the computed F value for the nonlinear component was below 0.05.

Zikmund et al. (2013) define data analysis as the application of reasoning to understand the data that has been gathered with the aim of determining consistent patterns and summarizing the relevant details revealed in the investigation. Sekaran (2006) suggests a four-step approach in data analysis, namely; get the data ready for analysis (editing for accuracy, consistency and completeness); get a feel of the data (descriptive statistics); test the goodness of fit (diagnostic tests) and finally hypothesis testing. The statistical package for social sciences (SPSS) version 21 was used in the data analysis.

The study used the multiple regression analysis to test the joint effect of Corporate Governance, Risk Management, and Firm Characteristics on bank Financial Performance.

The above analysis was consistent with those used in the previous studies to test the main effect, intervention, moderation and joint effect (Klein et al., 2005, Mang'unyi, 2011, Tandelilin et al., 2007, Rogers, 2006). Previous studies that have used multiple measures of Financial Performance include Ongore and Kusa (2013), who used three measures of Financial Performance (ROA, ROE & NIM); Rogers (2006), who measured Financial Performance based on each of the components of the CAMEL model (Capital adequacy, Asset Quality, Management Capacity, Earnings, and Liquidity) and Reddy (2012) who evaluated the relative performance of commercial banks using CAMEL approach. The current study adopted the CAMEL model to evaluate

Financial Performance for the attributes and composite (CAMEL ratio) measure as follows:

Multiple regression models were used to determine the joint effect of corporate governance, firm characteristics and risk management on bank financial performance. The models used to test hypothesis four was as follows:

$$FP_i = \beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \beta_4 CRM + \beta_5 BRM + \beta_6 LRM + \beta_7 FS + \beta_8 FL + \beta_9 NAF + \epsilon_i \dots\dots\dots (1)$$

$$CAMEL = \beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \beta_4 CRM + \beta_5 BRM + \beta_6 LRM + \beta_7 FS + \beta_8 FL + \beta_9 NAF + \epsilon_i \dots\dots\dots (2)$$

Where:

- Fr_i, BC, BI, BS β₀& ε_i
- CRM Credit Risk Management
- BRM Business Risk Management
- LRM Liquidity Risk Management
- FS Firm Size
- FL Firm Leverage.
- NAF Nature of the Audit Firm
- β₁... β₉ Regression coefficients,

VII. DATA ANALYSIS, FINDINGS AND DISCUSSIONS

Descriptive statistics included measures of the mean, maximum, minimum, standard error of estimate, skewness and kurtosis. Mean is a measure of central tendency used to describe the most typical value in a set of values. The standard error is a statistical term that measures the accuracy within a set of values. Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the centre point. Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution (Cooper & Schindler, 2003).

The results of the descriptive statistics of all the study variables for the number of observations (N) are shown in Table 2. Table 2 below shows that Capital Adequacy, Asset Quality, Management Efficiency, Earnings, Liquidity and CAMEL Ratio had a mean of .24±.15, .05±.06, .77±.24, .02±.02, .05±.00 and 022±.06 respectively.

Table 1. Financial Performance Descriptive Statistics

	Capital Adequacy	Asset Quality	Management Capacity	Earnings	Liquidity	CAMEL Ratio
N Valid	209	209	209	209	210	210
Missing	1	1	1	1	0	0
Mean	0.24	0.05	0.77	0.02	0.05	0.22
Median	0.20	0.03	0.76	0.03	0.05	0.22
Std. Deviation	0.15	0.06	0.24	0.02	0.00	0.06
Skewness	2.36	4.15	1.25	-1.86	-1.51	2.23
Std. Error of Skewness	0.17	0.17	0.17	0.17	0.17	0.17
Kurtosis	7.73	24.55	4.91	7.73	0.29	8.82
Std. Error of Kurtosis	0.34	0.34	0.34	0.34	0.33	0.33
Minimum	0.00	0.00	0.20	-0.11	0.05	0.05

Maximum	1.10	0.47	2.04	0.07	0.05	0.55
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Source: Research Findings

The results show Capital Adequacy, Asset Quality, Management Capacity, and CAMEL Ratio had positive skewness while all the variables showed positive Kurtosis.

Table 2. Risk Management Descriptive Statistics

	Liquidity Risk Mgt.	Credit Risk Mgt.	Business Risk Mgt.
N Valid	210	210	210
Missing	0	0	0
Mean	0.44	0.08	0.17
Median	0.39	0.05	0.19
Std. Deviation	0.19	0.09	1.85
Skewness	1.71	2.96	-0.43
Std. Error of Skewness	0.17	0.17	0.17
Kurtosis	4.63	10.53	29.88
Std. Error of Kurtosis	0.33	0.33	0.33
Minimum	0.00	0.00	-12.84
Maximum	1.30	0.61	13.20

Source: Research Data (2016)

Table 2 above shows that Liquidity Risk Management, Credit Risk Management and Business Risk Management had a mean of .44±.19, .08±.09 and .17±1.9, respectively. The results show that Liquidity Risk Management and Credit Risk Management had positive skewness while all the variables showed positive Kurtosis.

Table 3. Corporate Governance Descriptive Statistics

	Board Size	Board Composition	Board Independence
N Valid	210	210	210
Missing	0	0	0
Mean	8.88	0.19	0.81
Median	8.00	0.17	0.83
Std. Deviation	2.57	0.09	0.09
Skewness	1.40	1.23	-1.23
Std. Error of Skewness	0.17	0.17	
Kurtosis	3.70	1.99	0.17
Std. Error of Kurtosis	0.33	0.33	0.33
Minimum	5.00	0.05	0.50
Maximum	19.00	0.50	0.95

Source: Research Data (2016)

Table 3 above shows that Board Size, Board Composition, and Board independence had a mean of 8.9±2.57, .193±.09 and .81±.09, respectively. The results show that Board Size and Board composition had positive skewness while Board independence had negative skewness and all the variables showed positive Kurtosis.

Source: Research Data (2016)

Table 4: Firm Characteristics Descriptive Statistics

		Nature of Audit Firm	Firm Leverage	Firm Size
N	Valid	210	210	209
	Missing	0	0	1
Mean		0.90	0.24	23.95
Median		1.00	0.19	23.68
Std. Deviation		0.29	0.32	1.31
Skewness		-2.78	8.28	0.20
Std. Error of Skewness		0.17	0.17	0.17
Kurtosis		5.77	84.01	-0.97
Std. Error of Kurtosis		0.33	0.33	0.34
Minimum		0.00	0.00	21.28
Maximum		1.00	3.89	26.67

Table 4 above shows that the nature of audit firm, leverage and firm size had a mean of .90±.29, .24±.32 and 23.95±1.31, respectively. The results show that leverage and firm size had positive skewness with the nature of the audit firm and leverage showed positive kurtosis.

A. Financial Performance Panel Data Independence Test

Linear regression analysis requires that there is little or no autocorrelation in the data. Autocorrelation occurs when the residuals are not independent of each other. The Durbin –Watson (1951) statistic was used to test the autocorrelation in the panel data. The results are presented in Table 5 below

Table 5. Results of Financial Performance Independence Test

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate	Durbin-Watson Statistic (d)
Capital Adequacy	.299a	.089	.085	.0534503	2.085
Asset Quality	.690a	.476	.473	.0405567	1.661
Management Capacity	.129a	.017	.012	.0029946	2.122
Earnings	.066a	.004	.000	.0558889	1.932
Liquidity	.078a	.006	.001	.0569726	1.883

a. Dependent Variable: CAMEL Ratio
Source: Research Data (2016)

Table 5 shows the model summary and overall fit statistics. With Capital Adequacy as the predictor, adjusted R² is .085 with the R² = .089, meaning that the linear regression explains 0.9% of the variance in the data. The Durbin-Watson statistic (d = 2.085) lies between the two critical values of 1.5 < d < 2.5, meaning there is no first-order linear auto-correlation in the data. Asset Quality, Management Capacity, Earnings and Liquidity could explain 47.3% (d=1.661), 1.2% (d=2.122), 0% (d=1.932) and 0.1% (d=1.883) respectively, meaning no linear auto-correlation. All the attributes of Financial Performance, the Durbin-Watson statistic (d), lies between the two critical values of 1.5 < d < 2.5, meaning there is no first-order linear auto-correlation in the multiple linear regression data.

B. Financial Performance Panel Data Linearity Test

The ANOVA test of linearity was used to check for linearity of the relationships between the independent and the data of the dependent variable. The test computed both the linear and nonlinear components of a pair of variables. Nonlinearity was considered significant if the computed F value for the nonlinear component was below 0.05. The results are presented in Table 5 below:

Table 6. Results of Financial Performance Linearity ANOVA Test

			Sum of Squares	df	Mean Square	F	Sig.
Capital Adequacy	Between Groups	(Combined)	4.48	198.00	0.02	2.57	0.05
		Linearity	0.41	1.00	0.41	46.31	0.00
		Deviation from Linearity	4.07	197.00	0.02	2.34	0.07
Within Groups			.088	0.09	10.00	0.01	

Total			4.569	4.57	208.00		
Asset Quality	Between Groups	(Combined)	0.60	198.00	0.00	0.91	0.63
		Linearity	0.30	1.00	0.30	90.88	0.00
		Deviation from Linearity	0.30	197.00	0.00	0.46	0.98
	Within Groups		.033	0.03	10.00	0.00	
Total			.632	0.63	208.00		
Management Efficiency	Between Groups	(Combined)	11.60	198.00	0.06	4.71	0.01
		Linearity	8.18	1.00	8.18	657.81	0.00
		Deviation from Linearity	3.42	197.00	0.02	1.39	0.29
	Within Groups		.124	0.12	10.00	0.01	
Total			11.723	11.72	208.00		
Earnings	Between Groups	(Combined)	0.11	198.00	0.00	1.10	0.48
		Linearity	0.00	1.00	0.00	1.00	0.34
		Deviation from Linearity	0.11	197.00	0.00	1.10	0.48
	Within Groups		.005	0.01	10.00	0.00	
Total			.114	0.11	208.00		
Liquidity	Between Groups	(Combined)	0.00	190.00	0.00	0.70	0.88
		Linearity	0.00	1.00	0.00	0.50	0.49
		Deviation from Linearity	0.00	189.00	0.00	0.70	0.88
	Within Groups		.000	0.00	19.00	0.00	
Total			.002	0.00	209.00		

Source: Research Data (2016)

Based on the ANOVA Table 6 above, the values of significance from linearity for Capital Adequacy, Asset Quality, Management Capacity, Earnings and Liquidity of .068, .980, .292, .475 and .882 all greater than .05(p>.05), it can be concluded that there is a linear relationship between the Financial Performance variable and its attributes.

C. Financial Performance Panel Data Multicollinearity Test

Multicollinearity occurs when the variables are not independent of each other, meaning one independent variable can be linearly predicted from the others with some reasonable degree of accuracy (Woolridge, 2002). The presence of multicollinearity in the Financial Performance was assessed using the VIF (Tolerance) test. The results are presented in Table 7 below:

Table 7. Results of Financial Performance Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1 (Constant)	0.08	0.01		10.42	0.00			
	Management Capacity	0.20	0.01	0.84	21.87	0.00	1.00	1.00
2 (Constant)	0.00	0.00		0.17	0.87			
	Management Capacity	0.23	0.00	0.97	88.94	0.00	0.94	1.07
	Capital Adequacy	0.21	0.00	0.55	49.86	0.00	0.94	1.07
3 (Constant)	0.02	0.00		10.49	0.00			
	Management Capacity	0.21	0.00	0.87	124.57	0.00	0.59	1.70
	Capital Adequacy	0.19	0.00	0.51	90.12	0.00	0.88	1.13
	Asset Quality	0.17	0.01	0.17	24.54	0.00	0.63	1.59
4 (Constant)	0.01	0.00		50.28	0.00			
	Management Capacity	0.20	0.00	0.85	866.49	0.00	0.57	1.75
	Capital Adequacy	0.20	0.00	0.53	656.48	0.00	0.85	1.18
	Asset Quality	0.20	0.00	0.20	199.28	0.00	0.57	1.75
	Earnings	0.20	0.00	0.08	102.20	0.00	0.84	1.19
5 (Constant)	0.00	0.00		0.00	1.00			
	Management Capacity	0.20	0.00	0.85	2860	0.00	0.56	1.80
	Capital Adequacy	0.20	0.00	0.53	2202	0.00	0.85	1.18
	Asset Quality	0.20	0.00	0.20	6696	0.00	0.56	1.77
	Earnings	0.20	0.00	0.08	3457	0.00	0.84	1.20
	Liquidity	0.20	0.00	0.01	4791	0.00	0.97	1.03

a. Dependent Variable: CAMEL Ratio

Source: Research Data (2016)

In the stepwise multiple linear regression analysis, there are highly significant coefficients. When Camel Ratio was predicted against the attributes of Financial Performance, it was found that Management Capacity (Beta = -0.85, $p < .01$) and Capital Adequacy (Beta = 0.53, $p < .01$) had a higher impact on the CAMEL ratio while Asset Quality (Beta = 0.20, $p < .01$), Earnings (Beta = 0.08, $p < .01$) and Liquidity (Beta = 0.11, $p < .01$) have a relatively lower impact on the dependent variable. The VIF (Tolerance) test confirms there was no multicollinearity in the multiple linear regression model, as all the variables meet the Tolerance threshold of $0.1 < VIF < 10$.

D. Financial Performance Panel Data Normality Test

Normality of Financial Performance data was tested using the Kolmogorov-Smirnov goodness of fit test as well as the Shapiro–Wilk test, which is a more robust test of normality. The results are presented in Table 8 below:

Table 8. Normality Test for Financial Performance Data

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Capital Adequacy	.250	209	.200*	.850	209	.158
Asset Quality	.151	209	.200*	.912	209	.332
Management Capacity	.224	209	.200*	.875	209	.138
Earnings	.211	209	.200*	.913	209	.455
Liquidity	.097	209	.200*	.975	209	.488
CAMEL Ratio	.250	209	.200*	.850	209	.158
*. This is a lower bound of the true significance.						
Source: Research Data (2016)						

The results, as shown in Table 7, indicate that all the components of financial performance had Shapiro-Wilk probability $>.05$ indicating that the Financial Performance data follow a normal distribution.

E. Risk Management Panel Data Independence Test

The Durbin–Watson (1951) statistic was used to test the autocorrelation in the Risk Management panel data. The results are presented in Table 8 below:

Table 8. Results of Risk Management Linearity ANOVA Test

Model	R	R Square	Adjusted R Square	Std. An error of the Estimate	Durbin-Watson
Credit Risk Mgt	.014a	.000	-.005	.6192203	2.123
Business Risk Mgt	.533a	.284	.281	.1009800	1.535
Liquidity Risk Mgt	.084a	.007	.002	.6171013	2.152

a. Predictors: (Constant), Business Risk Mgt. (BRR)

b. Predictors: (Constant), Business Risk Mgt. (BRR), Liquidity Risk Mgt. (LRR)

c. Predictors: (Constant), Business Risk Mgt. (BRR), Liquidity Risk Mgt. (LRR), Credit Risk Mgt. (NPLR)

d. Dependent Variable: Composite Risk

Source: Research Data (2016)

Table 8 above shows that the Durbin-Watson statistic ($d = 2.123$), ($d=2.123$), ($d=1.535$) and ($d=2.152$) for Credit Risk Management, Business Risk Management and Liquidity Risk Management data, respectively, is within the threshold of $1.5 < d < 2.5$ meaning there was no linear auto-correlation between the variables.

F. Risk Management Panel Data Linearity Test

The ANOVA test of linearity was used to test the linearity of the Risk Management data. The test computed both the linear and nonlinear components of a pair of Risk Management variables. Nonlinearity was considered significant if the computed F value for the nonlinear component was below 0.05. The results are presented in Table 9 below:

Table 9. Results of Risk Management Linearity Data ANOVA Test

		Sum of Squares	df	Mean Square	F	Sig.	
Credit Risk Mgt	Between Groups	(Combined)	219.55	118.00	1.86	0.85	0.81
		Linearity	1.51	1.00	1.51	0.69	0.41
		Deviation from Linearity	218.04	117.00	1.86	0.85	0.80
	Within Groups		200.452	200.45	91.00	2.20	
	Total		420.000	420.00	209.00		
Business Risk Mgt	Between Groups	(Combined)	304.17	149.00	2.04	1.06	0.41
		Linearity	0.68	1.00	0.68	0.35	0.56

		Deviation from Linearity	303.49	148.00	2.05	1.06	0.40
	Within Groups		115.833	115.83	60.00	1.93	
	Total		420.000	420.00	209.00		
Liquidity Risk Mgt	Between Groups	(Combined)	343.33	169.00	2.03	1.06	0.43
		Linearity	5.11	1.00	5.11	2.67	0.11
		Deviation from Linearity	338.23	168.00	2.01	1.05	0.44
	Within Groups		76.667	76.67	40.00	1.92	
	Total		420.000	420.00	209.00		

Source: Research Data (2016)

The ANOVA Table 9 above show that the value of significance of Deviation from linearity of all the components of Risk Management was greater than .05. It can be concluded that there is a linear relationship between the variances of the variables.

G. Risk Management Panel Data Normality Test

Normality in the Risk Management data was tested using the Kolmogorov-Smirnov test, which is a nonparametric test of the equality of continuous, one-dimensional probability distributions that compares a sample with a reference probability distribution (one-sample K-S test) or to compare two samples (two-sample K-S test). In addition, a robust test of normality, the Shapiro-Wilk test, was also used. . The results are presented in Table 10 below:

Table 10. Normality test for Risk Management data

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Credit Risk Mgt	.215	210	.200*	.912	210	.477
Business Risk Mgt	.215	210	.200*	.933	210	.615
Liquidity Risk Mgt	.275	210	.200*	.911	210	.472

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Research Data (2016)

Table 10 above shows that all the components of Risk Management had a Shapiro-Wilk test p>.05 indicating the data was drawn from a normally distributed population.

Corporate Governance Panel Data Independence Test

The Durbin –Watson (1951) statistic was used to test the autocorrelation in the Firm Characteristics panel data. The results are presented in Table 11 below:

Table 11. Results of Corporate Governance Panel Data Independence Test

Predictor	R	R Square	Adjusted R Square	Std. The error of the Estimate	Durbin-Watson
Board Composition	.351 ^a	.123	.119	.8030690	1.751
Board Independence	.351 ^a	.123	.119	.8030690	1.751
Board Size	.033 ^a	.001	-.004	.1193073	2.148

a. Dependent Variable: Composite Corporate Governance - (IND VAR)

Source: Research Data (2016)

As shown in Table 11, the Durbin-Watson statistic (d = 1.751) for Board Composition and Board Independence and Board Size (d = 2.148) lies within the threshold of 1.5 < d < 2.5; thus, there was no linear auto-correlation between the Corporate Governance attributes.

H. Corporate Governance Panel Data Linearity Test

The ANOVA test of linearity was used to test the linearity of the Corporate Governance panel data. The test computed both the linear and nonlinear components of a pair of Corporate Governance variables. Nonlinearity was considered significant if the computed F value for the nonlinear component was below 0.05. The results are presented in Table 12 below.

Table 12. Results of Corporate Governance Data Linearity (ANOVA) Test

			Sum Squares	df	Mean Square	F	Sig.
Board Composition	Between Groups	(Combined) Linearity	32.81	21.00	1.56	0.76	0.77
		Deviation from Linearity	0.43	1.00	0.43	0.21	0.65
			32.38	20.00	1.62	0.79	0.73
	Within Groups		387.190	387.19	188.00	2.06	
Total			420.000	420.00	209.00		
Board Independence	Between Groups	(Combined) Linearity	32.81	21.00	1.56	0.76	0.77
		Deviation from Linearity	0.43	1.00	0.43	0.21	0.65
			32.38	20.00	1.62	0.79	0.73
	Within Groups		387.190	387.19	188.00	2.06	
Total			420.000	420.00	209.00		
Board Size	Between Groups	(Combined) Linearity	15.61	9.00	1.74	0.86	0.56
		Deviation from Linearity	0.01	1.00	0.01	0.00	0.96
			15.61	8.00	1.95	0.97	0.47
	Within Groups		404.387	404.39	200.00	2.02	
Total			420.000	420.00	209.00		

Source: Research Data (2016)

The ANOVA results in Table 12 above show that values of the significance of Deviation from linearity of $p > .05$ imply a linear relationship exists between the variances of Board Composition, Board Independence and Board Size.

I. Corporate Governance Panel Data Multicollinearity Test

The presence of multicollinearity in the Corporate Governance panel data was assessed using the VIF (Tolerance) test. The results are presented in Table 13 below:

Table 13. Results of Corporate Governance Data Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-0.33	0.00		-312.77	0.00		
Board Size (BS)	0.90	0.00	1.00	794.13	0.00	1.00	1.00
2 (Constant)	-0.33	0.00		-314.85	0.00		
Board Size (BS)	0.90	0.00	1.00	730.07	0.00	0.83	1.20
Board Composition (BC)	0.00	0.00	0.00	-2.28	0.02	0.83	1.20
3 (Constant)	-0.34	0.00		-180.69	0.00		
Board Size (BS)	0.90	0.00	1.00	793.82	0.00	0.82	1.22
Board Composition (BC)	-0.01	0.00	-0.02	-6.95	0.00	0.14	7.34
Board Independence (BIND)	-0.04	0.01	-0.02	-6.49	0.00	0.15	6.90

a. Dependent Variable: Composite Corporate Governance - (IND VAR)

Source: Research Data (2016)

In the stepwise multiple linear regression analysis, there were highly statistically significant beta coefficients. When Composite Risk Management was predicted, it was found that Board Size (Beta = -0.998, $p < .01$) had a high impact on the dependent variable compared to Board Composition (Beta = -.021, $p < .01$) and Board Independence (Beta = -.019, $p < .01$). There was no multicollinearity in the Corporate Governance data as the Tolerance threshold of > 0.1 (or $VIF < 10$) was met.

J. Corporate Governance Panel Data Normality Test

Normality of the Corporate Governance data was assessed using the goodness of fit test, the Kolmogorov-Smirnov test, as well as the more robust test of normality, Shapiro-Wilk test. A non-linear transformation, log transformation, was used to fix data that were not normally distributed. The results are presented in Table 14 below:

Table 14: Corporate Governance Panel Data Normality Test

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.

Board Composition	.26	210	.200*	.905	210	.404
Board Independence	.203	210	.200*	.877	210	.294
Board Size	.254	210	.200*	.914	210	.492

a. Lilliefors Significance Correction
 Source: Research Data (2016)

Table 14 above shows that all the components of corporate governance had a Shapiro-Wilk test $p > .05$ indicating the data was drawn from a normally distributed population.

K. Firm Characteristics Panel Data Independence Test

The Durbin –Watson (1951) statistic was used to test the autocorrelation in the Firm Characteristics panel data. The results are presented in Table 15 below

Table 15. Results of Firm Characteristics Panel Data Independence Test

Predictor	R	R Square	Adjusted R Square	Std. The error of the Estimate	Durbin-Watson
Firm Size	.942a	.887	.887	.1455742	1.646
Nature of Audit Firm	.220a	.048	.044	.1446562	1.810

a. Dependent Variable: Composite Firm Characteristics
 Source: Research Data (2016)

Table 12 shows that the Durbin-Watson threshold of $1.5 < d < 2.5$ for Firm Leverage ($d=1.696$), Firm Size ($d=1.646$), and Nature of Audit Firm ($d=1.810$) was met, meaning no linear auto-correlation with the dependent variable.

L. Firm Characteristics Panel Data Linearity Test

The ANOVA test of linearity was used to test the linearity of the Firm Characteristics. The test computed both the linear and nonlinear components of a pair of Corporate Governance variables. Nonlinearity was considered significant if the computed F value for the nonlinear component was below 0.05. The results are presented in Table 16 below:

Table 16. Results of Firm Characteristics Panel Data Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
Leverage	Between Groups	(Combined)	313.00	158.00	1.98	0.94	0.62
		Linearity	1.40	1.00	1.40	0.67	0.42
		Deviation from Linearity	311.60	157.00	1.99	0.95	0.61
	Within Groups	107.000	107.00	51.00	2.10		
Total	420.000	420.00	209.00				
Firm Size	Between Groups	(Combined)	12.96	4.00	3.24	1.91	0.11
		Linearity	12.93	1.00	12.93	7.63	0.01
		Deviation from Linearity	0.03	3.00	0.01	0.01	1.00
	Within Groups	345.484	345.48	204.00	1.69		
Total	358.440	358.44	208.00				
Nature of Audit Firm	Between Groups	(Combined)	16.28	188.00	0.09	1.00	0.54
		Linearity	11.27	1.00	11.27	130.18	0.00
		Deviation from Linearity	5.01	187.00	0.03	0.31	1.00
	Within Groups	1.818	1.82	21.00	0.09		
Total	18.095	18.10	209.00				

Source: Research Data (2016)

Based on the ANOVA tables above, the significance of the deviation from Linearity ($p > .05$) shows that there is a linear relationship between the variances of Leverage, Firm Size and Nature of Audit Firm with composite Firm Characteristics.

M. Firm Characteristics Panel Data Multicollinearity Test

The presence of multicollinearity in the Firm Characteristics panel data was evaluated using the VIF (Tolerance) test. The results are presented in Table 17 below:

Table 17. Results of Firm Characteristics Panel Data Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-0.27	0.02		-11.50	0.00	
	Total Asset	0.87	0.02	0.97	50.37	0.00	1.00
2	(Constant)	-0.35	0.02		-22.29	0.00	
	Total Asset	0.93	0.01	1.04	80.95	0.00	0.89
	Leverage	0.02	0.00	0.22	16.83	0.00	0.89

a. Dependent Variable: Composite Firm Characteristics

Source: Research Data (2016)

When Firm Characteristics was predicted, it was found that Total Assets (Beta = 1.037, $p < .01$) and Leverage (Beta = .216, $p < .01$) have a high impact on the dependent variable. There was no multicollinearity in the multiple linear regression model as the Tolerance threshold of > 0.1 (or $VIF < 10$) was met

N. Firm Characteristics Panel Data Normality Test

Normality of the Firm Characteristic data was tested using the Kolmogorov-Smirnov goodness of fit test as well as the Shapiro-Wilk normality test. The results are presented in Table 18 below:

Table 18: Firm Characteristics Panel Data Normality Test

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Leverage	.208	210	.200*	.970	210	.875
Firm Size	.229	210	.200*	.955	210	.774
Nature of Audit Firm	.179	210	.092	.910	210	.064

a. Lilliefors Significance Correction

Source: Research Data (2016)

Table 18 above shows that all the components of Firm Characteristics ($p > .05$) indicate the data is normally distributed.

O. Summary Statistics of the Diagnostic Tests

The summary statistics of the diagnostics test of the five assumptions (Normality, Linearity, Independence, Homogeneity and Collinearity), the thresholds and the values computed for all the four variables of the study are presented in Table 19 below. A brief discussion then follows.

Table 19: Summary of Diagnostic Tests

	Assumption (Test)	Normality (Shapiro-Wilk)	Linearity (ANOVA)	Independence (Durbin-Watson)	Homogeneity (Levene)	Collinearity (Tolerance)
Variable	Attribute	$p > 0.05$	$p > 0.05$	$1.5 < d < 2.5$	$p > 0.05$	VIF 10 max
Corporate Governance	Board Composition	.404	.728	1.75	.942	1.22
	Board Independence	.294	.728	1.75	.942	7.34
	Board Size	.492	.465	2.15	.999	6.90
Risk Management	Credit Risk Mgt.	.477	.804	2.12	.137	1.004
	Business Risk Mgt.	.615	.403	1.54	.987	1.004
	Liquidity Risk Mgt.	.472	.442	2.15	.811	1.007
Firm Characteristics	Firm Leverage	.875	.611	1.70	.272	1.23
	Firm Size	.774	.999	1.65	.998	1.13
	Nature of Audit Firm	.064	1.00	1.81	1.00	-
Bank Financial Performance	Capital Adequacy	.158	.068	2.09	.084	1.18
	Asset Quality	.332	.980	1.66	.442	1.80
	Management Efficiency	.138	.292	2.12	.906	1.77

	Earnings	.455	.475	1.93	.748	1.20
	Liquidity	.488	.882	1.88	.417	1.03

Source: Research Data (2016)

P. Correlation between Corporate Governance, Risk Management and Firm Characteristics

Correlation analysis is used to measure the strength of a linear association between two variables. The Pearson correlation coefficient, denoted as r, can take values ranging from -1 to +1. According to Cooper and Schindler (2003), a value of -1 indicate perfect negative correlation, which implies that an increase in one variable is followed by a proportionate decrease in the other variable, while a value less than zero indicates a negative association between the two variables implying that as the value of one variable increases, the value of the other variable decreases and vice versa. A value of zero indicates no association exists between the two variables. Any value of r greater than 0 indicates a positive association between the variables implying that as the value of one variable increases, the value of the other variable equally increases.

A value of the correlation coefficient of 1 designates perfect positive correlation, which implies that an increase/decrease in one variable is followed by a proportionate increase/decrease in the other variable. The value of the Pearson correlation Coefficient will be closer to either +1 or -1, the stronger the association between the two variables. Sekaran (2006) states that Pearson's correlation is used if the variables of the study are measured using either interval or ratio scales. In this study, the correlation results are reported at a significance level of 0.05 and 0.01, consistent with other studies such as Magutu (2012) and Munjuri (2012).

The relationship between Risk Management, Corporate Governance and Firm Characteristics was also investigated using Pearson product-moment correlation. The results are presented in Table 20 below.

Table 20: Correlation between Composite CG, Risk Management and Firm Characteristics Measures

		(1)	(2)	(3)
Risk Management (1)	r	1		
Corporate Governance (2)	r	.064	1	
Firm Characteristics (3)	r	.016	.115	1

Source: Research Data (2016)

Table 20 shows no statistically significant correlation between Corporate Governance, Risk Management and Composite Firm Characteristics.

Table 21. Correlation Matrix for Individual Predictor Variables

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Liquidity Risk Management (1)	r	1.00								
Credit Risk Management (2)	r	-0.06	1.00							
Business Risk Management (3)	r	-0.02	-0.06	1.00						
Board Size (4)	r	-.281**	-0.13	0.10	1.00					
Board Composition (5)	r	.141*	0.05	-0.09	-.412**	1.00				
Board Independence (6)	r	-0.07	-.152*	.163*	.342**	-.924**	1.00			
Nature of Audit Firm (7)	r	-0.13	0.09	-0.01	.295**	-0.14	.145*	1.00		
Leverage (8)	r	.317**	.409**	0.13	0.07	0.03	-0.05	0.04	1.00	
Total Asset (9)	r	-.246**	-.428**	0.02	.513**	-0.03	0.03	0.04	-.315**	1.00

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data (2016)

As shown in Table 21, statistically significant positive correlations were noted between Board independence and Business Risk Management (r = .163, p<.05), Board Independence and Board Size (r = .342, p<.01), Nature of Audit Firm and Board Size (r=.295, p<.01), Nature of Audit Firm and Board Independence (r=.145, p<.05), Leverage and Liquidity Risk Management (r=.317, p<.01), Leverage and Credit Risk Management (r=.409, p<.01) and, Total Assets and Board Size (r=.513, p<.01).

Q. Correlation between Corporate Governance and Risk Management

The relationship between Corporate Governance and Risk Management was investigated using Pearson product-moment correlation. Risk Management was measured through the use of a Composite Risk Management score for each bank based on Credit Risk Management, Business Risk Management Ratio Measure, and Liquidity Risk Management. The results were as shown in Table 4.28 below:

Table 22. Correlation between Corporate Governance and Risk Management

		Liquidity Management	Risk	Credit Management	Risk	Business Management	Risk	Composite Management	Risk
Board Size	r	-.281**		-.126		.099		.064	
Board Composition	r	.141*		.054		-.091		-.074	
Board Independence	r	-.073		-.152*		.163*		.147*	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data (2016)

Table 22 shows the results are of the correlation analysis between Corporate Governance and Risk Management. There was a statistically significant negative correlation between Board Size and Liquidity Risk Management ($r = -.281, p < 0.01$) and a positive correlation with Board composition ($r = .141, p < 0.05$). Liquidity Risk Management worsened with increased Board Size while it improved with improved Board Composition. There was a statistically significant negative correlation noted between Credit Risk Management ($r = -.152, p < 0.05$) and a positive statistically significant correlation between Board Independence and Business Risk Management ($r = .163, p < 0.05$). The more the board became independent, the worse credit Risk Management became while business Risk Management became better. There was a positive relationship between overall Risk Management and Board Independence ($r = .147, p < 0.05$), indicating that a more independent board improved overall Risk Management.

VIII. HYPOTHESIS TESTING AND DISCUSSION OF FINDINGS

This chapter presents the results of the tests of the four null hypotheses in the study and their interpretations. The null hypothesis tested the combined effect of corporate governance, risk management and bank financial performance. Tests of goodness of fit, including the adjusted coefficient of determination (R^2), t-tests, standard error of estimate (Se) and ANOVA, are also presented. The section concludes with a discussion of findings on each of the hypotheses tested.

A. Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on Bank Financial Performance

The objective of the study was to determine the joint effect of Corporate Governance, Firm Characteristics and Risk Management on Financial Performance of commercial banks in Kenya. The study hypothesized that the joint effect of Corporate Governance, Risk Management and Firm Characteristics on the Financial Performance of commercial banks in Kenya was not significant. The following null hypothesis was tested:

H: The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Financial Performance of Commercial Banks in Kenya is Not Significant

To evaluate the effect on each Financial Performance indicator, six sub hypotheses were tested. The first sub hypothesis was to evaluate the combined effect of Corporate Governance, Risk Management and Firm Characteristics on capital adequacy.

The hypothesis was stated as follows:

H_a: The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Capital Adequacy of Commercial Banks in Kenya is Not Significant

The regression equations were of the form:

$$C = \beta_0 + \beta_1 BI + \beta_2 BS + \beta_3 CRM + \beta_4 BRM + \beta_5 LRM + \beta_6 FS + \beta_7 FL + \beta_8 NAF + \epsilon_i$$

The results are as shown in table 23 below:

Table 23: Regression Results of CG, Firm Characteristics, Risk Management and Capital Adequacy

Variables	β	SE	Std. β	t	R	R ²	ΔR^2	F
Model 1a					.904	.818	.810	99.262**
Constant	.480	.114		4.206**				
Board Composition	.037	.023	.074	1.560				
Board Independence	.264	.433	.027	.610				
Board Size	-.032	.031	-.048	-1.024				
Credit Risk Mgt.	.082	.061	.053	1.354				
Business Risk Mgt.	.002	.003	.024	.745				
Liquidity Risk Mgt.	.459	.028	.590	16.616**				
Firm Size	-.020	.005	-.179	-4.121**				
Leverage	.182	.018	.395	10.079**				
Nature of Audit Firm	-.007	.016	-.014	-.423				

Note: * $p < .05$, ** $p < .01$

a. Predictors: (Constant), Board Independence, Board Size, Credit Risk Management, Business Risk Management, Liquidity Risk Management, Firm Size, Firm Leverage, Nature of Audit Firm
 b. Dependent Variable: Capital Adequacy

Source: Research Data (2016)

Table 23 shows the results of the multiple linear regression computed to assess the relationship between Corporate Governance, Risk Management, Firm Characteristics and Capital Adequacy of commercial banks. There was a significant relationship between Corporate Governance, Risk Management, Firm Characteristics and Capital Adequacy ($F=99.262$, $p<.01$, $\Delta R^2=.810$). The predictor variables explained 81% of Capital Adequacy.

The regression coefficients (β) of the Corporate Governance Indicators of Board Composition, Board Independence and Board Size were not statistically significant ($p>.05$). The β and p values of the other explanatory variables as presented in Table 5.19 were Credit Risk Management ($\beta=.082$, $p>.05$), Business Risk Management ($\beta=-.002$, $p>.05$), Liquidity Risk Management ($\beta=.459$, $p<.01$), Firm Size ($\beta=-.020$, $p<.01$), Firm Leverage ($\beta=.182$, $p<.01$) and Nature of Audit Firm ($\beta=-.007$, $p>.05$).

From the findings, the relationship between Capital Adequacy and Board Composition, Board Independence, Board Size, Credit Risk Management, Business Risk Management as well as Nature of Audit Firm were not statistically significant ($p>.05$). The relationship between Capital Adequacy and Liquidity Risk Management, Firm Size and Leverage were, however, statistically significant ($p<.01$). Since the overall model was statistically significant ($p<.01$), Corporate Governance, Risk Management and Firm Characteristics jointly have a significant relationship with the Capital Adequacy of commercial banks. The sub hypothesis was rejected.

The second sub hypothesis was to evaluate the combined effect of Corporate Governance, Risk Management and Firm Characteristics on Asset Quality. The hypothesis was stated as follows:

H_b: The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Asset Quality of Commercial Banks in Kenya are Not Significant.

The regression equations were of the form:

$$A = \beta_0 + \beta_1 BI + \beta_2 BS + \beta_3 CRM + \beta_4 BRM + \beta_5 LRM + \beta_6 FS + \beta_7 FL + \beta_8 NAF + \epsilon_i$$

The results were as presented in table 24 below:

Table 24. Regression Results of CG, Firm Characteristics, Risk Management and Asset Quality

Variables	β	SE	Std. β	t	R	R ²	ΔR^2	F
Model 1a					.865	.749	.737	65.859**
Constant	.212	.050		4.246**				
Board Composition	.044	.010	.239	4.293**				
Board Independence	1.919	.189	.531	10.138**				
Board Size	.004	.014	.016	.286				
Credit Risk Mgt.	.320	.027	.549	12.018**				
Business Risk Mgt.	.001	.001	.020	.536				
Liquidity Risk Mgt.	-.042	.012	-.145	-3.481*				
Firm Size	-.010	.002	-.229	-4.493**				
Leverage	-.024	.008	-.137	-2.983*				
Nature of Audit Firm	.011	.007	.060	1.572				

Note: * $p < .05$, ** $p < .01$

a. Predictors: (Constant), Board Independence, Board Size, Credit Risk Management, Business Risk Management, Liquidity Risk Management, Firm Size, Firm Leverage, Nature of Audit Firm

b. Dependent Variable: Asset Quality

Source: Research Data (2016)

Table 23 shows the results of the multiple linear regression computed to assess the relationship between Corporate Governance, Risk Management, Firm Characteristics and Asset Quality of commercial banks. There was a significant relationship between Corporate Governance, Risk Management, Firm Characteristics and Asset Quality capital adequacy ($F=65.859$, $p<.01$, $\Delta R^2=.737$). The predictor variables explained 73.7% of Asset Quality.

The regression coefficients (β) of Board Composition ($\beta=.044$, $p<.01$), Board Independence ($\beta=1.919$, $p<.01$), Credit Risk Management ($\beta=.320$, $p<.01$), Liquidity Risk Management ($\beta=-.042$, $p<.05$), Firm Size ($\beta=-.010$, $p<.01$) and Leverage ($\beta=-.024$, $p<.05$) were all statistically significant. The β and p values of the other explanatory variables as presented in Table 5.38 were as follows: Board Size ($\beta=.004$, $p>.05$), Business Risk Management ($\beta=.001$, $p>.05$) and Nature of Audit Firm ($\beta=.011$, $p>.05$).

From the findings, the relationship between Asset Quality and Board Size, Business Risk Management as well as Nature of Audit Firm was not statistically significant ($p>.05$). The relationship between Asset Quality and Board Composition, Board Independence, Credit Risk Management, Liquidity Risk Management, Firm Size

And Leverage were, however, statistically significant ($p < .05$). Since the overall model was statistically significant ($p < 0.01$), Corporate Governance, Risk Management Firm Characteristics jointly have a significant relationship with the Asset Quality of commercial banks. The sub hypothesis was rejected.

The third sub hypothesis was to evaluate the combined effect of Corporate Governance, Risk Management and Firm Characteristics on Management Efficiency. The hypothesis was stated as follows:

H_c: The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Management Capacity of Commercial Banks in Kenya are Not Significant.

The regression equations were of the form:

$$M = \beta_0 + \beta_1 BI + \beta_2 BS + \beta_3 CRM + \beta_4 BRM + \beta_5 LRM + \beta_6 FS + \beta_7 FL + \beta_8 NAF + \epsilon_i$$

The results were as presented in table 25 below:

Table 25. Regression Results of CG, Firm Characteristics, Risk Management and Management Efficiency

Variables	β	SE	Std. β	t	R	R2	$\Delta R2$	F
Model 1a					.777	.604	.586	33.755**
Constant	.479	.270		1.775				
Board Composition	.341	.055	.430	6.158**				
Board Independence	7.133	1.023	.459	6.975**				
Board Size	-.127	.074	-.120	-1.731				
Credit Risk Mgt.	.160	.144	.064	1.110				
Business Risk Mgt.	.003	.006	.023	.492				
Liquidity Risk Mgt.	-.764	.065	-.613	-11.714**				
Firm Size	.012	.012	.069	1.076				
Leverage	.243	.043	.330	5.702**				
Nature of Audit Firm	.081	.038	.100	2.098*				

Note: * $p < .05$, ** $p < .01$

a. Predictors: (Constant), Board Independence, Board Size, Credit Risk Management, Business Risk Management, Liquidity Risk Management, Firm Size, Firm Leverage, Nature of Audit Firm

b. Dependent Variable: Management Efficiency

Source: Research Data (2016)

The results of the multiple linear regression computed to assess the relationship between Corporate Governance, Risk Management, Firm Characteristics And Management Capacity of commercial banks are shown in Table 25 above. There was a significant relationship between Corporate Governance, Risk Management, Firm Characteristics and Management Capacity ($F = 33.755$, $p < .01$, $\Delta R^2 = .586$). The predictor variables explained 58.6% of the Management Capacity of commercial banks in Kenya.

The regression coefficients (β) of the explanatory variables as presented in Table 5.21 were as follows: Board Composition ($\beta = .341$, $p < .01$), Board Independence ($\beta = 7.133$, $p < .01$), Board Size ($\beta = -.127$, $p > .05$), Credit Risk Management ($\beta = .160$, $p > .05$), Business Risk Management ($\beta = .003$, $p > .05$), Liquidity Risk Management ($\beta = -.764$, $p < .01$), Firm Size ($\beta = .012$, $p > .05$), Firm Leverage ($\beta = .243$, $p < .01$) and Nature of Audit Firm ($\beta = .081$, $p < .05$). From the findings, the relationship between Management Capacity and Board Size, Credit Risk Management, Business Risk Management as well as Firm Size were not statistically significant ($p > .05$). The relationship between Management Capacity and Board Composition, Board Independence, Liquidity Risk Management, Firm Leverage, and Nature of Audit Firm was, however, statistically significant ($p < .05$). Since the overall model was statistically significant ($p < 0.01$), Corporate Governance, Risk Management and Firm Characteristics jointly have a significant relationship with the Management Capacity of commercial banks. The sub hypothesis was rejected.

The fourth sub hypothesis was to evaluate the combined effect of Corporate Governance, Risk Management and Firm Characteristics on Earnings. The hypothesis was stated as follows:

H_d: The Joint Effect Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Earnings of Commercial Banks in Kenya is Not Significant

The regression equations were of the form:

$$E = \beta_0 + \beta_1 BI + \beta_2 BS + \beta_3 CRM + \beta_4 BRM + \beta_5 LRM + \beta_6 FS + \beta_7 FL + \beta_8 NAF + \epsilon_i$$

The results were as presented in table 26 below:

Table 26. Regression Results of CG, Firm Characteristics, Risk Management and Earnings

Variables	β	SE	Std. β	t	R	R2	$\Delta R2$	F
Model 1a					.586	.343	.313	11.554**
Constant	-.158	.034		-4.625**				
Board Composition	-.009	.007	-.115	-1.281				
Board Independence	-.005	.130	-.004	-.042				
Board Size	-.004	.009	-.042	-.468				
Credit Risk Mgt	-.003	.018	-.014	-.188				
Business Risk Mgt	.000	.001	.022	.365				
Liquidity Risk Mgt	-.013	.008	-.109	-1.610				
Firm Size	.009	.001	.496	6.025**				
Leverage	-.006	.005	-.087	-1.174				
Nature of Audit Firm	-.013	.005	-.170	-2.760*				

Note: *p < .05, **p < .01

a. Predictors: (Constant), Board Independence, Board Size, Credit Risk Management, Business Risk Management, Liquidity Risk Management, Firm Size, Firm Leverage, Nature of Audit Firm

b. Dependent Variable: Earnings

Source: Research Data (2016)

Table 26 above shows the results of the multiple linear regression computed to assess the relationship between Corporate Governance, Risk Management, Firm Characteristics and Earnings of commercial banks. There was a significant relationship between Corporate Governance, Risk Management, Firm Characteristics and Earnings (F=11.554, p<.01, ΔR^2 =.313). The predictor variables explained 31.3% of the Earnings of commercial banks in Kenya.

The regression coefficients (β) for Board Composition (β = -.009 p>.05), Board Independence (β = -.005, p>.05), Board Size (β = -.004, p>.05), Credit Management (β = -.003, p>.05), Business Management (β = .000, p>.05), Liquidity Management (β = -.013, p>.05) and Firm Leverage (β = -.006, p>.05) were all not statistically significant (p>.05). The β and p values of the other explanatory variables as presented in Table 5.40 were as follows: firm size (β = .009, p<.01) and nature of audit firm (β = -.013 p<.05), both were statistically significant.

From the findings, the relationship between Earnings and Board Composition, Board Independence, Board Size, Credit Management, Business Management, Liquidity Management and Firm Leverage were not statistically significant (p>.05). The relationship between Earnings and Firm Size, as well as the Nature of Audit firms, were statistically significant (p<.05). Since the overall model was statistically significant (p<.01), Corporate Governance, Risk Management Firm Characteristics Jointly Have a Significant Relationship with Earnings of commercial banks. The sub hypothesis was rejected.

The fifth sub hypothesis was to evaluate the combined effect of Corporate Governance, Risk Management and Firm Characteristics on Liquidity. The hypothesis was stated as follows:

H_e: The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Liquidity of Commercial Banks in Kenya is Not Significant.

The regression equation was of the form:

$$L = \beta_0 + \beta_1 BI + \beta_2 BS + \beta_3 CRM + \beta_4 BRM + \beta_5 LRM + \beta_6 FS + \beta_7 FL + \beta_8 NAF + \epsilon_i$$

The results were as presented in table 27 below:

Table 27. Regression Results of CG, Firm Characteristics, Risk Management and Liquidity

Variables	β	SE	Std. β	t	R	R2	$\Delta R2$	F
Model 1a					.219	.048	.005	1.113
Constant	.041	.005		7.711**				
Board Composition	.001	.001	.082	.754				
Board Independence	.001	.020	.005	.048				
Board Size	-.003	.001	-.212	-1.970*				
Credit Risk Mgt	-.003	.003	-.101	-1.137				
Business Risk Mgt	-3.858	.000	-.024	-3.26				
Liquidity Risk Mgt	-.002	.001	-.106	-1.308				
Firm Size	.001	.000	.226	2.277*				
Leverage	.002	.001	.164	1.825				
Nature of Audit Firm	.000	.001	.031	.414				

Note: *p < .05, **p < .01

a. Predictors: (Constant), Board Independence, Board Size, Credit Risk Management, Business Risk Management, Liquidity Risk Management, Firm Size, Firm Leverage, Nature of Audit Firm

b. Dependent Variable: Liquidity

Source: Research Data (2016)

Table 27 shows the results of the multiple linear regression computed to assess the relationship between Corporate Governance, Risk Management, Firm Characteristics and Liquidity of commercial banks. There was no significant relationship between Corporate Governance, Risk Management, Firm Characteristics and Liquidity ($F=1.113$, $p>.05$, $\Delta R^2=.005$). The predictor variables explained only 0.5% of the Liquidity of commercial banks in Kenya.

The regression coefficients (β) of the explanatory variables as presented in Table 5.23 were as follows: board Composition ($\beta=.001$, $p>.05$), Board Independence ($\beta=.001$, $p>.05$), Board Size ($\beta=-.003$, $p<.05$), Credit Risk Management ($\beta=-.003$, $p>.05$), Business Risk Management ($\beta=-3.858$, $p>.05$), Liquidity Risk Management ($\beta=-.002$, $p>.05$), Firm Size ($\beta=.001$, $p<.05$), Firm Leverage ($\beta=.002$, $p>.05$) and Nature of Audit Firm ($\beta=.000$, $p>.05$).

From the findings, the relationship between Earnings and Board Composition, Board Independence, Credit Risk Management, Business Risk Management, Liquidity Risk Management, Firm Leverage And Nature of Audit Firms were all not statistically significant ($p>.05$). The relationship between Earnings, Board Size and Firm Size was all statistically significant ($p<.05$). Since the overall model was not statistically significant ($p>0.05$), Corporate Governance, Risk Management Firm Characteristics jointly have no significant relationship with the Liquidity of commercial banks. The findings fail to reject the sub hypothesis.

The sixth sub hypothesis was to evaluate the combined effect of Corporate Governance, Risk Management and Firm Characteristics on the Composite Financial Performance (CAMEL ratio). The hypothesis was stated as follows:

H₆: The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Composite Financial Performance of Commercial Banks in Kenya is Not Significant

The regression equations were of the form:

$$FP = \beta_0 + \beta_1 BI + \beta_2 BS + \beta_3 CRM + \beta_4 BRM + \beta_5 LRM + \beta_6 FS + \beta_7 FL + \beta_8 NAF + \epsilon_i$$

The results are as presented in table 28 below:

Table 28. Regression Results of CG, Firm Characteristics, Risk Management and Composite Bank Financial Performance (CAMEL Ratio)

Variables	β	SE	Std. β	t	R	R ²	ΔR^2	F
Model 1a					.760	.578	.559	30.315**
Constant	.211	.066		3.216*				
Board Composition	.083	.013	.442	6.145**				
Board Independence	1.862	.248	.509	7.495**				
Board Size	-.033	.018	-.130	-1.819				
Credit Risk Mgt.	.111	.035	.188	3.179*				
Business Risk Mgt.	.001	.001	.038	.780				
Liquidity Risk Mgt.	-.072	.016	-.247	-4.569**				
Firm Size	-.002	.003	-.038	-.569				
Leverage	.079	.010	.457	7.660**				
Nature of Audit Firm	.014	.009	.076	1.537				

Note: * $p < .05$, ** $p < .01$

a. Predictors: (Constant), Board Independence, Board Size, Credit Risk Management, Business Risk Management, Liquidity Risk Management, Firm Size, Firm Leverage, Nature of Audit Firm

b. Dependent Variable: CAMEL Ratio

Source: Research Data (2016)

The results of the multiple regression analysis performed to assess the association between banks Financial Performance (dependent variable), Firm Characteristics (moderating variable), Risk Management (intervening variable) and Corporate Governance (independent variable) are presented in Table 28 above. The findings were that there was a significant relationship between Corporate Governance, Risk Management, Firm Characteristics and Financial Performance ($F=30.315$, $p<.01$, $\Delta R^2=.559$). The predictor variables explained 55.9% of Financial Performance.

The regression coefficients (β) betas and p values of the explanatory variables as presented in Table 5.24 were as follows: Board Composition ($\beta=.083$, $p<.01$), Board Independence ($\beta=1.862$, $p<.01$), Board Size ($\beta=-.033$, $p>.05$), Credit Risk Management ($\beta=.111$, $p<.05$), Business Risk Management ($\beta=.001$, $p>.05$), Liquidity Risk Management ($\beta=-.072$, $p<.01$), Firm Size ($\beta=-.002$, $p>.05$), Firm Leverage ($\beta=.079$, $p<.01$) and Nature Of Audit Firm ($\beta=.014$, $p>.05$).

From the findings, the relationship between Financial Performance and Board Size, Business Risk Management, Firm Size and Nature of Audit Firms were not statistically significant ($p>.05$). The relationship between Financial Performance and Board Composition, Board Independence, Credit Risk Management, Liquidity Risk Management as well as Firm Leverage were statistically significant ($p<.05$). Since the overall model was statistically significant ($p<0.01$), Corporate Governance, Risk Management and Firm Characteristics jointly have a significant relationship with the Financial Performance of commercial banks. The sub hypothesis was rejected.

B. Discussion of the Hypotheses Tests and Research Findings

The objective of this study was to establish the joint effect of Corporate Governance, Risk Management and Firm Characteristics on bank financial performance. The prediction of the study was that the joint effect of Corporate Governance, Risk Management and Firm Characteristics on bank Financial Performance in Kenya was not significant. The findings of the study were that except for the liquidity measure, the joint effect of Corporate Governance, Risk Management and firm characteristic on Financial Performance measures as well as the composite measure were statistically significant. The summary results of the hypotheses and sub hypotheses relating to the fourth objective are presented in Table 28

The findings are consistent with that of Tandelilin et al. (2007), who investigated the relationships among Corporate Governance, Risk Management, and bank performance in the Indonesian banking sector. The study examined whether the type of ownership had a moderating effect on these relationships and whether ownership structure was a key determinant of Corporate Governance. The study found that the relationships between Corporate Governance and Risk Management and between Corporate Governance and bank performance were sensitive to the type of bank ownership. They also found that state-owned banks underperformed the other types of bank ownership in implementing good Corporate Governance. This study also found an interrelationship between Risk Management and bank performance.

IX. SUMMARY, CONCLUSION AND RECOMMENDATIONS

The objective of the study was to investigate the relationships among Corporate Governance, Risk Management, and Firm Characteristics on the Financial Performance of commercial banks in Kenya.

A. Summary of Findings

Hypothesis (H₁) assessed the joint effect of Corporate Governance, Risk Management, and Firm Characteristics on the Financial Performance of commercial banks in Kenya. The findings of the study show that Corporate Governance, Risk Management and Firm Characteristics jointly had a significant relationship ($p < 0.01$) with all the measures (attributes) of Financial Performance of commercial banks in Kenya except for liquidity. Using the Financial Performance composite measure (CAMEL ratio), Corporate Governance, Risk Management and Firm Characteristics jointly significantly predicted the Financial Performance of commercial banks in Kenya. The null hypothesis four was rejected.

B. Conclusion

The study concludes corporate governance, risk management and firm characteristics jointly predict bank financial performance. Commercial banks with good corporate governance, efficient risk management and optimal firm characteristics perform well financially. The implication of this is that when the board of directors and corporate make optimal decisions, corporate entities tend to perform better.

C. Contribution to Knowledge

The findings of this study add to the existing body of knowledge on Corporate Governance, Risk Management, Firm Characteristics and bank Financial Performance. The major contribution of the study is that Corporate Governance, Risk Management, Risk Management jointly predict bank financial performance. Some previous studies have

evaluated the relationships among Corporate Governance, Risk Management, Firm Characteristics and Financial Performance (Rogers, 2006; Tandelilin et al., 2007). However, the attributes of the four variables used in these previous studies were different, results contradictory and inconclusive. Secondly, the other major contribution of the study was the use of the CAMEL model to assess the influence of the explanatory variables on the five attributes of bank Financial Performance and the composite Financial Performance (CAMEL ratio). Previous studies have used only one indicator of Financial Performance, mainly profitability/earnings, Tobin's q and Sharpe ratio (Rechner & Dalton, 1991; Brown & Caylor, 2004; Aluchna 2009; Erkens et al., 2012, Naushad & Malik, 2015). The CAMEL model is the most widely used Financial Performance tool for financial institutions, including commercial banks around the world. This study adopted the CAMEL model to evaluate the Financial Performance of commercial banks in Kenya as opposed to conventional Financial Performance measures of earnings/profitability.

D. Limitations of Study

The study used secondary data sourced from the CBK Bank Annual Supervisory Reports and annual reports of the commercial banks. These are general-purpose reports, and any limitations in the reliability of the data reported therein could affect the reliability of the results.

E. Suggestions for Further Research

Arising from the findings and limitations of this study, a number of suggestions can be made for future research. Further research could be conducted to introduce more or different variables for testing both moderation and intervening effect mediating effect of Corporate Governance on bank Financial Performance. Secondly, the current study used quantitative measures of performance bank Financial Performance. A similar study could be conducted

based on both qualitative and quantitative measures of performance. This could further widen the scope of the current study.

The focus of the current study were commercial banks in Kenya. A similar study could be replicated for other financial institutions like insurance companies, housing finance companies, microfinance institutions and foreign exchange bureaus. Finally, the study could be replicated in other countries regionally and internationally. This would further validate the findings of the current and future studies

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