CORPORATE GOVERNANCE, RISK MANAGEMENT, FIRM CHARACTERISTICS AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

I declare that this PhD research thesis is my original work and has not been previously submitted in part or in totality to any other university for an award of a degree. All material referred to have been dully acknowledged.

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DEDICATION

I dedicate this PhD thesis to:

My nuclear family

Wife Martha; Daughters- Jackie Germaine & Terry Val; Son -Mannu Barry.

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For the inspiration, mentorship and encouragement to seek and attain the highest levels in Academia.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASX:	Australian Securities Exchange
BoD:	Board of Directors
BRR:	Business Risk Ratio
CAR:	Capital Adequacy Ratio
CBK:	Central Bank of Kenya
CCC:	Cash Claim on Central Bank
CCG:	Centre for Corporate Governance
CDS:	Credit Default Swap
CEO:	Chief Executive Officer
COSO:	Committee of Sponsoring Organizations
CPD:	Continuous Professional Development
EAS:	Egyptian Accounting Standards
EGX:	Egyptian Stock Exchange
ERM:	Enterprise Risk Management
EVA:	Economic Value Added
FAI:	Fixed Assets and Inventories to Capital
GCC:	Gulf Cooperation Council
GDP:	Gross Domestic Product
ICT:	Information and Communication Technology
LCR:	Liquidity Coverage Ratio
LLP:	Loan Loss Provision
MCCG:	Malaysian Code of Corporate Governance

NED:	Non-Executive Directors
NIM:	Net Interest Margin
NPL:	Non Performing Loans
NPM:	Net Profit Margin
P/BV:	Price-to-Book Value
P/ER:	Price-Earnings Ratio
ROA:	Return on Assets
ROE:	Return on Equity
SCR:	Secondary Reserve Ratio
USA:	United States of America
VARR:	Value at Risk Ratio

ABSTRACT

Sound Corporate Governance and effective Risk Management are accepted as a major cornerstone of bank management by academicians, practitioners as well as by 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 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. The specific objectives were: To determine the effect of Corporate Governance on Financial Performance of commercial banks in Kenya, to assess the effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya, to investigate the effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of commercial bank in Kenya and to evaluate the joint effect of Corporate Governance, Risk Management and Firm Characteristics on Financial Performances of commercial bank in Kenya. Different performance metrics have been used to evaluation of Banks performance in worldwide by regulators and scholars. This study used the CAMEL rating system that analyses capital adequacy, asset quality, management quality, earnings, and liquidity of Banks incorporating relevant financial ratios. The CAMEL system has become important tool of measuring the overall soundness and safety of banks in the light of global financial crisis and bank failures. The study used correlation and multiple regression analysis to establish the relationship between Corporate Governance and bank financial performance. The Baron and Kenny (1986) approach was used to test the intervening and moderating effect of Risk Management and Firm Characteristics respectively on the relationship between Corporate Governance and bank Financial Performance. Finally the 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 at 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 a statistically significant relationship exit between Corporate Governance bank Financial Performance, the intervening effect of Risk Management on relationship between Corporate Governance and attributes of Bank Financial Performance was inconclusive, Firm Characteristics generally moderated the relationship between Corporate Governance and bank Financial Performance and Corporate Governance, Risk Management and Firm Characteristics jointly significantly predicted all bank Financial Performance attributes except for Liquidity. The study recommends that regulators, boards and management of commercial banks to ensure congruence in their activities (oversight, implementation and monitoring) with corporate objectives to enhance improved bank Financial Performance and value maximization.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

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).

According to Khan and Ahmed (2001), the survival and success of a financial organization depends critically on the efficiency of Risk Management. Due to their involvement in the financial intermediation process Corporate Governance, Risk Management and Financial Performance are important concepts in ensuring stability in the financial system and the economy in general. Poor Risk Management and weak Corporate Governance systems in the banking sector can lead to contagion effect, which would affect a class of banks or even the entire financial system and the economy.

Weaknesses in corporate governance and risk management were the main contributing factors in both the Asian and the global financial crises.

By virtue of the relationship that exists between commercial banks and their stakeholders, the stakeholders have a duty to ensure that the bank is managed well. Stakeholders must exert influence in all areas of the health of commercial banks. Empirical findings on the effect of Corporate Governance on bank Risk Management have received mixed results from different researchers. For example, Jensen (1993) hypothesize that stakeholders in the Corporate Governance of banks impact how banks manage risks, while Simpson and Gleason (1999) and Prowse (1997) argue that stakeholders in the Corporate Governance do not have significant impact on Risk Management.

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 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).

Theoretically, Corporate Governance and Risk Management are mechanisms of aligning the interests of all the stakeholders in order to achieve corporate goals. Agency theory (Jensen & Meckling, 1976) argue that the separation of ownership from control creates a situation in which conflicts of interests naturally arise and as such the agents have to be

monitored and controlled to align their interests with those of the principals. Stewardship theory (Donaldson, 1990) on the other hand contend that agents are faithful custodians of the principals and therefore there is no need for monitoring and controls as agents work faithfully in the interests of the principals. Stakeholder theory (Freeman, 1989) acknowledges that there are several parties that have an interest (stake) in the financial health of an entity and the role of management is to ensure a balance in the interest of all stakeholders.

1.1.1 Corporate Governance

Council (2007) defines Corporate Governance as the framework of rules, relationships, systems and processes, within and by which authority is exercised and controlled in corporations. It encompasses the mechanisms by which companies, and those in control, are held to account. Effective Corporate Governance structures thus encourage companies to create value, through entrepreneurialism, innovation, development and exploration, and provide accountability and control systems commensurate with the risks involved.

Nambiro (2007) define Corporate Governance as the mechanisms used to align the interests of the executives with those of the shareholders including, but not limited to, boards of directors, executive compensation, and active use of ownership prerogatives by large shareholders, like institutional investors, and the market for corporate control, like acquisitions. Whether regulation substitutes or complements traditional governance mechanisms and controls is a subject of debate, however it is generally agreed that the

external controls coming from takeovers and product-market competition turn out to be weaker in banks than in other firms (Prowse, 1997).

The Banking Act (Cap. 488) defines Corporate Governance as the manner in which the business and affairs of an institution are governed by its board and senior management and provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. The Act states further that good Corporate Governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the institution and its shareholders, facilitate effective monitoring and define how an institution sets corporate objectives, including generating economic returns to owners; runs the day-to-day operations of the business; considers the interests of recognized stakeholders; aligns corporate activities and behaviours with the expectation that the institution will operate in a safe and sound manner, and in compliance with applicable laws and regulations; and protects the interests of depositors.

1.1.2 Risk Management

Cumming and Hirtle (2001) define Risk Management as the overall process that a financial institution follows to define a business strategy, to identify the risks to which it is exposed, to quantify those risks, and to understand and control the nature of risks it faces. Risk Management therefore refers to the process of identification, analysis and either acceptance or mitigation of uncertainty in investment decision-making (Cumming & Hirtle, 2001).

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 identification, measurement and control of five major risks namely liquidity risk, interest rate risk, market risk, credit risk and operational risk (Lukic, 2015).

1.1.3 Firm Characteristics

Firm Characteristics are distinguishing features or attributes of an entity that can influence its performance. Aaccording to Bauwhede and Willekens (2008), the most common firm attributes include size and leverage. Ownership structure is also a key firm characteristic that influence Corporate Governance in firms (Jensen & Meckling, 1976).

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.

1.1.4 Financial Performance

According to Simerly and Li (2000), measuring firm performance has been a major challenge for scholars and practitioners. Performance is a multidimensional construct and thus, any single index may not be able to provide a comprehensive understanding of the performance relationship relative to the constructs of interest (Chakravathy, 1986). Kaplan and Norton (1996) , in their balanced score card (BSC) model, suggest a framework of translating vision and strategy into shareholder value by focusing on the four drivers of value including financial, customer, learning & growth and finally internal business processes perspectives. They however argue that Financial Performance metric is the ultimate outcome measure for company success.

Khrawish (2011) state that there are a multitude of measures used to assess bank performance, with each group of stakeholders having its own focus of interest. Academicians and practitioners generally use three types of performance measures including traditional, economic and market-based. Traditional performance measures include return on equity (the ratio of income after taxes divided by total common equity capital); return on assets (the ratio of net income to average total asset); cost-to-income ratio (ratio of operating expenses to operating income generated) and net interest margin (net interest income divided by total earnings assets)

The economic measures of performance, identified by Khrawish (2011), include economic value added (the surplus value created by a firm in its existing environment); cash flow return on investment (the percentage return made by a firm on its existing investments) and risk-adjusted return on capital (the ratio of risk adjusted return to economic capital). The market-based measures of performance are total shareholder returns (combines share price appreciation and dividends paid to show the total return to the shareholder expressed as an annualized percentage); the price-earnings Ratio (the ratio for valuing a company that measures its current share price relative to its per-share earnings); the price-to-book value (relates the market value of stockholders' equity to its book value) and the credit default swap (derivative used to hedge credit risk or to take a position on a basket of credit entities).

The most widely used Financial Performance tool for financial institutions by the principal regulators all around the world is the CAMEL rating (Kabir & Dey, 2012). CAMEL is considered as one of the most widely used tools for judging Capital Adequacy, Asset Quality, Management Capacity, Earnings Ability, and Liquidity of the financial institution. CAMEL rating system is generally used by the Government and commercial bank regulators for the purpose of assessing the soundness of a saving associations and banks (Siems & Barr, 1998)

The applicability of the CAMEL rating system for evaluating 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 CAMEL rating contain useful information for predicting bank failure.

1.1.5 Interactions among Corporate Governance, Risk Management, Firm Characteristics and Bank Financial Performance

The Triangle Model, developed by Tandelilin, Kaaro and Mahadwartha (2007), states that Corporate Governance can influence the performance of banks either directly or indirectly through the regulation of Risk Management. Through the implementation of effective Corporate Governance mechanisms, the stakeholders of banks are able to enhance the market creditability and thereby be able to raise capital at both lower cost as well as lower risk level. As a consequence, banks that implement good Corporate Governance are likely to report better Financial Performance. Bank Financial Performance and Risk Management therefore depend on the implementation of good Corporate Governance. The trade-off between risk-bearing and return earning therefore influences both bank Financial Performance and Risk Management.

Prudent Risk Management improves the Financial Performance of banks and better Financial Performance leads to an increase in bank reputation which allows banks to enjoy lower cost of risky capital and other sources of fund. A study by Jiang, Feng and Zhang (2012) found a positive relationship between Corporate Governance and bank Financial Performance. Similarly, Black, Jang and Kim (2006) found a positive influence

of Corporate Governance on bank Financial Performance in Korea. Beasley, Clune and Hermanson (2005) found that for entities in the banking, education, and insurance industries, the stage of enterprise risk management (ERM) implementation was positively related to the presence of a chief risk officer, board independence, chief executive officer (CEO) and chief finance officer (CFO) apparent support for ERM, the presence of a big four auditor and entity size. Abate (2014) found that Corporate Governance, as measured by board meeting frequency, negatively impacted on both credit and liquidity risks.

The influence of Firm Characteristics on Risk Management, Corporate Governance or bank Financial Performance has equally been investigated by scholars. 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 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.

1.1.6 Commercial Banks in Kenya

According to the Central Bank of Kenya (CBK) Bank Supervision Annual Report 2014, as at 31 December 2014, the Kenyan banking sector comprised of the Central Bank as the regulator, 44 banking institutions (43 commercial banks and one mortgage finance institution), 8 representative offices of foreign banks, 9 microfinance banks, 2 credit

reference bureaus, 13 money remittance providers and 87 foreign exchange bureaus. Out of the 44 banking institutions 30 were locally owned (comprising 3 with public shareholding), 27 were privately owned while 14 were foreign owned. The microfinance banks, credit reference bureaus, money remittance providers and foreign exchange bureaus were all privately owned. (Retrieved from https://www.centralbank.go.ke).

Commercial banks play an important role in the economy of a country. The main functions of commercial banks include the provision of a safe place for clients to keep their money by accepting money deposited by customers and making the money accessible to customers when the need arises. They facilitate convenient transfer of money from one account to another which is useful to customers when making payment directly into another account (Retrieved from https://www.centralbank.go.ke).

Commercial banks offer lending services in form of loans to customers who need the money. They offer foreign exchange services by selling foreign currencies to the customers at the market value of the currency and also offer exchange of currencies to the customers. They provide assistance to traders dealing in international trade by providing statement of credit worthiness and acting as the collateral for the trader to secure a deal. They offer other services including investment services by selling their own shares or shares of other companies to their customers. They provide financial advice to their customer on the best business practices to engage in when asking for a loan to start a business and also provide customers with the best payment plan. They keep valuable items for customers including title deeds and expensive jewelry. They offer their

customers advice on taxation matters by proving information useful when preparing/filling tax returns and finally they act as trustees by managing the property of the deceased on behalf of the family thus preventing wrangles from destroying the profitability of the business or estate left by a deceased (retrieved from https://www.centralbank.go.ke).

The banking industry in Kenya is regulated by the CBK Act (Cap 491), Banking Act (Cap 488), Companies Act (Cap 486), 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 general level of prices in Kenya, fostering liquidity/solvency and proper functioning of 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 crisis of confidence and bank runs, this can increase the moral hazard problem. Macey and O'hara (2003) argue that commercial banks pose unique Corporate Governance problems for managers and regulators, as well as for claimants on the banks' cash flows, such as investors and depositors. They supports the general principle that fiduciary duties should be owed

exclusively to shareholders but in the special case of banks, the scope of the fiduciary duties and obligations of officers and directors should be broadened to include creditors. Naushad and Malik (2015) argue that the structure of the governance of banks remains unique in nature since unlike other corporations, banks carry a special responsibility to take care of people's money as well as maintain trust among the other stakeholders. Therefore, banks need to be more accountable and transparent.

1.2 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 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, the 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, the Basel III issued accord to promote a more resilient banking system by focusing on four vital banking parameters that is; 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 of 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)

The recent wave of corporate scandals leading to resignations/convictions of CEOs in several corporations (Petrobras, 2015; Toshiba,2015; Mumias Sugar, 2015; CMC Motors, 2011; Fannie Mae, 2011; Lehman Brothers, 2008; WorldCom, 2002 ;Enron 2001, among others) has led to increased interest and attention from regulators, academicians and researchers on the governance practices among corporation. The increased media coverage has turned transparency, managerial accountability, Corporate Governance failures, weak boards of directors, hostile takeovers, protection of minority shareholders, and investor activism into household phrases.

Regardless of the interventions internationally and locally, Kenya has witnessed several cases of weaknesses in Risk Management and poor Corporate Governance practices among commercial banks resulting into receivership/statutory management and liquidation. A chronology of bank failures in Kenya include; Rural Urban Credit Finance (1984), Continental Bank of Kenya and Continental Credit Finance Ltd (1986), Capital Finance (1987), Post Bank Credit (1993), Euro bank (2003), Daima bank (2003) and Charterhouse Bank (2006). In 2015 Dubai bank was put under receivership and ultimately closed. In October 2015, Imperial bank was placed under statutory management and in April 2016, Chase bank was put under receivership and later reopened under KCB oversight. In the all these cases the regulator cited liquidity, Risk Management and Corporate Governance problems in the banks.

There are conflicts in Agency, Stewardship and Stakeholder theories. Heracleous (2001) states "researches have failed to find any convincing connection between the best practices in Corporate Governance and organizational performance". Some studies find significant relationships between Corporate Governance and firm performance (Rosenstein & Wyatt, 1990; Yermack, 1996; Tandelilin et al. 2007; Brown and Caylor, 2004), while others find no relationship (Fosberg, 1989; Bhagat & Black, 2002). The influence of Risk Management as well as Firm Characteristics on Financial Performance is equally inconclusive. While Brinkmann and Horvitz (1995) document a negative relationship between Risk Management and Financial Performance, other studies report positive relationships (Peek & Rosengren, 1995; Smith Jr., 1995; Ndung'u, 2013). Some studies find that Firm Characteristics are related to performance (Morck, Shleifer & Vishny, 1988; Chantapong, 2005 Olweny & Shipho, 2011; Ongore & Kusa, 2013) while others find that Firm Characteristics are unrelated to firm performance (Himmelberg, Hubbard & Palia, 1999; Mang'unyi, 2011).

Methodologically previous empirical researches that have focused mainly on the direct effect of Corporate Governance on Financial Performance with limited studies testing the intervening and moderating 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. The research question was: What are the relationships among Corporate Governance, Risk Management, Firm Characteristics and Financial Performance of commercial banks in Kenya?

1.3 Research Questions

The study addressed the following specific research questions:

i. Does Corporate Governance significantly affect the Financial Performance of commercial banks in Kenya?

ii. Does Risk Management significantly affect the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya?

iii. Do Firm Characteristics significantly affect the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya?

iv. Do Corporate Governance, Risk Management and Firm Characteristics jointly significantly affect Financial Performance of commercial banks in Kenya?

1.4 Research Objectives

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 objectives were to:

i. To determine the effect of Corporate Governance on Financial Performance of commercial banks in Kenya.

ii. To assess the effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya.

iii. To investigate the effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of commercial bank in Kenya.

iv. To evaluate the joint effect of Corporate Governance, Risk Management and Firm Characteristics on Financial Performances of commercial bank in Kenya.

1.5 Value of the Study

This study makes contribution to the conflicting corporate finance theories by empirically analysing the relationships among Corporate Governance, Risk Management, Firm Characteristics and bank Financial Performance. It would help resolve the conflicts in theories that document contradictory propositions on the effects of Corporate Governance and Risk Management on Financial Performance such as Agency, Stewardship and Stakeholder theories.

The findings of this study makes contribution to policy and practice by improving understanding the mechanisms through which Corporate Governance influence bank Financial Performance. Policy makers can develop guidelines to be implemented by commercial bank in Corporate Governance and Risk Management to improve Financial Performance. Practitioners can adopt best practices in Risk Management and Corporate Governance that maximize the shareholder value.

This study makes contributions to future research by empirically testing the relationships among Corporate Governance, Risk Management, Firm Characteristics and bank Financial Performance. The findings of this study provide room for further studies on the concepts in Kenya and beyond.

1.6 Organization of the Thesis

The thesis is divided into six chapters: introduction; literature review; research methodology; descriptive data analysis and results; hypotheses testing and discussion of

findings; and finally summary, conclusions and recommendations. Chapter one introduces the four concepts of the study: Corporate Governance, Risk Management, Firm Characteristics and Financial Performance. A contextual discussion of commercial banks in Kenya is then provided which leads to the research problem, research questions and research objectives. The chapter concludes with a discussing on the value of the study as well as justification of the research.

Chapter two brings out the theoretical literature underpinning the study. The theories are Agency theory (Jensen & Meckling, 1976), Stewardship theory (Donaldson, 1990), Stakeholder theory (Freeman, 1989) and Transaction cost theory (Cyert & March 1963). The chapter further provides a discussion on the empirical literature, summary of empirical studies and research gaps identified. A conceptual framework and model, together with the conceptual hypotheses to be tested are provided at the end of the chapter.

Chapter three presents the research methodology used in the study including research philosophy, research design, population, data collection, diagnostic tests of statistical assumptions, operationalization and measurement of the variables and data analysis. Chapter four covers the descriptive statistics and results. The chapter presents the descriptive statics (minimum, maximum, mean, standard deviation, skewness and kurtosis), diagnostic tests (linearity, normality, collinearity, independence and heteroscadasticity) and finally analysis of the correlation among the variables.

Chapter five encompasses hypothesis testing and results. It presents the tests and results of the four hypotheses (and sub hypotheses) as well as a discussion of the research findings. The hypotheses test the direct linkage between Corporate Governance and bank Financial Performance, the intervening effect of Risk Management on the relationship between Corporate Governance and bank Financial Performance, the moderating effect of Firm Characteristics on the relationship between Corporate Governance and bank Financial Performance, and finally the joint effect of Corporate Governance, Risk Management and Firm Characteristics on bank Financial Performance. Chapter six focuses on summary, conclusions, contribution to knowledge, policy, practice, theory limitations of the study and suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews theoretical and empirical literature relevant to the study. It identifies the research gaps, develops a conceptual framework, conceptual model and the research hypotheses.

2.2 Theoretical Review

There are several theories that explain the relationship between Corporate Governance and bank Financial Performance namely Agency theory (Jensen & Meckling, 1976) the Stewardship theory (Donaldson, 1990), Stakeholder theory (Freeman, 1989) and Transaction cost theory (Cyert & March, 1963).These theories are discussed below.

2.2.1 Agency Theory

The 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.

In the field of corporate Risk Management, agency issues have been shown to influence managerial decisions towards risk taking and hedging (Smith & Stulz, 1985). According to Mayers and Smith (1987), the theory can explain the mismatch of interest between shareholders, management and debt holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects. Consequently, Agency theory implies defining hedging policies that impact on firm value. Jensen (1993) argues that the role of managers as agents for stakeholders is full of conflict of interest which can affect asset selection, firm behaviour, efficiency and performance.

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 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 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.

2.2.2 Stewardship Theory

The theory was developed by Donaldson in 1990. It holds that there is no conflict of interest between managers and owners, and that the goal of governance is, precisely, to find the mechanisms and structure that facilitate the most effective coordination between the two parties (Donaldson, 1990). In contrast to Agency theory, Stewardship theory, regard managers as good stewards, who are willing to sacrifice their self- interests and act in the best interests of the shareholders (Donaldson & Davis, 1991). Managers are therefore concerned with identifying the situational and psychological factors that align their interests with those of the principals. Davis, Schoorman and Donaldson (1997), argue that the behaviour of stewards is pro-organizational and it produces higher utility than self-serving behaviour. They argue that stewards protect and maximize shareholders wealth through firm performance, because by so doing, the stewards' utility functions are maximized.

In the stewardship theory, the 'model of man' is someone whose behaviour is ordered such that pro-organizational behaviours have higher utility than individualistic behaviours (Davis et al., 1997). The steward is considered rational as well, but perceives greater utility in cooperative behaviours rather than in self-serving behaviours. A steward's utility function is maximized when the shareholders' wealth is maximized. The steward perceives that the utility gained from interest alignment and collaborative

behaviour with the principal is higher than the utility that can be gained through individualistic, self-serving behaviours (Davis et al., 1997).

Stewardship theory focus on intrinsic rewards that are not easily quantified (such as growth, achievement, and duty), while Agency theory places more emphasis on extrinsic motivation (Donaldson & Davis. 1991). Unlike Agency theory, Stewardship theory focus not on the perspective of individualism, but rather on the role of top management being as stewards, integrating their goals as part of the organization. Stewards are therefore satisfied and motivated when organizational success is attained.

The theory is relevant to this study since if directors and managers act as stewards, then Corporate Governance and Risk Management practices would all be geared towards ensuring a proper balance of power among directors and corporate management to ensure their behaviours, decisions and actions are aligned with the interests of the principals. This implies that directors and manager who are willing to sacrifice their self- interests and act in the best interests of the shareholders would generate better Financial Performance and returns to the shareholders. Stewards seek to achieve the goals of the corporations, so their behaviour is not conflict with the interests of organization. Stewards generally protect and take care of the needs of others. In commercial banks the CEOs and managers protect the interests of the owners or shareholders and make decisions on their behalf with the main objective being creation and maintenance of successful organizations to prosper shareholders. Commercial banks that embrace the

stewardship theory would generally combine the role of the CEO and Chairman under one executive.

2.2.3 Stakeholder Theory

The theory was developed by Freeman (1989) who defines a stakeholder as any group or individual who can affect or is affected by the achievement of the organization's objectives. Accordingly, shareholders are but one of a number of important stakeholder groups. According to stakeholder theory, just like business owes special and particular duties to its investor; it also has different duties to the various stakeholder groups. The firm and its managers have special obligations to ensure that the shareholders receive a fair return on their investment, but the firm also has special obligations to other stakeholders, which goes above and beyond those required by law (Freeman, 1989). Therefore stakeholder theory provides a new insight into possible rationale for Risk Management.

Dao and Giang (2012) contend that the affected parties in a company can be divided into two main groups; internal and external stakeholders. Internal stakeholders comprises of executives, board of directors and employees while the external ones comprises of customers, suppliers, debt creditors, trade creditors and shareholders. All these stakeholders are involved in managing the process of the firm's performance in different ways with different purposes. They argue that the three parties that affect the performance of the corporation directly and substantially are shareholders, board of directors and executive board. These stakeholders are mainly the ones in charge of controlling the firm to assure that all the set-up goals of the business will be achieved.

The argument that shareholders are just another stakeholder group is not one that is supported by the corporate law in most economies. In Kenya for example, the Companies Act (Cap 486) gives prominent status to shareholders as the owners of the firm. They elect all, or most of the members of board of directors, which in turn have the right to hire and fire senior executives and approve or reject important policies and strategies of the firm. In effect, the shareholders have the right to treat the firm as a vehicle to maximize the return on their investment. While the board is supposed to ensure that the firm respect legal and contractual obligations to other stakeholders, it is also fully within its rights to instruct managers to consider the ultimate purpose of the firm to be the maximization of profits and shareholder value (Freeman, 1989).

The stakeholder theory is relevant to the study as it focuses explicitly on equilibrium of stakeholder interest as the main determinant of corporate policy, whether in Risk Management, Corporate Governance or Financial Performance. As the theory states; the business owes special and particular duties to its investor but it also has different duties to the various stakeholder groups. The firm and its managers have special obligations to ensure that the shareholders receive a fair return on their investment; but the firm also has special obligations to other stakeholders. Thus the Corporate Governance and Risk Management functions have special obligations to ensure that the shareholders receive a fair return on their investment while at the same time ensuring the firm satisfies the obligations to the other stakeholders.

2.2.4 Transaction Cost Theory

This theory was originated by Cyert and March (1963) and later expounded by Williamson (1996) as an interdisciplinary alliance of law, economics and organizations. According to this theory firms are viewed as organizations comprising people with different views and objectives. The theory assumes that firms become so large such that in effect they substitute for the market in determining the optimal allocation of scarce economic resources.

The argument of the theory is that the organization and structure of a firm can determine price and production of goods and services in the society. It suggests that the combination of people with transaction creates managers with opportunities to arrange firms 'transactions to their interests (Williamson, 1996). The relevance of the theory to the study is that since commercial banks comprise people (Directors, managers, employees and other shareholders) with different views and objectives and the fact that managers can arrange transactions to their interest, there ought to be an optimal mechanism of allocation of the scarce resources through Corporate Governance and Risk Management to ensure Financial Performance is enhanced. The most promising contribution to Risk Management is the extension of implicit contracts theory from employment to other contracts, including sales and financing (Cornell & Shapiro, 1987).

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 focus on effective and efficient accomplishment of transactions by firms rather the protection of ownership rights of shareholders.

2.3 Empirical Literature Review

This section reviews the empirical studies on the relationships among Risk Management, Corporate Governance, Firm Characteristics and Firm Performance. A summary of the empirical literature reviewed identifying the research gap is presented and forms the basis for the development of the conceptual model.

2.3.1 Relationship between Corporate Governance and Financial Performance

The relationship between CEO duality and organizational performance was examined by Rechner and Dalton (1991) using a random sample of corporations from the Fortune 500. The study identified corporations which had remained as either dual or independent chair-CEO structures for each year of a six-year period (1978–1983) and found that corporations which had independent chair-CEO structures had higher return on equity

(ROE), return on investment (ROI) and profit margins. Their study supports agency theory expectations about inferior shareholder returns from CEO duality.

Whether firms with weaker Corporate Governance performed differently from those with stronger Corporate Governance was studied by Brown and Caylor (2004). The researchers examined whether firms with weaker Corporate Governance were riskier and pay out fewer dividends, than firms with stronger Corporate Governance and found out that firms with weaker Corporate Governance were riskier and had lower dividend pay-outs and lower dividend yields than firms with stronger Corporate Governance.

In Poland, Aluchna (2009) investigated the relationship between compliance with Corporate Governance best practice and Corporate Performance on a sample of Polish public listed companies for years 2004-2006. The findings were that complying with Corporate Governance best practice in Poland was associated with lower return on investment. However, the tendency changed into negative but statistically insignificant for the second and third years and positive but statistically insignificant when only rated companies were included in the research sample. Further, the relationship between proxy of Tobin's q and Corporate Governance rating was statistically insignificant and negative for the whole sample and positive for first and third year as well as for rated companies.

The relationship between Corporate Governance and bank Performance during the credit crisis was investigated by Beltratti and Stulz (2012) in an international sample of 98 banks. They found that banks with more shareholder-friendly boards as measured by the

"Corporate Governance Quotient" (CGQ) obtained performed worse during the crisis. The findings suggest that the generally good Governance is not necessarily have in the best interest of shareholders.

Using a unique dataset of 296 financial firms from 30 countries that were at the centre of the 2007–2008 financial crises, Erkens, Hung and Matos (2012) investigated the influence of Corporate Governance on firm Financial Performance during the crisis. They found that firms with more independent boards and higher institutional ownership experienced worse stock returns during the crisis. The findings suggest a negative relationship exists between Corporate Governance and Firm Performance.

Naushad and Malik (2015) examined the effect of Corporate Governance (denoted by board size, duality & agency cost) on the Performance of selected 24 Gulf Cooperation Council (GCC) banks for the financial year 2012-13. The findings were that smaller boards were more capable for monitoring the management closely in GCC banking sector. Further dual role of Chief Executive Officer (CEO) were likely to improve the GCC bank Performance and the presence of block holders in ownership structure of GCC banks had a positive effect on the Performance of banking sector. The conclusion of the study was that the Corporate Governance posed a significant influence on the Financial and Accounting Performance of GCC banking sector.

Using a sample of 107 banks in Russia and fifty banks in Ukraine, Love and Rachinsky (2015) did a study on the relationship between Corporate Governance and operating

Performance in banks. The study found a significant, but modest, relationships between Governance and operating performance and a non-significant link with the subsequent performance. The study concluded that other than the popularity of Corporate Governance in public discussions, it had at best a second-order effect on operating performance in Russian and Ukrainian banks.

2.3.2 Relationships among Corporate Governance, Risk Management and Financial Performance

The relationship between credit risk and performance of Egypt and Lebanon banks in the 1990s was examined Hakim and Neamie (2001). Using data from 1993-1999, the study estimated a fixed effects model of bank return with varying intercepts and coefficients. The study found that credit risk was positively related to profitability, while liquidity risk was insignificant across all banks and had no impact on profitability. The study recommends to policymakers to set performance targets that enable bank managers to allocate capital more efficiently across their business units.

Kleffner, Lee, and McGannon (2003) examined the use of ERM by companies in Canada, the characteristics that were associated with the use of ERM, what obstacles companies faced in implementing ERM, and what role, if any, Corporate Governance guidelines had played in the decision to adopt ERM. Primary data was obtained from responses to mail surveys as well as telephone interviews with the respondents. The findings were that 31 percent of the respondents had adopted ERM, the reasons for adopting ERM included the influence of the risk manager, encouragement from the board of directors, and compliance with Toronto Stock Exchange (TSE) guidelines. The major deterrents to

ERM were an organizational structure that discouraged ERM and an overall resistance to change.

Beasley, Clune and Hermanson (2005) did an exploratory study to examine the factors associated with the stage of ERM implementation at 123 USA and international organizations. The findings of the study were that the stage of ERM implementation was positively related to the presence of a chief risk officer, board independence, CEO and CFO apparent support for ERM, the presence of a big four auditor, entity size, entities in the banking, education, and insurance industries. The study further found that USA organizations had less-developed ERM processes than international organizations.

Minton, Taillard and Williamson (2010) investigated how risk taking and bank Performance were related to board independence and financial expertise of the board in USA commercial banks before and during the financial crisis. They found that financial expertise of the board was positively related to risk taking and bank Performance before the crisis but is negatively related to bank Performance in the crisis.

Using a sample of 74 large U.S banks, Ellul and Yerramilli (2013) investigated the relationship between Risk Management and bank risk taking as well as performance during credit crisis. The study constructed a Risk Management Index (RMI) based on five variables related to the strength of a bank's Risk Management. The study used three dummy variables; whether the bank had a designated credit risk officer (CRO) who was a member of the executive board, whether the CRO was among the top five highly paid

executives, and whether at least one of the non-executive directors on the banks risk committee met more frequently in the respective year as compared to the average value across the other sample banks. The study found that banks with a high RMI value were less active in trading off balance sheet derivatives and had a smaller fraction of non-performing loans, a lower downside risk and a higher Sharpe ratio during the crisis year 2007-2008.

Aebi, Sabato and Schmid (2012) investigated the association between Risk Management and Corporate Governance mechanisms with bank performance during the financial crisis of 2007/2008. The study used a sample of 372 USA banks. Bank performance was measured using buy-and-hold returns and ROE while Corporate Governance variables included CEO ownership, board size, and board independence. The findings of the study were that banks in which the CRO directly reported to the board of directors, and not to the CEO, demonstrated significantly higher stock returns and ROE. On the contrary, Corporate Governance variables were mostly insignificant or even negatively related to the bank performance. The study found a significant relationship between Risk Management and bank Financial Performance whereas Corporate Governance insignificantly or negatively affected bank Performance during the 2007/2008 financial crisis.

Ndung'u (2013) examined the effect of financial Risk Management on Financial Performance of oil companies in Kenya. The study adopted causal research design. Semi-structured questionnaires were used to obtain primary data on Risk Management while

the financial performance data was obtained from financial statements. A linear regression model of Financial Performance versus financial Risk Management techniques was applied on the data. The study found that financial Risk Management practices had a positive correlation to the Financial Performance of oil companies in Kenya.

Adeusi, Akeke, Adebisi, and Oladunjoye (2014) investigated the association between Risk Management practices and bank Financial Performance in Nigeria. The study used secondary data obtained from 4 year progressive annual reports and financial statements of 10 banks. A panel data estimation technique was adopted in the data analysis. The study found a significant inverse relationship between banks Financial Performance and doubt loans as well as capital asset ratio. The study concluded that a significant relationship exists between banks Performance and Risk Management.

Abate (2014) analysed the impact of Corporate Governance on credit and liquidity risks of commercial banks in Ethiopia. The study employed a panel multiple regression model. Ordinary Least Squares (OLS) with random effects and pooled OLS estimation procedure were applied to a panel data set of 9 banks over the period 2005 through 2011. The study found as follows; that Central Bank regulations negatively affected both measures of risks but management capacity was found to have positively impacted on both risks; board meeting frequency negatively impacted on both measures of risks; bank size and inflation both had significant impact on credit risk with a negative and positive coefficients respectively, but insignificant for liquidity. The study concluded that Corporate Governance had an impact on bank Risk Management.

2.3.3 Relationships among Corporate Governance, Firm Characteristics and Financial Performance

Using sample of 263 Canadian firms, Klein, Shapiro and Young (2005) studied the relationship between firm value as measured by Tobin's Q, and newly released indices of effective Corporate Governance. The study used four control variables; size, advantage, growth and profit variability. They found that size and advantage were consistently negatively related to performance while growth and performance were positively related. Further, board independence had no effect on performance and board independence was negatively related to performance for family owned firms. Their conclusion was that Corporate Governance did matter in Canada.

Mang'unyi (2011) explored the effects of ownership structure and Corporate Governance on Performance of banks in Kenya. Using a survey research design and purposive sampling procedure to select 40 bank managers drawn from state-owned, locally-owned and foreign-owned banking institutions banks, data was collected using a semi-structured questionnaire consisting of both closed and open-ended questions that were administered to the bank managers. The study used one-way analysis of variance (ANOVA) to test the hypotheses and found that there was no significant difference between type of ownership and Financial Performance, there was no significant difference between banks ownership structure and Corporate Governance practices. Further, there were significant differences between Corporate Governance and Financial Performance of foreign-owned and domestically-owned banks.

Using an explanatory approach and panel data research design, Olweny and Shipho (2011) investigated the effects of banking sectorial factors on the profitability of commercial banks in Kenya. Secondary data, obtained from the CBK banking survey and financial statements of 38 Kenyan commercial banks from 2002 to 2008, was used in a multiple linear regression analysis. The study found that all the bank specific factors had a statistically significant impact on profitability; on the contrary none of the market factors had any significant impact on profitability. The implication of this study was that Firm Characteristics significantly influenced Financial Performance of commercial banks in Kenya.

Boateng, Huang and Kufuor (2015) examined the determinants of bank performance based on proxy variables that assessed the quality of assets, profitability, liquidity and overall performance. The study used a sample of 111 Chinese commercial banks over the period of 2000–2012. The findings of the study were that foreign owned banks appeared to have better asset quality and overall Performance although lower profitability compared to domestic banks. On the contrary, the state-owned banks tended to be more profitable and had better liquidity positions compared with domestic banks and foreign banks. At the micro level, equity/liability ratio exerted significant influence on overall bank Performance, while at the macroeconomic level, per capital GDP, GDP growth, inflation and unemployment rates had a bearing on bank Performance.

Phuong, Harvie and Arjomandi (2015) investigated the impact of financial reforms, bank characteristics, and time trends on the performance of the Vietnamese banking sector for

the period 2007 – 2012. The study hypothesized that ownership could result in a divergence of technologies utilized by different bank groups (state - owned, private, and foreign banks). Using combined Meta - frontier analysis with double - bootstrap two - stage DEA the study analysed the impact of environmental variables on bank efficiency across separate groups operating under different technologies. The study employed ownership as an ex ante rather than an ex post factor when examining the influence on bank efficiency. The study found that the performances of the different bank groups were significantly different, and that state - owned banks were more efficient and had a smaller technology gap to the Meta - frontier in comparison with foreign and private banks. Moreover, the different bank groups reacted dissimilarly to a number of variables, for instance, state - owned banks had a negative, while private banks had a positive, relationship to the loan to asset ratio.

The determinants of the performance of commercial banks in Kenya were evaluated by Ongore and Kusa (2013) using an explanatory research design. Secondary from 2001 to 2010 obtained was from financial statements of the 37 commercial banks commercial banks in Kenya, CBK, IMF and World Bank. The study used both multiple linear regression model and t-statistic to determine the effect of each the explanatory variables on the performance of banks. The moderating effect of ownership identity was evaluated using a dummy variable. The study found that bank specific factors significantly affected the performance of commercial banks in Kenya, except for liquidity variable. The effect of macroeconomic variables were inconclusive at 5% level of significance level. Finally the moderating effect of ownership identity on the Financial Performance of commercial

banks was insignificant. The study concluded that the Financial Performance of commercial banks in Kenya was mainly influenced by board and management decisions; however the influence of macroeconomic factors was insignificant.

2.3.4 The Relationships among 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 on 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 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.

2.4 Summary of Research Gaps

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

Studies relating Corporate Governance and Financial Performance have yielded contradictory and inconclusive results. Some studies have documented positive relationships while others have reported either negative or no relationships. The possible explanation for the conflicts and contradictions could be that intervention and moderation

effects are excluded from the studies, the differences in the attributes of predictor and dependent used, as well as methodological differences.

The influence of Firm Characteristics on the relationship between Corporate Governance and Financial Performance is also inconclusive as previous studies have documented either positive, negative or no effect. Further studies on the influence of Firm Characteristics on the relationship between Corporate Governance and Financial Performance are few, contradictory and inconclusive. This area has not been fully investigated. Another gap arises from the fact that previous studies have in many instances used one attribute of bank Financial Performance measure (Earnings). The current study was based on the CAMEL model and therefore used all the five attributes in the CAMEL model (Capital Adequacy, Asset Quality, Management Capacity, Earnings and Liquidity) as well as the composite CAMEL ratio

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 intervention and moderation effects of Risk Management and Firm Characteristics at the same time. Given the contextual and methodological differences, the inconclusive and sometimes conflicting results, this is an area that requires the current and further research. Table 2.1 provides a summary of the empirical studies reviewed, findings, research gaps and how gaps were addressed in current study.

Table 2.1: Summary of Empirical Literature Review and Research Gaps

Author(s)	Focus of the Study	Main Findings	Limitations (Research Gaps)	How Gaps are Addressed In the Current Study
Rechner & Dalton (1991)	CEO duality and organizational performance: A longitudinal analysis.	- CEO duality leads to inferior shareholder returns from. - Independent chair-CEO structures led to higher ROE, ROI and profit margins.	- No control for intervention/moderating Variables in the study	- Moderating and intervening effect of Risk Management and Firm Characteristics considered
Hakim & Neamie (2001)	Performance and Credit Risk in Banking	- Credit risk positively related to profitability, while liquidity risk had no impact on profitability. - Strong link between capital adequacy and commercial bank return	- Influence of Corporate Governance not considered - Only one attribute of Risk Management used - Effect of moderating and intervening variables not considered	- Influence of Corporate Governance considered - More attribute of Risk Management used - Moderating effect of Firm Characteristics and intervening effect of Risk Management to be tested
Brown & Caylor (2004)	The Correlation between Corporate Governance and Company Performance	- Relationship between profitability and Corporate Governance positive - Relationship between Corporate Governance were risk positive	- Did not include Risk Management and Firm Characteristics - Intervention and moderation analysis not conducted	- Risk Management and Firm Characteristics included in the current study - Intervention and moderation analysis conducted -
Klein et al.(2005)	Corporate Governance, Family Ownership and Firm Value	- Corporate Governance does matter in Canada. - The effects of governance do differ by ownership category.	- Risk Management and Firm Characteristics - Intervention analysis not conducted	- Risk Management included and Firm Characteristics as variable in the current study - Intervention analysis conducted

Roger (2006).	Corporate Governance and Financial Performance of Commercial Banks	- Corporate Governance predicts Financial Performance insignificantly - Credit risk has a negative relationship with financial performance.	- Moderating effect of Firm Characteristics not considered - Intervening effects of Corporate Governance not assessed	- Both intervention and moderating effects considered in the current study
Tandelilin et al .(2007)	Corporate Governance, Risk Management, Bank Performance, Type of Ownership	- Positive relationship between Corporate Governance practices and Risk Management - Corporate Governance practices have significant effect on bank Performance - Type of bank ownership has moderating effect	- Other aspects of Firm Characteristics limited to ownership structure	- Firm Characteristics measures have been increased to three - Moderation and intervention both tested
Aluchna (2009)	Effect of Corporate Governance and return of equity	- Corporate Governance is associated with lower return on investment;	- Risk Management and Firm Characteristics not considered - Moderation and intervention not tested -	- Risk Management & Firm Characteristics included in the study - Moderation and intervention both tested
Minton et al. (2010).	Effect of Independence and Financial Expertise of the Board on Risk Taking and Performance	- Financial expertise among independent directors is negatively related to changes in both firm value and cumulative stock returns. - Financial expertise is positively associated with risk-taking levels	- Firm Characteristics not included in the study - Moderation and intervention not tested	- Considers Firm Characteristics as mediating - Moderation and intervention both tested
Mang'unyi (2011)	Ownership Structure	- No significant difference	- Risk Management	- Risk Management included

	& Corporate Governance and Its Effects on Performance	between type of ownership and financial performance, and between banks ownership structure and Corporate Governance practices	not included - Moderation or intervention not tested	in the study - Other Firm Characteristics included - Moderation and intervention tested
Olweny & Shipho (2011)	Effects of banking sectorial factors on the profitability of commercial banks	- Bank specific factors had a statistically significant impact on profitability. - Market factors had no significant impact.	- Study did not consider the intervening or moderating effect - Risk Management nor Corporate Governance addressed	- Incorporates both moderating as well as intervening variables - Risk Management and Corporate Governance included
Erkens et al. (2012).	Corporate Governance in the financial crisis: Evidence from financial institutions worldwide	- Institutional ownership inversely related to performance and risk - Board independence inversely related to performance - Board independence associated with more equity raisings	- Performance based on stock returns - Risk Management not addressed - Moderation or intervention not tested	- Considers Risk Management - Intervention and moderation tested - Performance based on CAMEL model
Beltratti & Stulz (2012).	Why some banks perform better during the credit crisis around the globe	- The better-performing banks had less leverage and lower returns - Banks with more shareholder-friendly boards performed significantly worse.	- Risk Management not considered - Moderation or intervention not tested -	- Risk Management and other Firm Characteristics included - Intervention and moderation tested
Ndung'u (2013)	The effect of financial Risk Management on Financial Performance	- Financial Risk Management practices had a positive correlation to the financial performance	- Influence of Corporate Governance ignored - Context was in the oil sector - Moderation and or intervention ignored	- Influence of Corporate Governance considered - Context of the study is banking sector - Tests intervention and moderation conducted - Performance based on

			- Performance based on Earnings	CAMEL model
Ongore & Kusa (2013)	The determinants of the performance of commercial banks	- Bank specific factors significantly affected the performance - The moderating effect of ownership identity was insignificant	- Ignored Corporate Governance and Risk Management - Intervening effect of variables not considered - Performance based on Earnings	- Corporate Governance, Firm Characteristics and Risk Management - Both intervening and moderating variables considered in the study - Performance based on CAMEL model
Adeusi et al. (2014)	Risk Management and Financial Performance of Banks	- Better Risk Management results in better bank performance.	- No investigation of moderation and /or intervention - Performance based on Earnings	- Intervention of Risk Management investigated - Performance based on CAMEL model
Naushad & Malik (2015)	Effect of Corporate Governance on the performance of selected banks.	- Corporate Governance significantly influenced financial and accounting performance	- Intervention and moderation not tested - Performance based on Earnings	- Both intervening and moderating variables considered in the study - Performance based on CAMEL model

Source: Researcher

2.5 Conceptual Framework

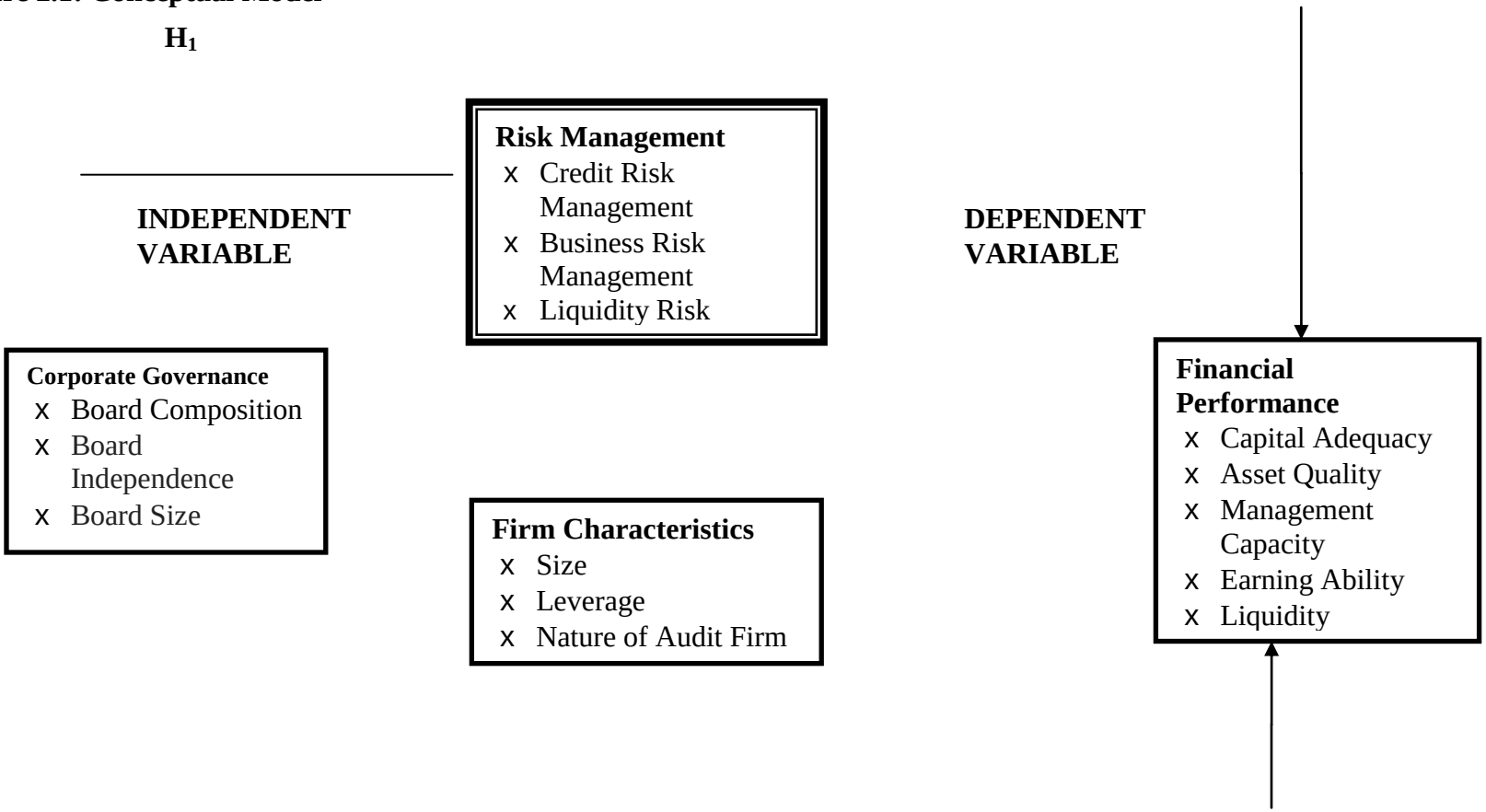
Figure 2.1 presents a conceptual framework model of relationships among Corporate Governance, Risk Management, Firm Characteristics and bank Financial Performance. The figure shows that Corporate Governance influences Financial Performance in several ways. First, Corporate Governance can directly influence bank Financial Performance. In other words when directors exercise prudently their oversight responsibility it is likely to lead to improved bank Financial Performance. This proposition, supported by the Agency theory, is shown in hypothesis one in the diagram. This position has been investigated by a number of scholars who have investigated the relationship between Corporate Governance and bank Financial Performance with mixed and inconclusive results.

Corporate Governance can affect bank Financial Performance indirectly through Risk Management. Directors, who are appointed by shareholders at the AGM, do not engage in the daily operational activities of the firm rather they monitor the managerial activities and approve critical managerial decisions in the firm. Banks for example have a Risk Management committee of the board whose main duty is to assist the board in the execution of its responsibility for the governance of risk. The Risk Management committee reviews the risk philosophy, strategy, policies and risk tolerance and appetite recommended by management and ensure compliance with the overall risk profile of the bank. Hypothesis two therefore proposes that the board through the Risk Management committee would influence enterprise Risk Management that then leads to better Financial Performance.

Corporate Governance could also influence bank Financial Performance through the moderation of the Firm Characteristics. Large firms for example are able to have effective broad based board that can effectively discharge oversight role compared with small banks. Use of debt in financing also imposes restrictive covenants and financial discipline on management. The big four audit firms improve on the audit quality and Corporate Governance mechanism. Firm Characteristics have been documented from empirical studies to have an influence on Financial Performance although the nature and direction of the effect is inconclusive. The most common firm attributes include Size Leverage and Nature of Audit Firm. Hypothesis three therefore proposes that Firm Characteristics moderates the relationship between Corporate Governance and bank Financial Performance.

Corporate Governance, Risk Management, Firm Characteristics could jointly affect bank Financial Performance. From the past empirical studies each of these variables have been documented by scholars to have some effect (positive, negative or none) on bank Financial Performance. The joint effect of the variables have also been investigated by few scholars. This fourth hypothesis evaluated the joint effect of Corporate Governance, Risk Management and Firm Characteristics on bank Financial Performance. The conceptual model relating the study variables is presented in figure 2.1 below:

Figure 2.1: Conceptual Model



Source: Researcher

Table 3.1: Major Elements of Research Philosophies

Positivism	**Constructivism**
x Determination x Reductionism x Empirical observation and measurement x Theory verification	x Understanding x Multiple participant meanings x Social and historical construction x Theory generation
Realism	**Pragmatism**
x Political x Power and justice oriented x Collaborative x Change-oriented	x Consequences of action x Problem-centred x Pluralistic x Real-world practice oriented

Source: Creswell (2013)

The research philosophies are discussed in detail in the next section.

3.2.1 Positivism:

According to Remenyi and Williams (1998) positivism is concerned with facts rather than impressions. Such facts are consistent with the notion of 'observable social reality'. Positivism research is undertaken, as far as possible, in a value-free way in that 'the researcher is independent of and neither affects nor is affected by the subject of the research'. The positivist researcher use a highly structured methodology in order to facilitate replication (Collis & Hussey, 2009). Furthermore, the emphasis is on quantifiable observations that lend themselves to statistical analysis.

Positivism research philosophy entails production of quantitative data based on large samples as well as testing of theory and hypothesis. According to Myers (1997),

positivists generally assume that reality is objectively given and can be described by measurable properties which are independent of the observer (researcher) and his or her instruments. Orlikowski and Baroudi (1991) state that positivist studies generally attempt to test theory, in an attempt to increase the predictive understanding of phenomena. Orlikowski and Baroudi (1991) supports this proposition by stating that positivism is applicable if there is evidence of formal propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about a phenomenon from the sample to a stated population. This study was therefore premised on the positivism research philosophy as it tested several quantitative hypotheses.

3.2.2 Realism

According to Creswell (2013), the philosophy of realism is that there is a reality quite independent of the mind. Direct realism states that what you see is what you get: what we experience through our senses portrays the world accurately. Critical realists argue that what we experience are sensations, the images of the things in the real world, not the things directly. Critical realism claims that there are two steps to experiencing the world: there is the thing itself and the sensations it conveys then there is the mental processing that goes on sometime after that sensation meets our senses. Bhaskar (2014) identifies with the epistemology of critical realists and argue that as researchers we will only be able to understand what is going on in the social world if we understand the social structures that have given rise to the phenomena that we are trying to understand. In other words, what we see is only part of the bigger picture.

Bhaskar (2014) argues that we can identify what we do not see through the practical and theoretical processes of the social sciences. Our knowledge of reality is a result of social conditioning and cannot be understood independently of the social actors involved in the knowledge derivation process (Dobson, 2002).

3.2.3 Interpretivism

This research paradigm postulates that knowledge is subjective, based on experience and is based on the personal experience of the researcher. The emphasis of the approach is that the world as experienced by a person and not the world or reality is something separate from the person (Saunders et al., 2009). The paradigm is appropriate in explaining social matters that surround human activity as well as understanding the social context of an organization. It relies on the immediate experience and adopts mainly case studies and open/unstructured interviews in data collection.

According to Saunders (2007), Interpretivism comes from two intellectual traditions: phenomenology and symbolic interactionism. Phenomenology refers to the way in which we as humans make sense of the world around us (Saunders, 2007). In symbolic interactionism, we are in a continual process of interpreting the social world around us in that we interpret the actions of others with whom we interact and this interpretation leads to adjustments of our own meanings and actions. Interpretivist paradigm is highly appropriate in the case of business and management research, particularly in such fields as organisational behaviour, marketing and human resource management. Not only are

business situations complex, they are also unique. They are a function of a particular set of circumstances and individuals coming together at a specific time (Creswell, 2013).

3.2.4 Pragmatism

According to Cherryholmes (1992), pragmatism derives from the work of Peirce, James, Mead, and Dewey. It arises out of actions, situations, and consequences rather than antecedent conditions. It is a concerned with applications, what works, and solutions to problems (Patton, 1990). Instead of focusing on methods, researchers emphasize the research problem and use all approaches available to understand the problem (Rossman & Wilson, 1985).

As a philosophical underpinning for mixed methods studies, the pragmatism focuses attention on the research problem in social science research and then uses pluralistic approaches to derive knowledge about the problem (Cherryholmes, 1992). Pragmatism is intuitively appealing, largely because it avoids the researcher engaging in what they see as rather pointless debates about such concepts as truth and reality. Under the paradigm, "you study what interests you and is of value to you, study in the different ways in which you deem appropriate, and use the results in ways that can bring about positive consequences within your value system'' (Tashakkori & Teddlie, 1998). A comparison of the four research philosophies based on Ontology, Epistemology, Axiology and Data collection techniques most often used is provided in Table 3.2 below:

Table 3.2: Comparison of Research Philosophies used in Management Research

	Positivism	**Realism**	**Interpretivism**	**Pragmatism**
Ontology: The researcher's view of the nature of reality or being	External, objective and independent of social actors	Is objective, Exists independently of human thoughts and beliefs or knowledge of their existence (realist), but is interpreted through social conditioning (critical realist	Socially constructed, subjective, may change, multiple	External, multiple, view chosen to best enable answering of research question
Epistemology: The researcher's view regarding what constitutes acceptable knowledge	Only observable phenomena can provide credible data, facts. Focus on causality and law like generalisations, reducing phenomena to simplest elements	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations (direct realism). Alternatively, phenomena create sensations which are open to misinterpretation (critical realism). Focus on explaining within a context or contexts	Subjective meanings and social phenomena. Focus upon the details of situation, a reality behind these details, subjective meanings motivating actions	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data
Axiology: The researcher's view of the role of values in research	Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance	Research is value laden; the researcher is biased by world views, cultural experiences and upbringing. These will impact on the research	Research is value bound, the researcher is part of what is being researched, cannot be separated and so will be subjective	Values play a large role in interpreting results, the researcher adopting both objective and subjective points of vie
Data collection techniques most often used	Highly structured, large samples, measurement, quantitative, but can use qualitative	Methods chosen must fit the subject matter, quantitative or qualitative	Small samples, in-depth investigations, qualitative	Mixed or multiple method designs, quantitative and qualitative

Source: Saunders et al. (2009)

3.3 Research Design

A research design is a blue print 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 (Bhattacherjee, 2012). A detailed discussion of each research design is provided in the section below:

3.3.1 Exploratory Research Design

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 interview.

Bhattacherjee (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 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 absence of direction to the enquiry, it simply means that the focus is initially broad and becomes progressively narrower as the research progresses.

3.3.2 Descriptive Research Design

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 current practice and make judgment and also to develop theories. Robson and McCartan (2016) state that the objective of a 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).

3.3.3 Explanatory Research Design

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 a phenomena. Zikmund, Babin, Carr and Griffin (2013) suggest that the degree of uncertainty about the research problem determines the research design. Table 3.3 below provides a summary of degree of problem definition and possible situations that would be appropriate for each of the three research designs.

Table 3.3: Degree of Uncertainty and Research Design

	Exploratory Research	**Descriptive Research**	**Explanatory Research**
Degree of Problem Definition	Key variables not defined	Key variables are defined	Key variables and key relationships are defined
Possible Situations	"Quality of service is declining and we don't know why." "Would people be interested in our new product idea?" "How important is business process reengineering as a strategy?"	"What have been the trends in organisational downsizing over the past ten years?" "Did last year's product recall have an impact on our company's share price?" "Has the average merger rate for financial institutions increased in the past decade?"	"Which of two training programs is more effective for reducing labour turnover?" "Can I predict the value of energy stocks if I know the current dividends and growth rates of dividends?" "Do buyers prefer our product in a new package?"

Source: Zikmund et al. (2013)

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 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).

3.4 Population

Cooper and Schindler (2003) defines 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 at December 31, 2014 (Appendix I). 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.

3.5 Data Collection

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).

3.6 Diagnostic Tests

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.

3.6.1 Independence Test

Linear regression analysis requires that there is little or no autocorrelation in the data. Autocorrelation occurs when the residuals are not independent from 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 from the value of y(x).

3.6.2 Linearity

The ANOVA test of linearity was used to check for linearity of the relationships between the independent and the dependent variables data. 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.

3.6.3 Multicollinearity Test

Multicollinearity occurs when the independent variables are not independent from each other meaning one independent variables can be linearly predicted from the others with some reasonable degree of accuracy (Woolridge, 2002). A second important independence assumption is that the error of the mean has to be independent from the independent variables. When the independent variables are highly correlated the resultant regression model run will have high standard errors of the individual coefficients making the regression model very sensitive to small changes in the specifications (Brook. 2008). The presence of multicollinearity was assessed using the VIF (Tolerance) test.

3.6.4 Heteroscedasticity Test

The classical linear regression model assumes that the data is homoscedastic (literally, same variance). Homoscedasticity describes a situation in which the error term (that is, the "noise" or

random disturbance in the relationship between the independent variables and the dependent variable) is the same across all values of the independent variables that is that is the variance of the errors is constant and is known. Histograms, scatterplots, normal P-P plots were used to test for heteroscedasticity by splitting the data in high and low value to assess whether the samples were significantly different. In addition the Levene's test was used to assess the assumption that variances of the populations from which different samples drawn were equal. The Levene's statistic tested the null hypothesis that the population variances are equal (called homogeneity of variance or homoscedasticity). When there is no heteroscedasticity there is homoscedasticity.

3.6.5 Multivariate Normality Test

The linear regression analysis requires all variables to be multivariate normal. Normality was checked with a goodness of fit test, the Kolmogorov-Smirnov test, which is nonparametric test of the equality of continuous, one-dimensional probability distribution that compares a sample with a reference probability distribution (one-sample K–S test), or compares two samples (two-sample K–S test). In addition the Shapiro–Wilk (1965) test, which is a more robust test of normality, was also adopted. Data that was not normally distributed was adjusted for using a non-linear transformation, log-transformation.

3.7 Operationalization and Measurement of the Study Variables

Operationalization is the process of assigning numerals, numbers and other symbols to the study variables. According to Sekaran (2006), operationalization is the explicit specification of a variable in such a way that its measurement is possible. The four variables of the study were Corporate Governance, Risk Management, Firm Characteristics, and bank Financial

Performance. Corporate Governance indicators were board composition (the proportion of executive directors on the board), board independence (the proportion of independent non-executive directors on board and board size (the number of members on the board of directors). This was consistent with measures used by Akhtaruddin et al. (2009).

Risk Management indicators were Credit Risk Management (non-performing loans ratio), Liquidity Risk Management (liquidly ratio) and Business Risk Management (business risk ratio). These measures were adopted from those used by Jorion (2001). Firm characteristic indicators (Size, Leverage and Nature of Audit Firm) were adopted from Akhtaruddin et al. (2009). Financial Performance measures were based on the CAMEL model (Consisting of five attributes namely Capital Adequacy Asset Quality Management Capacity, Liquidity) and the CAMEL ratio. The CAMEL model measures were adopted from Kabir and Dey (2012). Table 3.4 gives a summary of the variables, operational definition, indicators, measurement and comparable studies that had used similar measures to justify their choice in the current study.

Table 3.4: Operationalization and Measurement of Variables

Dependent Variable: Bank Financial Performance				
Variable	**Operational Definition**	**Indicator(s)**	**Measurement(s)**	**Study using Comparable Measures**
Financial Performance	Objective of shareholder's interest	Capital Adequacy	Capital Adequacy Ratio	Adopted from Kabir & Dey (2012).
		Asset Quality	Non-Performing Assets to Net Advances	
		Management Capacity	Total Advances to Total Deposits	
		Earning Ability	Return on Assets	
		Liquidity	Cash Assets to Total Assets	
		CAMEL Ratio	Geometric Mean of the Financial Performance Attributes	
Intervening Variable: Risk Management				
Risk Management	Represents risk-taking behavior of managers	Credit Risk Management	Non-Performing Loans Ratio (NPLR)	Adopted from Jorion (2001)
		Liquidity Risk Management	Liquidly Ratio (LR)	
		Business Risk Management	Business Risk Ratio (BRR)	
RM	Composite measure of Risk Management		Geometric mean of Risk Management Attributes	
Independent Variable: Corporate Governance				
Corporate Governance	Endogenous Mechanisms for the accountability, monitoring, and control of a firm's management with respect to the use of resources and risk taking	Board Composition (BC)	The proportion of executive directors on the board.	Adopted from Akhtaruddin, et al. (2009)
		Board Independence (BI)	Proportion of independent nonexecutive directors	
		Board Size (BS)	The number of members on a board	
CG	Composite measure of Corporate Governance		Geometric mean of Risk Management Attributes	

Moderating Variable: **Firm Characteristics**				
Size	Total Assets	Size of the firms measured by total assets.	Log of total assets.	Akhtaruddin, et al. (2009)
Leverage	Represents the relationship between a firm's long term debt and its book value of equity.	Represents the relationship between a firm's long term debt and its book value of equity.	Ratio of long term debt to book value of equity	
Nature of audit firm	Independent auditors	The nature of independent audit firms hired by the bank	1 for local audit firm affiliated with Big-4; 0 otherwise	
FC	Composite measure of Corporate Governance		Geometric mean of Risk Management Attributes	

Source: Researcher

3.8 Data Analysis

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 correlation and multiple regression analysis to establish the relationship between Corporate Governance and bank Financial Performance. The Baron and Kenny (1986) approach was used to test the intervening and moderating effect of Risk Management and Firm Characteristics respectively, on the relationship between Corporate Governance and bank Financial Performance. Finally the multiple regression analysis was used 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:

3.8.1 Corporate Governance and Bank Financial Performance

Hierarchical multiple regression model was used to determine the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. The following multiple regression models were used to test hypothesis one of the study.

$FP_i = \beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \varepsilon_i$ ..... (3.1)

$CAMEL = \beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \varepsilon_i$ ..... (3.2)

Where:

FP_i, Financial Performance Attribute i, (i=1 to 5; i_1=Capital Adequacy, i_2=Asset Quality, i_3=Management Capacity, i_4=Earnings, and i_5=Liquidity)

CAMEL Composite ratio of Financial Performance that was computed as a geometric mean of the attributes of Financial Performance

β_0 Regression constant or intercept,

β_i Regression coefficients of variable i

BC Board Composition,

BI Board Independence

BS Board Size

εi is a random error term that accounts for the unexplained variations.

3.8.2 Corporate Governance, Risk Management and Bank Financial Performance

Four steps were followed to test the mediating effects of Risk Management on the relationship between Corporate Governance and bank Financial Performance in line with the process advocated by Baron and Kenny (1986) which involved four steps. In step one, regression analysis was performed to assess the relationship between bank Financial Performance (dependent variable) and Corporate Governance indicators (independent variable) while ignoring Risk Management (the intervener). The following regression models were was used to test the main effect:

$FP_i = \beta_0 + \beta_1 CG + \varepsilon_i$ ..... (3.3)

$CAMEL = \beta_0 + \beta_1 CG + \varepsilon_i$ ..... (3.4)

Where:

FP_i, β_0 , β_i & CAMEL as defined in 3.8.1

CG is the Composite ratio of Corporate Governance that was computed as a geometric mean of the attributes of Corporate Governance

In step two of the intervention analysis, regression analysis was performed to assess the relationship between Risk Management (intervening variable) and Corporate Governance (independent variable) ignoring the dependent variable (bank Financial Performance). The following regression model was used to test step two of intervention.

$RM = \beta_0 + \beta_1 CG + \varepsilon_i$ ..... (3.5)

Where:

RM is the Composite ratio of Risk Management that was computed as a geometric mean of the attributes of Risk Management.

FP_i, β_0 , β_i CAMEL as defined in 3.8.1

Step three of the intervention analysis, involved performing a regression analysis to assess the relationship between Risk Management (intervening variable) and bank Financial Performance (dependent variable) while ignoring the independent variable (Corporate Governance). The following regression models were was used to test step three of intervention.

$FP_i = \beta_0 + \beta_1 RM + \varepsilon_i$ ..... (3.6)

$CAMEL = \beta_0 + \beta_1 RM + \varepsilon_i$ ..... (3.7)

Where:

FP_i, β_0 , β_i , CAMEL & εi as defined in 3.8.1

RM as defined in step 2 above

The fourth step of the intervention analysis involved performing regression analysis to assess the relationship between bank Financial Performances (dependent variable), Risk Management (intervening variable) and Corporate Governance (independent variable).

$FPi = \beta_0 + \beta_1 CG + \beta_2 RM + \varepsilon i$ ..... (3.8)

$CAMEL = \beta_0 + \beta_1 CG + \beta_2 RM + \varepsilon i$ ….. (3.9)

Where;

FP_i, β_0 , β_i , CAMEL& ε_i as defined in 3.8.1

RM as defined in step 2 above

CG as defined in step 2 above

Intervention occurs if Corporate Governance predicts bank Financial Performance, Corporate Governance predicts Risk Management, Risk Management predicts bank Financial Performance and still Corporate Governance predicts performance when Risk Management is in the model.

3.8.3 Corporate Governance, Firm Characteristics and Bank Financial Performance

Multiple regression models were used to determine the moderating effect of the Firm Characteristics on the relationship between Corporate Governance and bank Financial Performance attributes (Capital Adequacy, Asset Quality, Management Efficiency, Earnings and Liquidity) as well as the composite CAMEL ratio. The methodology suggested by Baron and Kenny (1986) was adopted as follows:

$$FP_i = \beta_0 + \beta_1 (CG) + \beta_2 (FC) + \beta 3 (CG*FC) + \varepsilon_i \ldots\ldots (3.10)$$

$$CAMEL = \beta_0 + \beta_1 (CG) + \beta_2 (FC) + \beta 3 (CG*FC) + \varepsilon_i \ldots\ldots (3.11)$$

Where;

FP_i, β_0, β_i, CAMEL & ε_i	as defined in 3.8.1
CG	as defined in 3.8.2
FC	Composite ratio of Firm Characteristics that was computed as a geometric mean of the attributes of Firm Characteristics

3.8.4 Corporate Governance, Firm Characteristics, Risk Management and Bank Financial Performance

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:

$$FP_i=\beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \beta_4 CRM + \beta_5 BRM + \beta_6 LRM + \beta_7 FS + \beta_8 FL + \beta_9 NAF + \varepsilon i \quad \ldots\ldots (3.12)$$

$$CAMEL = \beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \beta_4 CRM + \beta_5 BRM + \beta_6 LRM + \beta_7 FS + \beta_8 FL + \beta_9 NAF + \varepsilon i \quad \ldots\ldots (3.13)$$

Where:

FP_i, BC, BI, BS β_0 & ε_i are as defined in section 3.8.1 above

CRM	Credit Risk Management
BRM	Business Risk Management
LRM	Liquidity Risk Management
FS	Firm Size
FL	Firm Leverage.
NAF	Nature of the Audit Firm
$\beta_1 \ldots B_9$	Regression coefficients,

The objectives, hypotheses analytical models, and interpretation of the results are summarized in Table 3.5 below:

Table 3.5: Objectives, Hypothesis, Analytical Model and Interpretation of Results

Objective	Hypothesis	Analytical model(s)	Interpretation of results
1. To establish the relationship between Corporate Governance and the financial performance commercial banks in Kenya	**H_1:** The relationship between Corporate Governance and Financial Performance of commercial banks in Kenya is not significant	x Pearson correlation Analysis x Hierarchical multiple regression analysis x Goodness of fit tests $FP_i=\beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \varepsilon_i$…..... (3.1)	x Pearson correlation coefficient is significant x Statistical significance of the model F value x Statistical significance of at least one of betas of the coefficients
2. To establish the intervening effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial bank in Kenya	**H_2:** The intervening effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya is not significant.	x Pearson correlation Analysis x Stepwise Regression Analysis(Baron and Kenny Approach(1986) x Goodness of fit tests 1. $FP_i = \beta_0 + \beta_1 CG + \varepsilon_i$ CAMEL = $\beta_0 + \beta_1 CG + \varepsilon_i$ 2. $RM = \beta_0 + \beta_1 CG + \varepsilon_i$ 3. $FP_i = \boldsymbol{\beta_0} + \beta_1 RM + \varepsilon_i$ CAMEL = $\boldsymbol{\beta_0} + \beta_1 RM + \varepsilon_i$ 4. $FP_i = \beta_0 + \beta_1 CG + \beta_2 RM + \varepsilon i$ CAMEL = $\beta_0 + \beta_1 CG + \beta_2 RM + \varepsilon i$	x Pearson correlation coefficient is significant x Statistical significance in Steps 1-3 x Intervention exist if the Beta of the mediating term is statistically significant in Step 4
3. To establish the Moderating effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of	**H_3:** The moderating effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of commercial bank in Kenya is not	x Pearson correlation Analysis x Multiple Regression Analysis x Goodness of fit tests	x Pearson correlation coefficient is significant x A relationship exist F

commercial banks in Kenya	significant.	1. $FP_i = \beta_0 + \beta_1 CG + \beta_2 FC + \beta_3 (CG*FC)$ 2. $CAMEL = \beta_0 + \beta_1 CG + \beta_2 FC + \beta_3 (CG*FC)$	is statistically significant x Statistical significance of explanatory coefficients
4. To establish the joint effect of Corporate Governance ,Risk Management and Firm Characteristics on the financial performances of commercial bank in Kenya	**H_4:** The joint effect of Corporate Governance, Risk Management and Firm Characteristics on the Financial Performance of commercial banks in Kenya is not significant.	x Pearson correlation Analysis x Multiple Regression Analysis x Goodness of fit tests $FP_i = \beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \beta_4 CRM + \beta_5 BRM + \beta_6 LRM + \beta_7 FS + \beta_8 FL + \beta_9 NAF + \varepsilon i$ $CAMEL = \beta_0 + \beta_1 BC + \beta_2 BI + \beta_3 BS + \beta_4 CRM + \beta_5 BRM + \beta_6 LRM + \beta_7 FS + \beta_8 FL + \beta_9 NAF + \varepsilon i$	x Pearson correlation coefficient is significant A relationship exists F value is statistically significant x Statistical significance of explanatory coefficients

Source: Researcher

CHAPTER FOUR

DESCRIPTIVE ANALYSIS AND RESULTS

4.1 Introduction

. Descriptive statistics are very important for the researcher to visualize the data was showing, especially if there was a lot of it and also to present the data in a more meaningful way, which allows simpler interpretation of the data. Whereas descriptive analysis relies solely on a sample inferential statistics (hypothesis testing) enables the researcher to make generalisations about a larger population. This chapter presents results of the diagnostic tests of the statistical assumptions of the regression analysis as well as descriptive statistics of Corporate Governance, Risk Management, Firm Characteristics and Financial Performance. Measures of central tendency, dispersion and sleekness including mean, standard deviation and kurtosis are also presented. The chapter concludes with a correlation analysis of the study variables.

4.2 Descriptive Statistics

Descriptive statistics included measures of 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 4.1 to 4.5 below:

Table 4.1: 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		.241430	.045823	.765666	.024232	.051000	.224804
Median		.197000	.033000	.757710	.027000	.052500	.215872
Std. Deviation		.1482142	.0551310	.2374044	.0233923	.0030072	.0570096
Skewness		2.356	4.145	1.249	-1.859	-1.511	2.226
Std. Error of Skewness		.168	.168	.168	.168	.168	.168
Kurtosis		7.733	24.546	4.910	7.732	.285	8.821
Std. Error of Kurtosis		.335	.335	.335	.335	.334	.334
Minimum		.0000	.0000	.2020	-.1140	.0450	.0525
Maximum		1.1020	.4660	2.0440	.0730	.0525	.5549

Source: Research Findings

Table 4.1 above 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. The results show Capital Adequacy, Asset Quality, Management Capacity and CAMEL Ratio had positive skewneness while all the variables showed positive Kurtosis.

Table 4.2: Risk Management Descriptive Statistics

		Liquidity Risk Mgt.	Credit Risk Mgt.	Business Risk Mgt.
N	Valid	210	210	210
	Missing	0	0	0
Mean		.438210	.078552	.167114
Median		.391000	.050500	.193000
Std. Deviation		.1926412	.0945374	1.8504503
Skewness		1.707	2.960	-.432
Std. Error of Skewness		.168	.168	.168
Kurtosis		4.629	10.534	29.883
Std. Error of Kurtosis		.334	.334	.334
Minimum		.0000	.0000	-12.8390
Maximum		1.2950	.6070	13.2000

Source: Research Findings

Table 4.2 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 skewneness while all the variables showed positive Kurtosis.

Table 4.3: Corporate Governance Descriptive Statistics

		Board Size	Board Composition	Board Independence
N	Valid	210	210	210
	Missing	0	0	0
Mean		8.88	.193375	.806625
Median		8.00	.166700	.8333000
Std. Deviation		2.567	.0874315	.0874315
Skewness		1.404	1.232	-1.232
Std. Error of Skewness		.168	.168	
Kurtosis		3.696	1.993	.168
Std. Error of Kurtosis		.334	.334	.334
Minimum		5	.0526	.5000
Maximum		19	.5000	.9474

Source: Research Findings

Table 4.3 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 skewneness while Board independence had negative skewness and all the variables showed positive Kurtosis.

Table 4.4: Firm Characteristics Descriptive Statistics

		Nature of Audit Firm	Firm Leverage	Firm Size
N	Valid	210	210	209
	Missing	0	0	1
Mean		.90	.244163	23.951177
Median		1.00	.192000	23.681700
Std. Deviation		.294	.3219124	1.3127337
Skewness		-2.778	8.281	.199
Std. Error of Skewness		.168	.168	.168
Kurtosis		5.770	84.011	-.972
Std. Error of Kurtosis		.334	.334	.335
Minimum		0	.0000	21.2754
Maximum		1	3.8890	26.6726

Source: Research Findings

Table 4.4 above shows that 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 skewneness with Nature of Audit Firm and Leverage showing positive Kurtosis.

Table 4.5: Summary Statistics of the Diagnostic Tests

Variable		**Mean**	**Median**	**Skewness**	**Kurtosis**
Corporate Governance	Board Size	8.88	8	1.404	3.696
	Board Composition	0.193375	0.1667	1.232	1.993
	Board Independence	0.806625	0.8333	-1.232	0.168
Risk Management	Liquidity Risk Mgt.	0.43821	0.391	1.707	4.629
	Credit Risk Mgt.	0.078552	0.0505	2.96	10.534
	Business Risk Mgt.	0.167114	0.193	-0.432	29.883
Firm Characteristics	Nature of Audit Firm	.90	1.00	-2.778	5.770
	Leverage	.244163	.192000	8.281	84.011
	Firm Size	23.951177	23.681700	.199	-.972
Bank Financial Performance	Capital Adequacy	0.24143	0.197	2.356	7.733
	Asset Quality	0.045823	0.033	4.145	24.546
	Management Capacity	0.765666	0.75771	1.249	4.91
	Earnings	0.024232	0.027	-1.859	7.732
	Liquidity	0.051	0.0525	-1.511	0.285

Source: Reseach Findings

Table 4.5 above shows that Board Size, Board Composition and Board independence had mean scores of 8.9±2.57, .193±.09 and .81±.09 respectively. The results show that Board Size and Board composition had positive skewneness while Board independence had negative skewness.

Liquidity Risk Management, Credit Risk Management and Business Risk Management had a mean of .44±.19, .08±.09 and .17±1.9 respectively. Liquidity Risk Management and Credit Risk Management had positive skewneness. Nature of Audit Firm, Leverage and Firm Size had a mean of .90±.29, .24±.32 and 23.95±1.31 respectively. Leverage and Firm Size had positive skewneness. Capital Adequacy, Asset Quality, Management Efficiency, Earnings and Liquidity had a mean of .24±.15, .05±.06, .77±.24, .02±.02 and .05±.00 respectively. The results show Capital Adequacy, Asset Quality, Management Capacity and CAMEL Ratio had positive skewneness. All the variables showed positive Kurtosis except firm size.

4.3 Diagnostic Tests of Statistical Assumptions

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. A multiple linear regression analysis was performed to test the assumptions on the variables in the study. The Stepwise method was used to enter the variables in the equation. The results of the diagnostic tests conducted on the data are presented below.

4.3.1 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 from each other. The Durbin – Watson (1951) statistic was used to test the autocorrelation in the panel data. The results are presented in Table 4.6 below

Table 4.6: Results of Financial Performance Independence Test

Model	R	R Square	Adjusted R Square	Std. 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 Findings

Table 4.6 shows the model summary and overall fit statistics. With Capital Adequacy as the predictor, adjusted R^2 is .085 with the R^2 = .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.

4.3.2 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 dependent variables data. 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 4.7 below:

Table 4.7: Results of Financial Performance Linearity ANOVA Test

			Sum of Squares	df	Mean Square	F	Sig.
Capital Adequacy	Between Groups	(Combined)	4.481	198	.023	2.566	.050
		Linearity	.408	1	.408	46.308	.000
		Deviation from Linearity	4.073	197	.021	2.344	.068
	Within Groups		.088	10	.009		
	Total		4.569	208			
Asset Quality	Between Groups	(Combined)	.599	198	.003	.914	.631
		Linearity	.301	1	.301	90.877	.000
		Deviation from Linearity	.298	197	.002	.458	.980
	Within Groups		.033	10	.003		
	Total		.632	208			
Management Efficiency	Between Groups	(Combined)	11.599	198	.059	4.709	.005
		Linearity	8.182	1	8.182	657.805	.000
		Deviation from Linearity	3.416	197	.017	1.394	.292
	Within Groups		.124	10	.012		
	Total		11.723	208			
Earnings	Between Groups	(Combined)	.109	198	.001	1.099	.475
		Linearity	.001	1	.001	1.002	.341
		Deviation from Linearity	.108	197	.001	1.099	.475
	Within Groups		.005	10	.001		
	Total		.114	208			
Liquidity	Between Groups	(Combined)	.002	190	.000	.700	.883
		Linearity	.000	1	.000	.499	.488
		Deviation from Linearity	.002	189	.000	.701	.882
	Within Groups		.000	19	.000		
	Total		.002	209			

Source: Research Findings

Based on the ANOVA Table 4.7 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.

4.3.3 Financial Performance Panel Data Multicollinearity Test

Multicollinearity occurs when the variables are not independent from each other meaning one independent variables 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 4.8 below:

Table 4.8: Results of Financial Performance Multicollinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.075	.007		10.418	.000		
	Management Capacity	.197	.009	.835	21.871	.000	1.000	1.000
2	(Constant)	.000	.002		.169	.866		
	Management Capacity	.229	.003	.974	88.942	.000	.936	1.069
	Capital Adequacy	.206	.004	.546	49.861	.000	.936	1.069
3	(Constant)	.015	.001		10.491	.000		
	Management Capacity	.205	.002	.869	124.570	.000	.588	1.701
	Capital Adequacy	.193	.002	.513	90.115	.000	.884	1.132
	Asset Quality	.168	.007	.166	24.539	.000	.627	1.594
4	(Constant)	.010	.000		50.277	.000		
	Management Capacity	.201	.000	.852	866.491	.000	.570	1.754
	Capital Adequacy	.200	.000	.530	656.484	.000	.845	1.184
	Asset Quality	.198	.001	.196	199.278	.000	.571	1.750
	Earnings	.198	.002	.083	102.198	.000	.841	1.189
5	(Constant)	6.765E-17	.000		.000	1.000		
	Management Capacity	.200	.000	.850	286025831.516	.000	.555	1.802
	Capital Adequacy	.200	.000	.530	220287508.905	.000	.845	1.184
	Asset Quality	.200	.000	.197	66964168.788	.000	.564	1.773
	Earnings	.200	.000	.084	34571118.013	.000	.835	1.198
	Liquidity	.200	.000	.011	4791583.802	.000	.967	1.034

a. Dependent Variable: CAMEL Ratio

Source: Research Findings

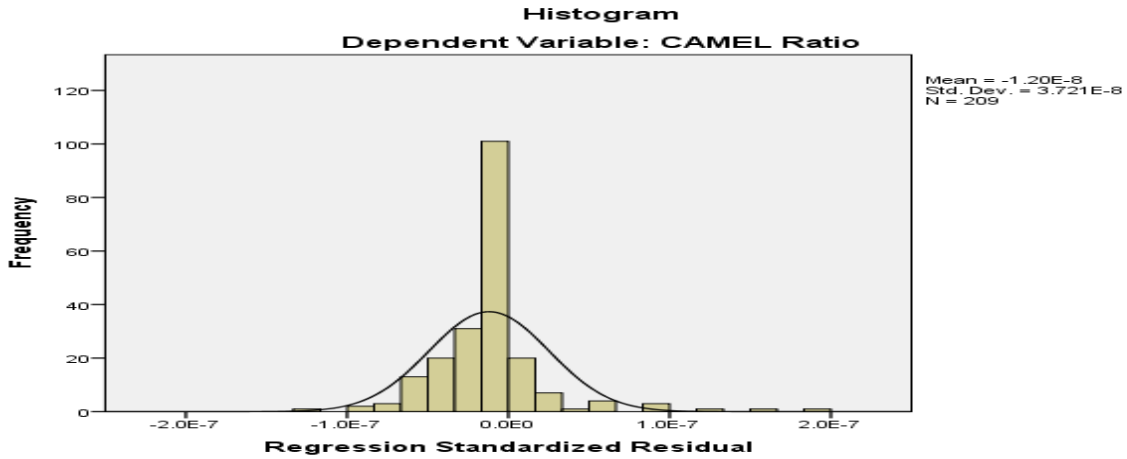
In the stepwise multiple linear regression analysis, there are highly significant coefficients. When Camel Ratio was predicted against the attributes of Financial Performance, it was found that

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).

4.3.4 Financial Performance Panel Data Heteroscedasticity Test

Homoscedasticity was tested using histograms, scatterplots, and normal P-P plot by splitting the data in high and low value to assess whether the samples were significantly different. In addition the Levene's test was used to assess the assumption that variances of the populations from which different samples are drawn were equal. The results of the Heteroscedasticity diagnostic tests are presented in Figures 4.1 to 4.3 and Table 4.9 below:

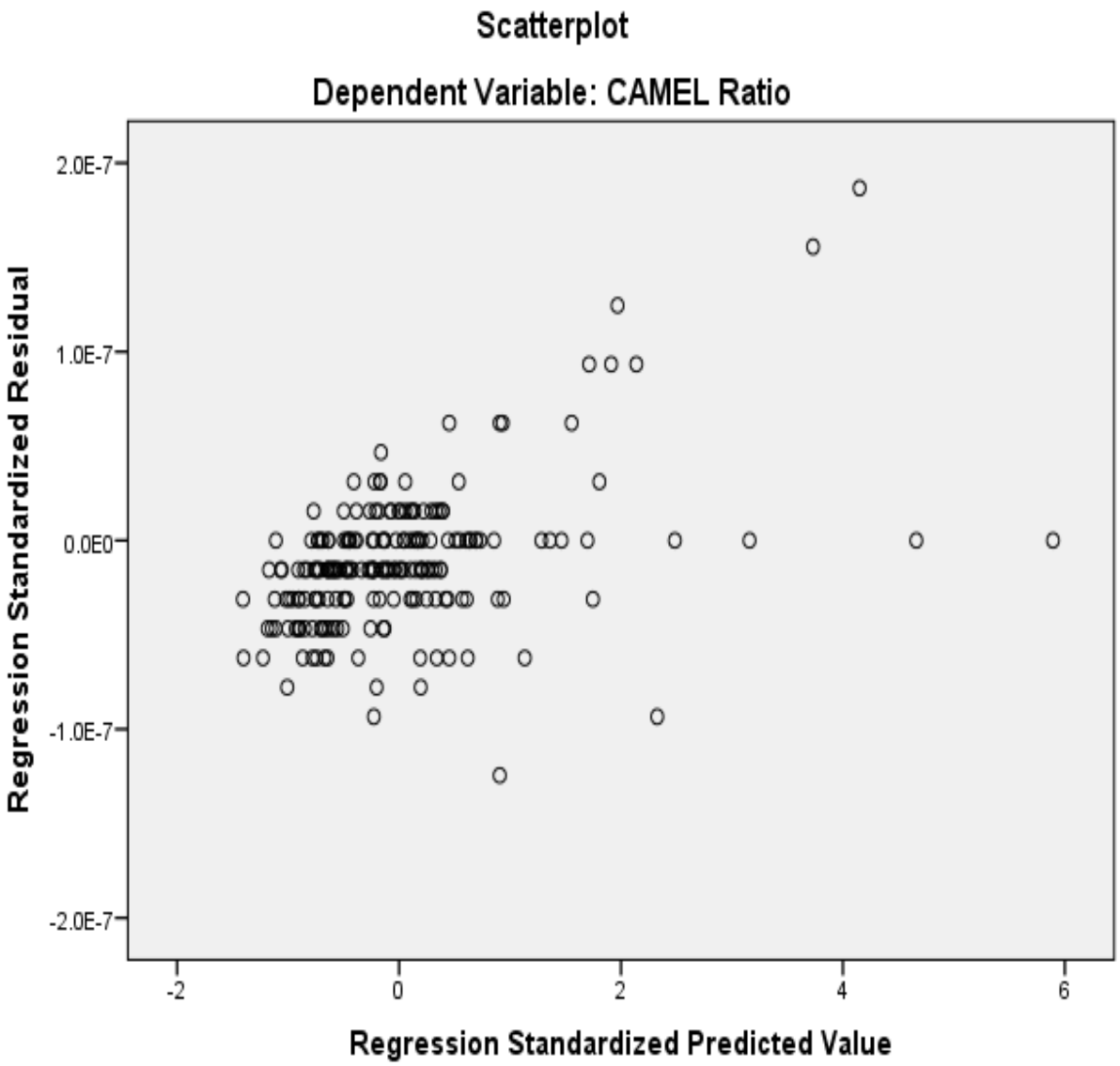
Figure 4.1: Histogram of the Residuals of Financial Performance Data



Source: Research Findings

The histogram above shows a normal distribution of the data and no evidence of heteroscedasticity.

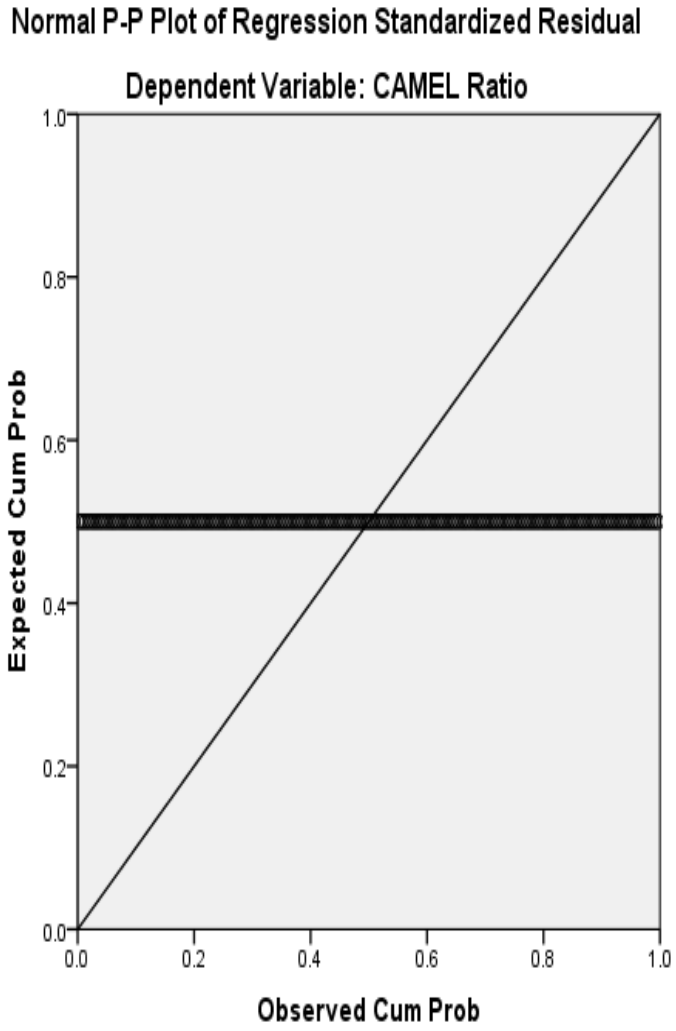
Figure 4.2: Scatterplot of the Residuals of Financial Performance Variable



Source: Research Findings

Figure 4.2 above shows there was no tendency in the error terms hence providence evidence of no heteroscedasticity in the data.

Figure 4.3: Normal P-P Plot of Regression Standardized Residual of Financial Performamnce Data



Source: Research Findings

The Normal P-P Plot in Figures 4.3 above shows there was no evidence of heteroscedasticity in the Financial Performance panel data

Figures 4.1 to 4. 3 for testing for homoscedasticity and normality of residuals in the multiple linear regression analysis there was no tendency in the error terms and no heteroscedasticity in the Financial Performance data.

Table 4.9: Test of Homogeneity of Variances for Financial Performance Data

	Levene Statistic	df1	df2	Sig.	F	Sig.
Capital Adequacy	2.083	4	204	.084	1.262	.286
Asset Quality	.939	4	204	.442	.739	.566
Management Efficiency	.255	4	204	.906	1.490	.206
Earnings	.483	4	204	.748	.190	.944
Liquidity	.663	4	204	.417	.641	.424

Source: Research Findings

Table 4.9 above shows there was no evidence of heteroscedasticity in the Financial Performance data since the computed Levene Statistics for all the attributes of Financial Performance were higher than the threshold (p>.05).

4.3.5 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 4.10 below:

Table 4.10: Normality Test for Financial Performance Data

	Kolmogorov-Smirnov[a]			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.

a. Lilliefors Significance Correction

Source : Research Findings

The results as shown in Table 4.10 indicate that all the components of financial performance had Shapiro-Wilk probability >.05 indicating that the Financial Performance data follow a normal distribution.

4.3.6 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 4.11 below:

Table 4.11: Results of Risk Management Linearity ANOVA Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Credit Risk Mgt	.014[a]	.000	-.005	.6192203	2.123
Business Risk Mgt	.533[a]	.284	.281	.1009800	1.535
Liquidity Risk Mgt	.084[a]	.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 Findings

Table 4.11 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.

4.3.7 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 4.12 below:

Table 4.12: Results of Risk Management Linearity Data ANOVA Test

			Sum of Squares	df	Mean Square	F	Sig.
Credit Risk Mgt	Between Groups	(Combined)	219.548	118	1.861	.845	.806
		Linearity	1.509	1	1.509	.685	.410
		Deviation from Linearity	218.038	117	1.864	.846	.804
	Within Groups		200.452	91	2.203		
	Total		420.000	209			
Business Risk Mgt	Between Groups	(Combined)	304.167	149	2.041	1.057	.411
		Linearity	.677	1	.677	.351	.556
		Deviation from Linearity	303.490	148	2.051	1.062	.403
	Within Groups		115.833	60	1.931		
	Total		420.000	209			
Liquidity Risk Mgt	Between Groups	(Combined)	343.333	169	2.032	1.060	.428
		Linearity	5.108	1	5.108	2.665	.110
		Deviation from Linearity	338.226	168	2.013	1.050	.442
	Within Groups		76.667	40	1.917		
	Total		420.000	209			

Source: Research Findings

The ANOVA Table 4.12 above show that value of significance of Deviation from linearity of all the components of Risk Management were greater than .05. It can be concluded that there is a linear relationship between the variances of the variables.

4.3.8 Financial Management Panel Data Multicollinearity Test

Multicollinearity occurs when the independent variables are not independent from each other meaning one independent variables can be linearly predicted from the others with some

reasonable degree of accuracy. The presence of multicollinearity in the Risk Management data was assessed using the VIF (Tolerance) test. The results are presented in Table 4.13 below:

Table 4.13: Results of Risk Management Linearity Data ANOVA Test

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.173	.005		35.596	.000		
	Business Risk Mgt (BRR)	.332	.003	.994	126.868	.000	1.000	1.000
2	(Constant)	.031	.005		5.646	.000		
	Business Risk Mgt (BRR)	.332	.001	.995	281.710	.000	1.000	1.000
	Liquidity Risk Mgt (LRR)	.324	.011	.101	28.554	.000	1.000	1.000
3	(Constant)	2.880E-16	.000		.000	1.000		
	Business Risk Mgt (BRR)	.333	.000	.998	532215307.241	.000	.996	1.004
	Liquidity Risk Mgt (LRR)	.333	.000	.104	55408265.768	.000	.996	1.004
	Credit Risk Mgt (NPLR)	.333	.000	.051	27147118.579	.000	.993	1.007

a. Dependent Variable: Composite Risk Management

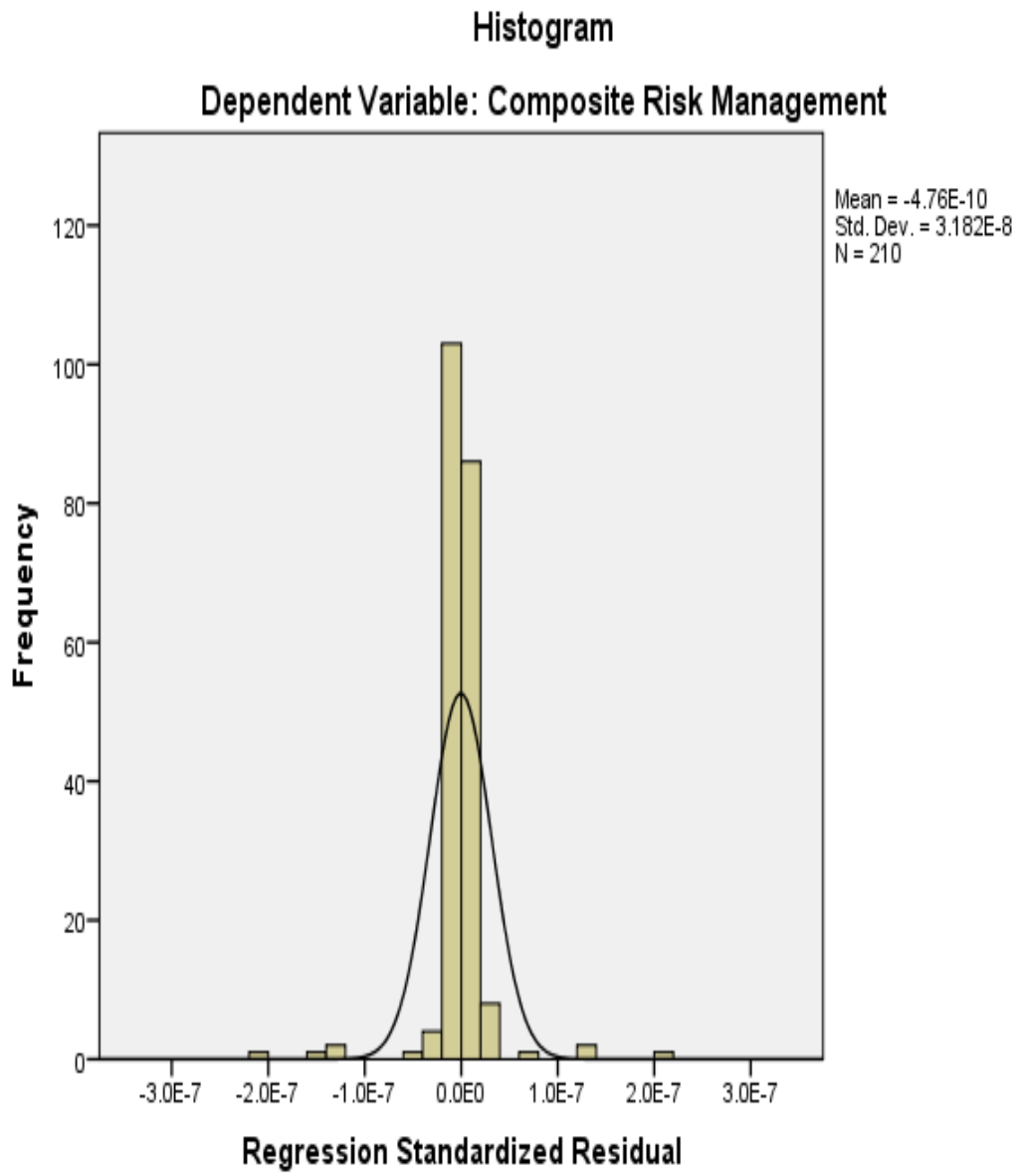
Source: Research Findings

In the stepwise multiple linear regression analysis done in Table 4.13 above, there is a highly significant coefficients between Business Risk Management and composite Risk Management (Beta = -0.998, $p < .01$) and Liquidity Risk Management (Beta = 0.104, $p < .01$) with Credit Risk Management (Beta = 0.05, $p < .01$) showing a small impact on the dependent variable. The VIF (Tolerance) test indicate there was no multicollinearity in the multiple linear regression model as the Risk Management variables met the Tolerance threshold of > 0.1 (or VIF < 10).

4.3.10 Risk Management Panel Data Heteroscedasticity Test

The presence of Heteroscedasticity in the Risk Management was tested based on the histogram, normal P-P plot of the standardized residuals, the scatter plot of residuals as well the Levene's test. The results are shown in Figures 4.4 to 4.6 and Table 4.14 below:

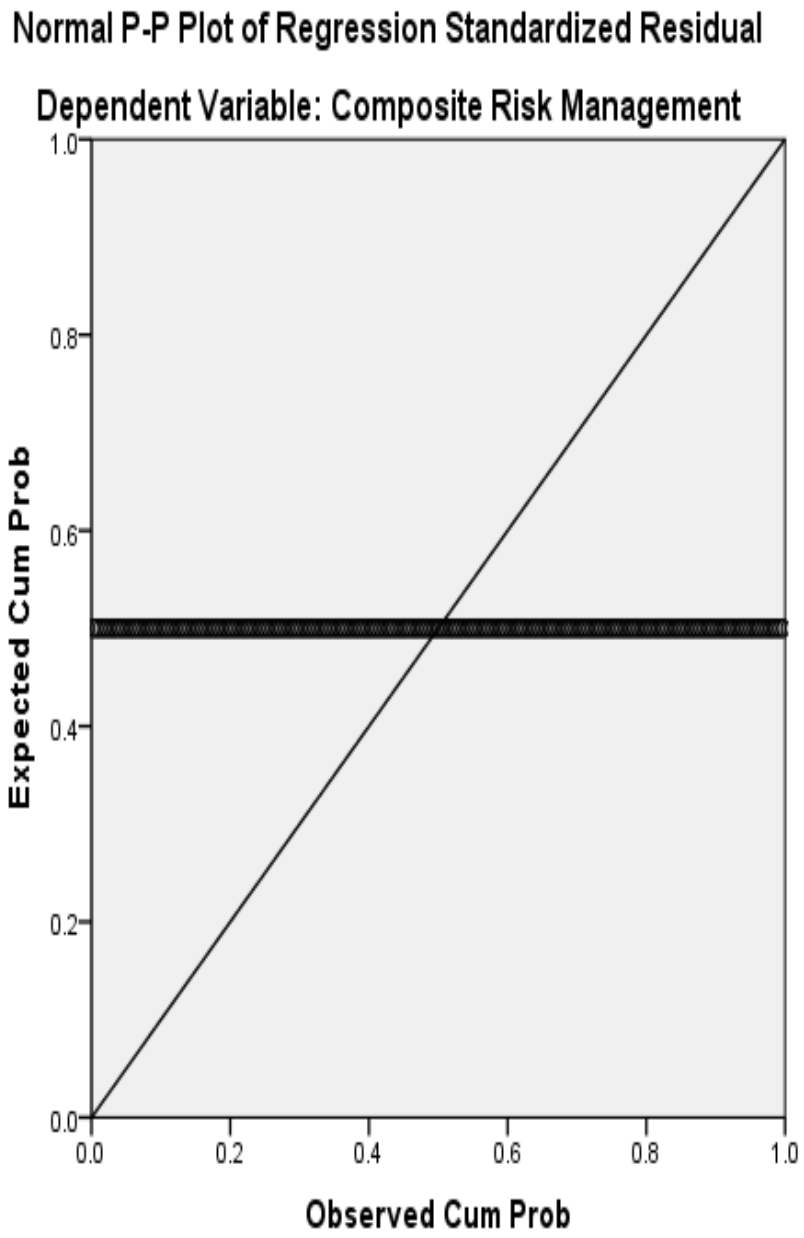
Figure 4.4: Histogram of the Residuals of Risk Management Data



Source: Research Findings

The histogram shows in Figure 4.4 above shows normal distribution in the Risk Management panel data.

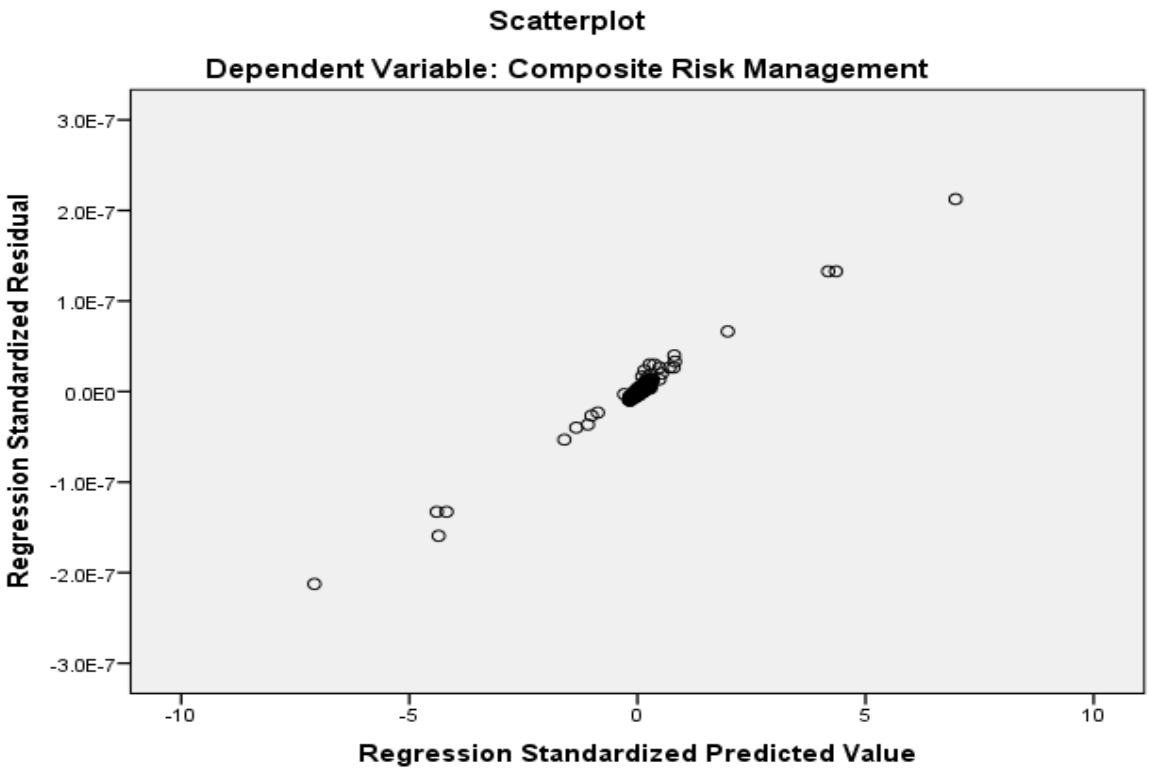
Figure 4.5: Normal P-P Plot of Regression Standardized Residual of Risk Management Data



Source: Research Findings

The Normal P-P Plot in Figures 4.5 above shows there was no evidence of heteroscedasticity in the Risk Management panel data

Figure 4.6: Scatterplot the Residuals of Financial Performance Data



No evidence of heteroscedasticity in the data
Source: Research Findings

Table 4.14: Test of Homogeneity of Variances for Risk Management data

	Levene Statistic	df1	df2	Sig.	F	Sig.
Credit Risk Mgt	1.767	4	205	.137	.872	.482
Business Risk Mgt	.085	4	205	.987	.606	.658
Liquidity Risk Mgt	.396	4	205	.811	.867	.485

Source: Research Findings

There was no heteroscedasticity as confirmed by Levene Statistics (p>.05) of the components Risk Management as shown in Table 4.14 above.

4.3.11 Risk Management Panel Data Normality Test

Normality in the Risk Management data was tested using the Kolmogorov-Smirnov test which is nonparametric test of the equality of continuous, one-dimensional probability distributions 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 4.14 below:

Table 4.15: Normality test for Risk Management data

	Kolmogorov-Smirnov[a]			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 Findings

Table 4.15 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.

4.3.12 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 4.16 below:

Table 4.16: Results of Corporate Governance Panel Data Independence Test

Predictor	R	R Square	Adjusted R Square	Std. 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 Findings

As shown in Table 4.16, the Durbin-Watson statistic (d = 1.751) for Board Composition and Board Independence and Board Size (d = 2.148) lie within the threshold of 1.5 < d < 2.5 thus, there was no linear auto-correlation between the Corporate Governance attributes.

4.3.13 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 4.17 below

Table 4.17: Results of Corporate Governance Data Linearity (ANOVA) Test

			Sum of Squares	df	Mean Square	F	Sig.
Board Composition	Between Groups	(Combined)	32.810	21	1.562	.759	.767
		Linearity	.430	1	.430	.209	.648
		Deviation from Linearity	32.380	20	1.619	.786	.728
	Within Groups		387.190	188	2.060		
	Total		420.000	209			
Board Independence	Between Groups	(Combined)	32.810	21	1.562	.759	.767
		Linearity	.430	1	.430	.209	.648
		Deviation from Linearity	32.380	20	1.619	.786	.728
	Within Groups		387.190	188	2.060		
	Total		420.000	209			
Board Size	Between Groups	(Combined)	15.613	9	1.735	.858	.564
		Linearity	.007	1	.007	.003	.955
		Deviation from Linearity	15.606	8	1.951	.965	.465
	Within Groups		404.387	200	2.022		
	Total		420.000	209			

Source: Research Findings

The ANOVA results in Table 4.17 above show that values of significance of Deviation from linearity of p>.05 implying a linear relationship exists between the variances of Board Composition, Board Independence and Board Size.

4.3.15 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 4.18 below:

Table 4.18: Results of Corporate Governance Data Multicolliinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-.332	.001		-312.765	.000		
	Board Size (BS)	.897	.001	1.000	794.125	.000	1.000	1.000
2	(Constant)	-.332	.001		-314.854	.000		
	Board Size (BS)	.896	.001	.999	730.071	.000	.831	1.204
	Board Composition (BC)	-.002	.001	-.003	-2.284	.023	.831	1.204
3	(Constant)	-.343	.002		-180.693	.000		
	Board Size (BS)	.895	.001	.998	793.820	.000	.820	1.219
	Board Composition (BC)	-.012	.002	-.021	-6.950	.000	.136	7.340
	Board Independence (BIND)	-.039	.006	-.019	-6.494	.000	.145	6.903

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

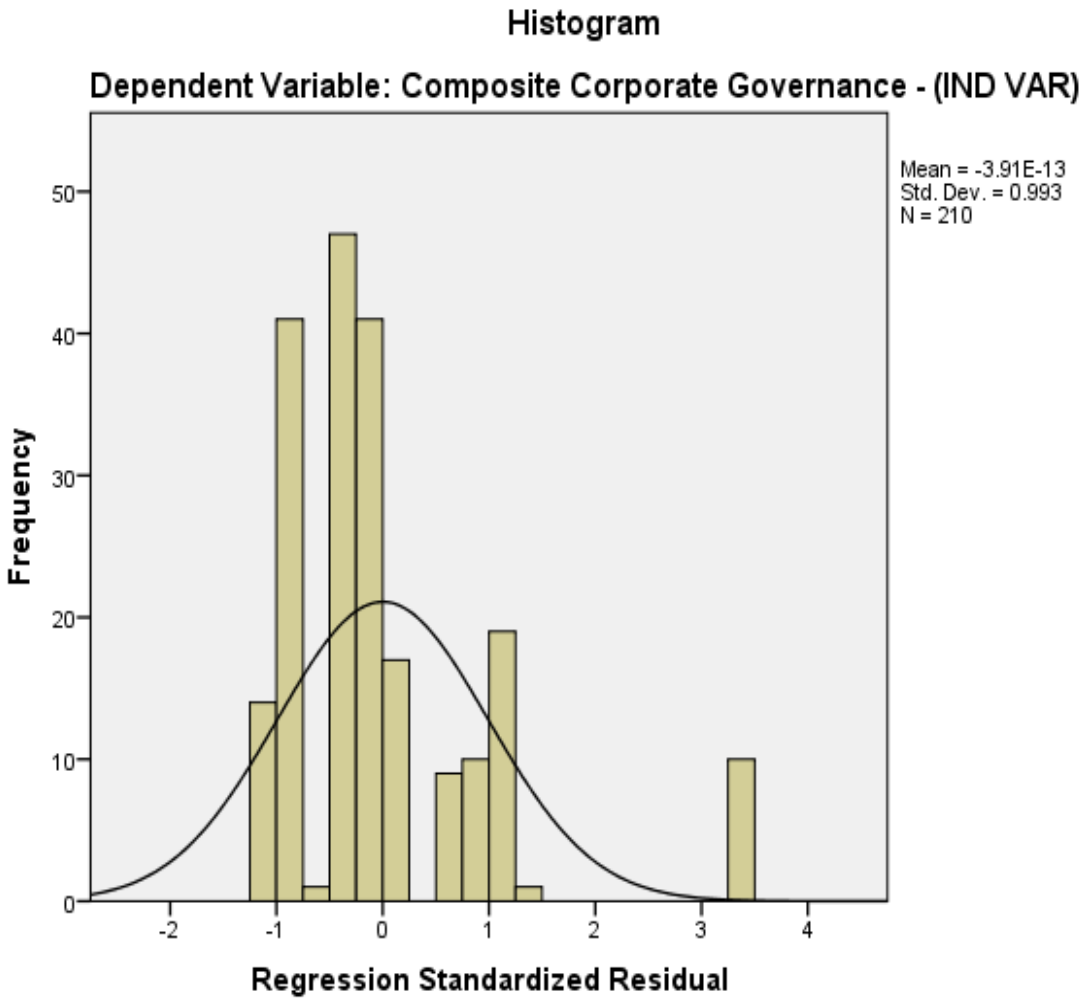
Source: Research Findings

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.

4.3.16 Corporate Governance Panel Data Heteroscedasticity Test

The presence of Heteroscedasticity in the Corporate Governance panel data was tested based on the histogram, normal P-P plot of the standardized residuals, the scatter plot of residuals as well the Levene's test. The results are shown in Figures 4.7 to 4.9 and Table 4.19 below

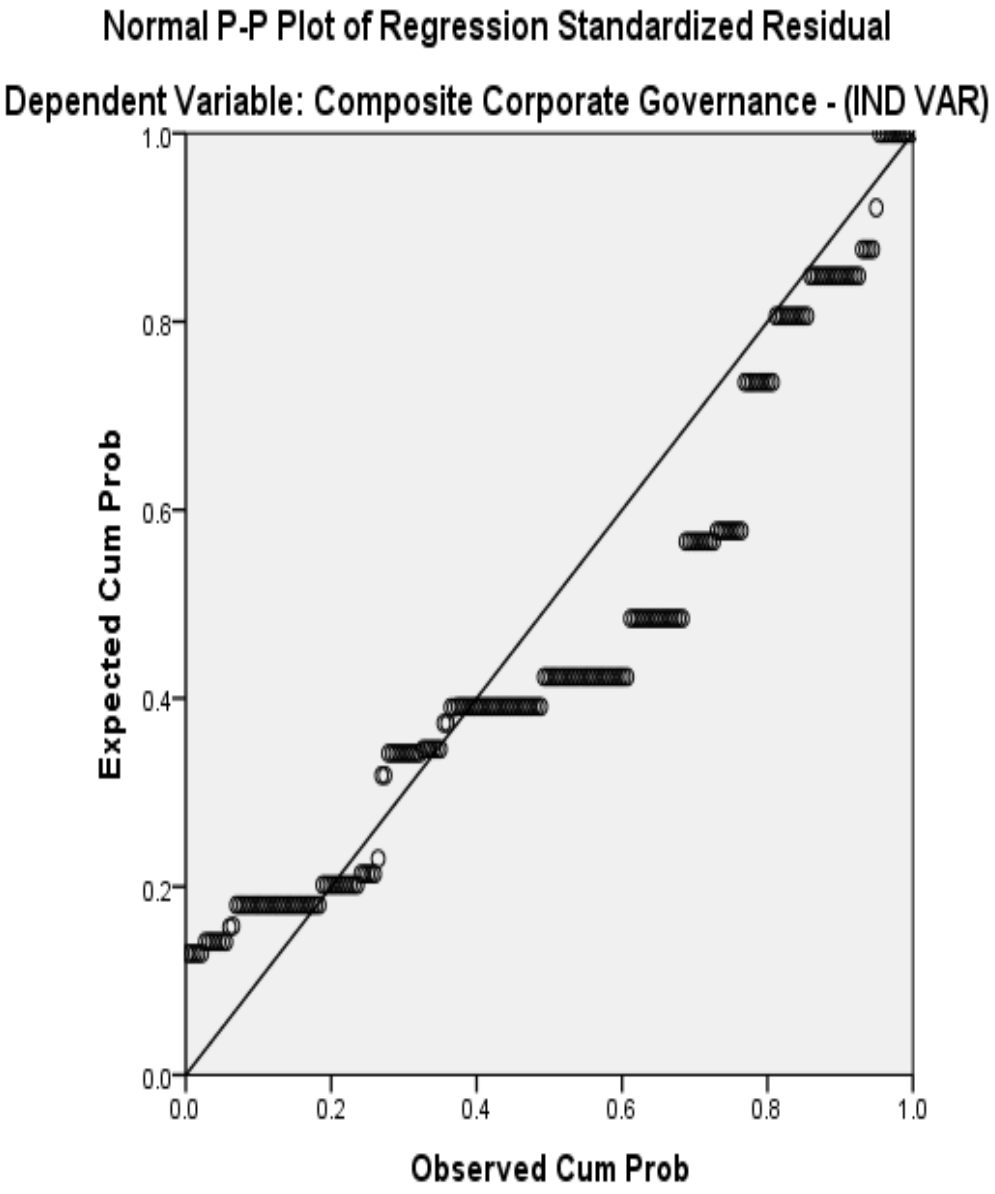
Figure 4.7: Histogram of the Residuals of Corporate Governance Data



Source: Research Findings

The histogram shows in Figure 4.7 above shows near normal distribution in the Corporate Governance panel data.

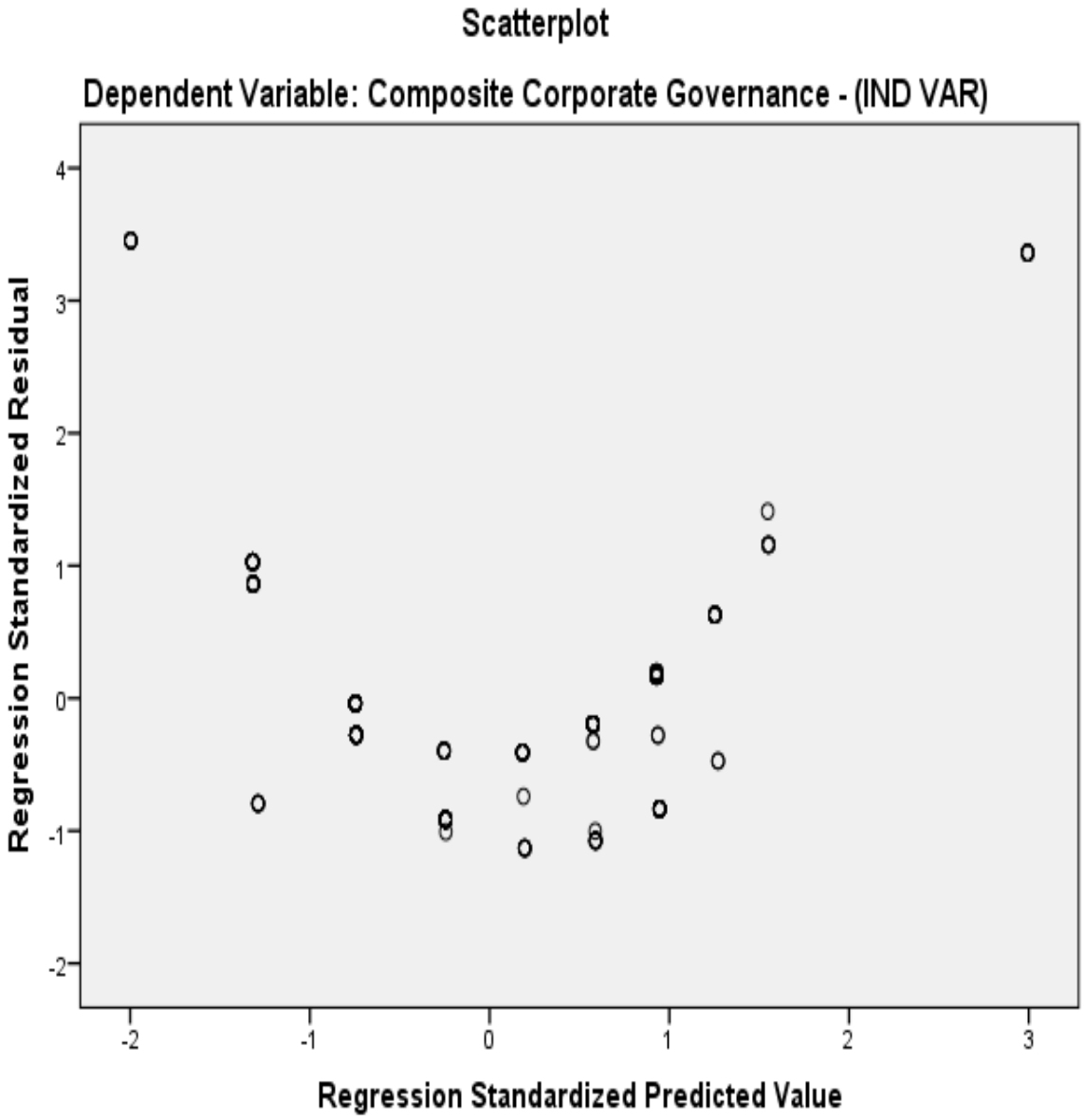
Figure 4.8: Normal P-P Plot of Regression Standardized Residual of Corporate Governance Data



Source: Research Findings

The Normal P-P Plot in Figures 4.5 above shows there was no evidence of heteroscedasticity in the Corporate Governance panel data

Figure 4.9: Scatterplot the Residuals of Corporate Governance data



Source: Research Findings

No evidence of heteroscedasticity in the Corporate Governance data as shown in Figure 4.9 above.

Table 4.19: Test of Homogeneity of Variances for Corporate Governance Panel Data

	Levene Statistic	df1	df2	Sig.	F	Sig.
Board Composition	.194	4	205	.942	.073	.990
Board Independence	.194	4	205	.942	.073	.990
Board Size	.021	4	205	.999	.006	1.000

Source: Research Findings

There was no heteroscedasticity as confirmed by Levene Statistics (p>.05) of the components of Corporate Governance as shown in Table 4.19 above.

4.3.16 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 was not normally distributed. The results are presented in Table 4.20 below:

Table 4.20: Corporate Governance Panel Data Normality Test

	Kolmogorov-Smirnov[g]			**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

Table 4.20 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.

4.3.17 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 4.21 below

Table 4.21: Results of Firm Characteristics Panel Data Independence Test

Predictor	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Firm Leverage	.329[a]	.108	.104	.5970727	1.696
Firm Size	.942[a]	.887	.887	.1455742	1.646
Nature of Audit Firm	.220[a]	.048	.044	.1446562	1.810

a. Dependent Variable: Composite Firm Characteristics

Source: Research Findings

Table 4.21 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.

4.3.18 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 4.22 below:

Table 4.22: Results of Firm Characteristics Panel Data Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
Leverage	Between Groups	(Combined)	313.000	158	1.981	.944	.615
		Linearity	1.399	1	1.399	.667	.418
		Deviation from Linearity	311.601	157	1.985	.946	.611
	Within Groups		107.000	51	2.098		
	Total		420.000	209			
Firm Size	Between Groups	(Combined)	12.956	4	3.239	1.913	.110
		Linearity	12.928	1	12.928	7.634	.006
		Deviation from Linearity	.028	3	.009	.006	.999
	Within Groups		345.484	204	1.694		
	Total		358.440	208			
Nature of Audit Firm	Between Groups	(Combined)	16.277	188	.087	1.000	.535
		Linearity	11.271	1	11.271	130.177	.000
		Deviation from Linearity	5.006	187	.027	.309	1.000
	Within Groups		1.818	21	.087		
	Total		18.095	209			

Source: Research Findings

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.

4.3.19 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 4.23 below:

Table 4.23: Results of Firm Characteristics Panel Data Multicollinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.273	.024		-11.497	.000		
	Total Asset	.868	.017	.965	50.372	.000	1.000	1.000
2	(Constant)	-.349	.016		-22.291	.000		
	Total Asset	.933	.012	1.037	80.951	.000	.889	1.125
	Leverage	.020	.001	.216	16.827	.000	.889	1.125

a. Dependent Variable: Composite Firm Characteristics

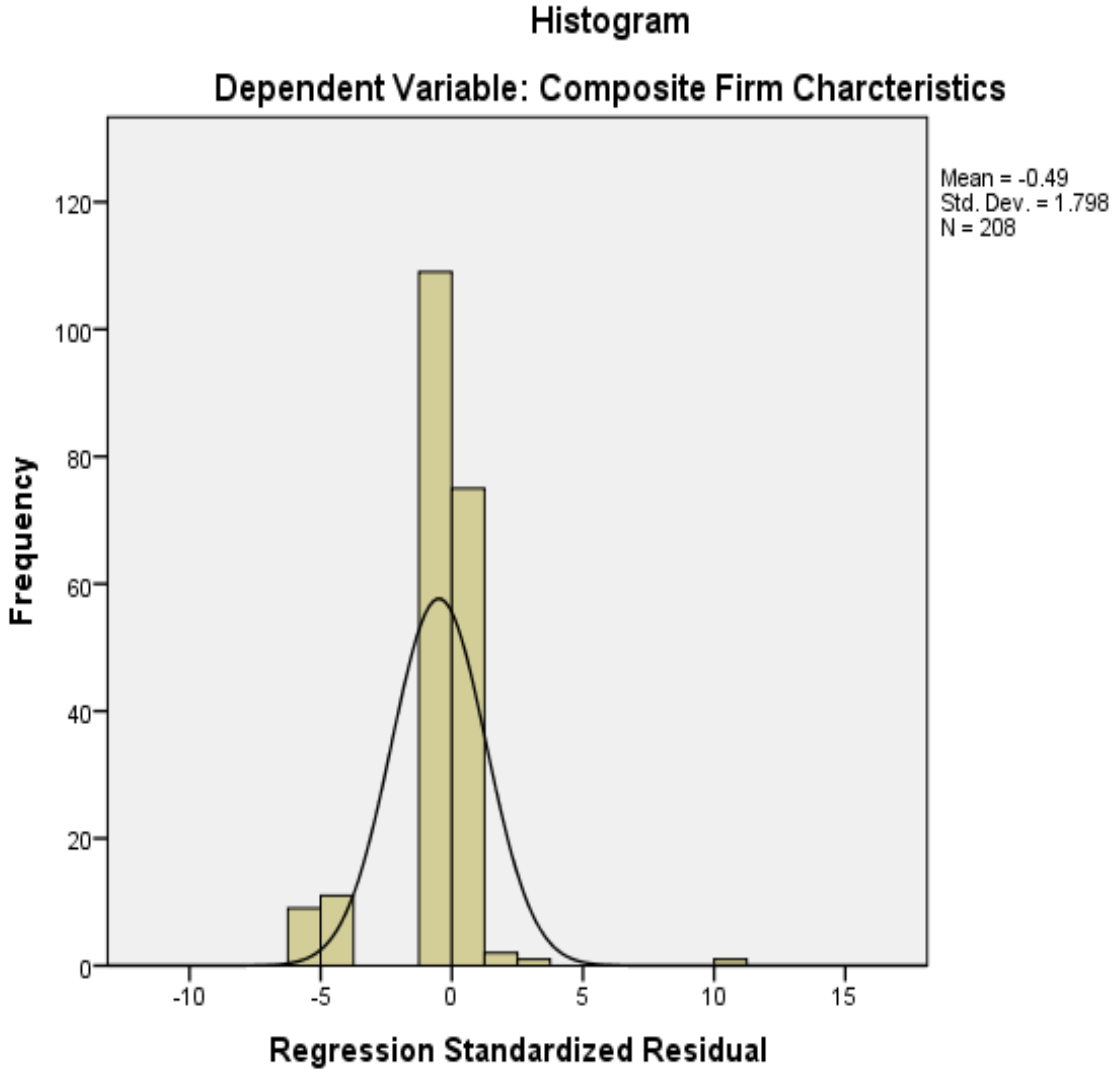
Source: Research Findings

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

4.3.20 Firm Characteristics Panel Data Heteroscedasticity Test

The presence of heteroscedasticity in the Corporate Governance panel data was tested based on the histogram, normal P-P plot of the standardized residuals, the scatter plot of residuals as well the Levene's test. The results are shown in Figures 4.10 to 4.12 and Table 4.24 below:

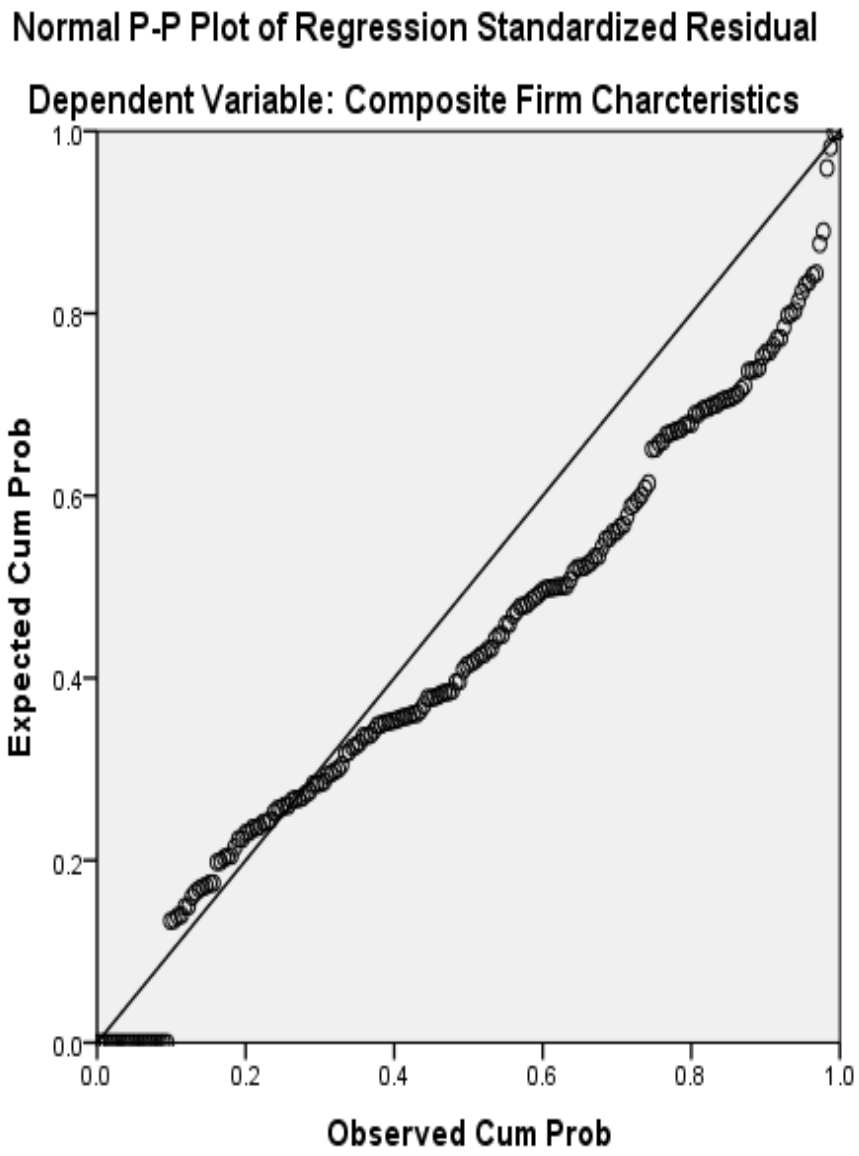
Figure 4.10: Histogram of the Residuals of Firm Characteristics Data



Source: Research Findings

The histogram shows in Figure 4.10 above shows normal distribution in the Firm Characteristics panel data.

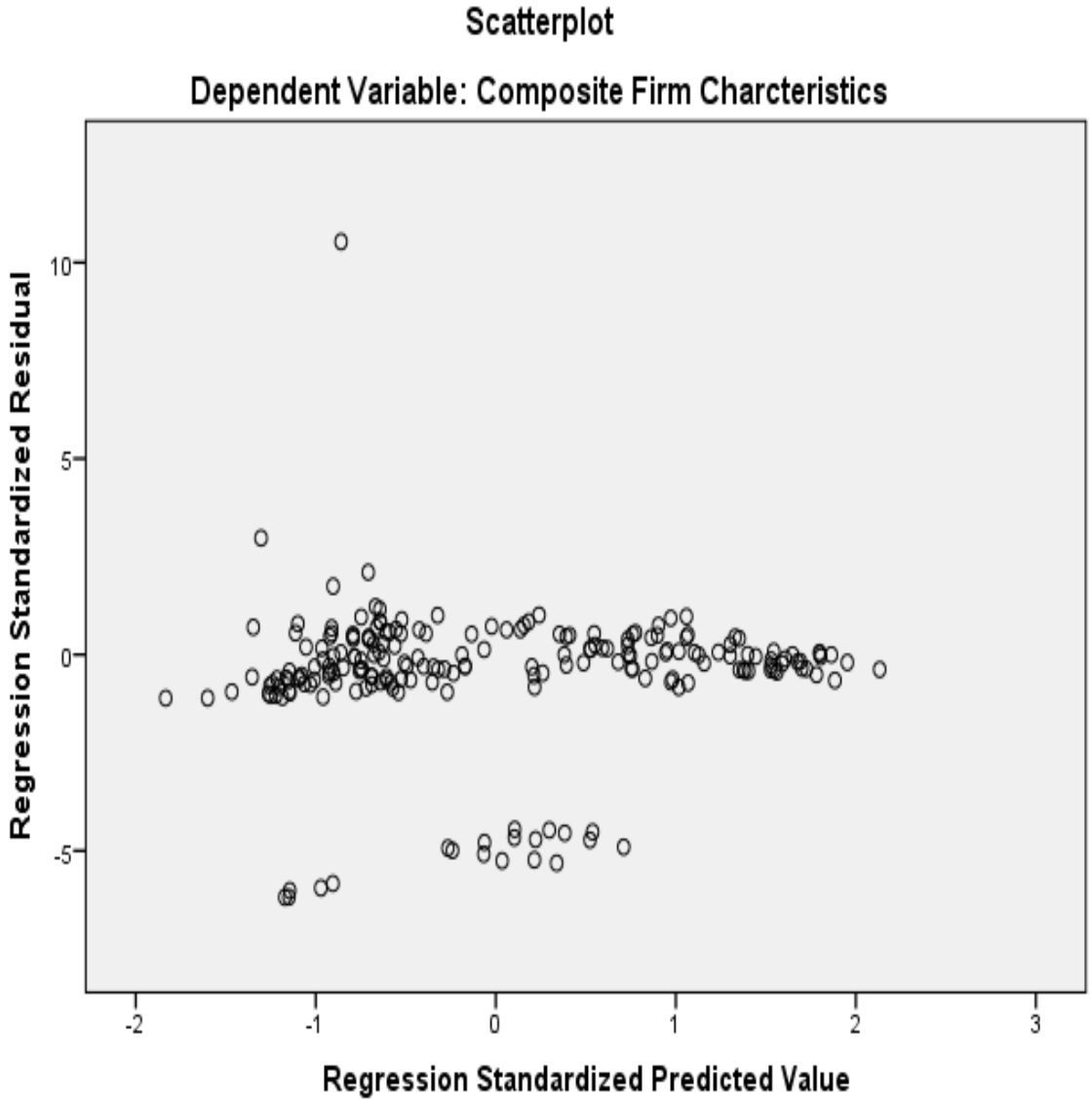
Figure 4.11: Normal P-P Plot of Regression Standardized Residual of Firm Characteristics Data



Source: Research Findings

No evidence of heteroscedasticity in normal P-P plot of regression standardized residual of Firm Characteristics panel data.

Figure 4.12: Scatterplot the Residuals of Firm Characteristics Data



Source: Research Findings

No evidence of heteroscedasticity in the Corporate Governance data as shown scatterplot the residuals of Firm Characteristics data in Figure 4.12 above.

Table 4.24: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.	F	Sig.
Leverage	1.298	4	205	.272	.325	.861
Firm Size	.035	4	204	.998	1.913	.110
Nature of Audit Firm	.000	4	205	1.000	0.000	1.000

Source: Research Findings

The components of Firm Characteristics showed homogeneity of variances (p>.05) as shown in Table 4.24 above.

4.3.21 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 4.24 below:

Table 4.25: Firm Characteristics Panel Data Normality Test

	Kolmogorov-Smirnov[a]			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

Table 4.25 above shows that all the components of Firm Characteristics (p>.05) indicate the data is normally distributed.

4.3.22 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 4.26 below. A brief discussion then follows.

Table 4.26: 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 Findings

Normality was tested using the Shapiro-Wilk test which has power to detect departure from normality due to either skewness or kurtosis or both. The readings of the study (p>.05) were greater than 0.05 confirming normality. Normality assumes that the sampling distribution of the mean is normal. Further Linearity was tested by use of ANOVA test of linearity which computes both the linear and nonlinear components of a pair of variables whereby nonlinearity is significant if the F significance value for the nonlinear component is below 0.05. Computed readings for the ANOVA test were all above 0.05 confirming linear relationships (constant

slope) between the predictor variables and the dependent variable. The study further assessed Independence of error terms, which implies that observations are independent through the Durbin-Watson test whose statistic ranges from 1.5 to 2.5. The test results ranged between 1.54 and 2.15 supporting independence of error terms. Homoscedasticity was tested by use of Levene's test of homogeneity of variances. The test was not significant at $\alpha = 0.05$ confirming homogeneity. Multicollinearity was tested by computing the Variance Inflation Factors (VIF) and its reciprocal, the tolerance. Multicollinearity is a situation in which the predictor variables in a multiple regression analysis are themselves highly correlated making it difficult to determine the actual contribution of respective predictors to the variance in the dependent variable. The multicollinearity assumption has a VIF threshold value of 10 maximum (Gatwirth et al., 2009). The computed tolerance for all the variables were less than 1 and therefore it's reciprocal, the VIF was between one and two, which falls within the threshold.

4.4. Correlation Analysis

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 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 the 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).

4.4.1 Correlation between Corporate Governance and Composite Financial Performance

The strength of the relationship between composite bank Financial Performance (measured by the CAMEL score) and Corporate Governance indicators (Board Composition, Board Independence, Board Size) was investigated using Pearson product moment correlation. The results were as shown in Table 4.27 below:

Table 4.27: Correlation between Corporate Governance and Financial Performance

		Capital Adequacy	Asset Quality	Management Capacity	Earnings	Liquidity	CAMEL Ratio
Board Size	r	-.263**	-.164*	.200**	.134	.002	.001
Board Composition	r	.074	.160*	-.127	.114	-.013	-.031
Board Independence	r	-.052	-.341**	-.051	-.101	.019	-.143*

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research Findings

Table 4.27 above shows a statistically significant negative correlation between Board Size and Capital Adequacy ($r = -.263$, $p < .01$), meaning that the capital adequacy in a bank declines as the

board size increases. These results were to those of Board Size and Asset Quality (r =-.164, p<.05). There was a positive correlation between Board Size and Management Capacity (r = -.200, p<0.01), indicating that the size of the board improved management efficiency. Similarly, the composition of the board improved asset quality (r =-.160, p<0.05) but board independence (r =-.341, p<0.01) had the opposite effect on asset quality. There was significant negative correlation between Board Independence and Financial Performance (CAMEL Ratio) (p<.05). It can therefore be concluded that the more the Board became independent the poorer the financial performance.

4.4.2 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 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 4.28: Correlation between Corporate Governance and Risk Management

		Liquidity Risk Management	Credit Risk Management	Business Risk Management	Composite Risk Management
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 Findings

Table 4.28 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 and 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.

4.4.3 Correlation between Risk Management and Financial Performance

The relationship between commercial bank Financial Performance (measured by the Capital Adequacy, Asset Quality, Management Capacity, Earnings, Liquidity as well as the composite CAMEL ratio) and Risk Management (as measured by Credit Risk Management, Business Risk Management, and Liquidity Risk Management) was evaluated using the Pearson correlation analysis. The results were as presented in Table 4.29 below.

Table 4.29: Correlation Risk Management and Financial Performance

		Capital Adequacy	Asset Quality	Management Capacity	Earnings	Liquidity	CAMEL Ratio
Liquidity Risk Mgt	r	.757**	-.218**	-.581**	-.204**	-.068	-.115
Credit Risk Mgt	r	.259**	.731**	.336**	-.265**	-.097	.540**
Business Risk Mgt	r	.054	-.130	-.010	.014	-.007	-.006

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

Source: Research Findings

As shown in Table 4.29 above, there was correlation between Liquidity Risk Management and Capital Adequacy, Asset Quality, Management Capacity and Earnings which was statistically significant, (r =.757, p<.01), (r =-.218, p<.01), (r =-.581, p<.01) and (r =-.204, p<.01) respectively. Similarly, there was statistically significant correlation between credit Risk Management and Capital Adequacy, Asset Quality, Management Efficiency, Earnings and CAMEL Ratio (r =.259, p<.01), (r =.731, p<.01), (r =.336, p<.01), (r =-.265, p<.01) and (r =.540, p<.01) respectively. These results indicate that increased liquidity Risk Management increased capital adequacy while it decreased asset quality, Management Capacity and earnings. Better credit Risk Management increased capital adequacy, asset quality, Management Capacity and overall CAMEL Ratio.

4.4.4 Correlation between Corporate Governance, Risk Management and Firm Characteristics

The relationship between Risk Management, Corporate Governance and Firm Characteristics was also investigated using Pearson product moment correlation. The results are presented in the Table 4.30 below.

Table 4.30: Correlation between Composite CG, Risk Management and Firm Characteristics Measures

		Risk Management	Corporate Governance	Firm Characteristics
Risk Management	r	1		
Corporate Governance	r	.064	1	
Firm Characteristics	r	.016	.115	1

Source: Research Findings

Table 4.30 shows no statistically significant correlation between Corporate Governance, Risk Management and Composite Firm Characteristics.

Table 4.31: Correlation Matrix for Individual Predictor Variables

		Liquidity Risk Management	Credit Risk Management	Business Risk Management	Board Size	Board Composition	Board Independence	Nature of Audit Firm	Leverage	Total Asset Ln
Liquidity Risk Management	r	1								
Credit Risk Management	r	-.059	1							
Business Risk Management	r	-.017	-.059	1						
Board Size	r	-.281**	-.126	.099	1					
Board Composition	r	.141*	.054	-.091	-.412**	1				
Board Independence	r	-.073	-.152*	.163*	.342**	-.924**	1			
Nature of Audit Firm	r	-.134	.094	-.009	.295**	-.135	.145*	1		
Leverage	r	.317**	.409**	.131	.069	.029	-.047	.036	1	
Total Asset	r	-.246**	-.428**	.021	.513**	-.032	.029	.041	-.315**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research Findings

As shown in Table 4.31, 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 ($r = .513$, $p < .01$).

CHAPTER FIVE

HYPOTHESIS TESTING AND DISCUSSION OF FINDINGS

5.1 Introduction

This chapter present results of the tests of the four null hypotheses in the study and their interpretations. The first null hypothesis tested the effect of Corporate Governance and bank Financial Performance (and its indicators). The second null hypothesis tested the intervening effect of Risk Management on the relationship between Corporate Governance and bank Financial Performance.

The third null hypothesis tested the moderating effect of Firm Characteristics on the relationship between Corporate Governance and bank Financial Performance. The fourth null hypothesis tested the combined effect of Corporate Governance, Risk Management and the 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 chapter concludes with a discussion of findings on each of the hypotheses tested.

5.2 The Effect of Corporate Governance on Bank Financial Performance

The first objective examined the effect of Corporate Governance on the bank Financial Performance. The attributes of Corporate Governance Consisted of Board Composition, Board Independence, and Board Size while the those of Financial Performance were based on the CAMEL model (Capital Adequacy, Asset Quality, Management Efficiency, Earnings, Liquidity and the CAMEL ratio). The indicators were based on data obtained from the published annual

accounts of the banks and CBK Bank Supervision and Banking Sector Annual Reports. The first null hypothesis tested was stated as follows:

H_1: The Relationship between Corporate Governance and Financial Performance of Commercial Banks in Kenya is Not Significant.

The above hypothesis sought to establish the effect of Corporate Governance on Financial Performance of commercial banks in Kenya. Three steps were used in carrying out the hierarchical multiple regressions with the first step involving regressing the Financial Performance against Board Composition; the second involving regressing Financial Performance against Board Composition and Board Independence, while the third step involved regressing Financial Performance against Board Composition, Board Independence and Board Size. The first null sub hypothesis was:

H_{1a}: The Relationship between Corporate Governance and Capital Adequacy of Commercial Banks in Kenya is Not Significant.

The hypothesis was divided into six sub hypotheses to consider the individual (attributes) bank Financial Performance measures (Capital Adequacy(C), Asset Quality (A), Management Capacity (M), Earnings (E), and Liquidity (L)) and the composite measures of bank Financial Performance measure (CAMEL ratio, FP). The hypothesis was tested by using a modified multiple regression model as described in chapter three was as follows:

$$\mathbf{C=\beta_0 + \beta_1 BC + \beta_2 BS + \beta_3 BI + \varepsilon_i}$$

The results were as presented in Table 5.1 below:

Table 5.1: Effect of Corporate Governance on Capital Adequacy

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1					.091	.008	.003	1.72
Constant	.27	.02		11.58**				
Board Composition	-.05	.03	-.09	-1.31				
Model 2					.255	.065	.056	7.19*
Constant	.39	.04		9.57**				
Board Composition	.02	.04	.04	.47				
Board Size	-.18	.05	-.27	-3.54**				
Model 3					.255	.065	.052	4.77*
Constant	.39	.05		7.93**				
Board Composition	.02	.05	.03	.35				
Board Size	-.18	.05	-.27	-3.53*				
Board Independence	-.02	.88	.00	-.02				

Note: *$p < .05$, **$p < .01$
Dependent Variable: Capital Adequacy

Source: Research Findings

As shown in Table 5.1 above, a three stage hierarchical multiple regression was conducted with Capital Adequacy as the dependent variable. Board Composition was entered at stage one (Model 1), Board Size and Board Independence were entered at stage two (Model 2) and in stage three (Model 3), Board Size and Board Independence and Board Independence were all entered in the regression analysis.

The results show that Board Composition had no effect on Capital Adequacy ($F = 1.72$, $p>.05$) explaining only 0.8% of the Capital Adequacy ($R^2=.008$). The addition of Board Size significantly changed the result leading to the conclusion that Board Composition and Board Size explains a significant amount (6.5%), of Capital Adequacy ($F= 7.19$, $p<.05$, $R^2=.065$, $\Delta R^2=.056$). However, the addition of Board Independence at stage three did not change the result significantly ($F= 4.77$, $p<.05$, $R^2=.065$, $\Delta R^2=.052$) but the relationship remained statistically

significant. The results show that the beta coefficient of the constant (β=0.39) the line of best fit for the final model, was statistically significant. The beta coefficients for Board composition, Board Size and Board Independence in model 3 were .02, -.18 and -.02 respectively. The t value (slope coefficient / standard error) for Board Size was = -3.53 which was statistically significant (p<.05). The results show that Corporate Governance significantly predicts Capital Adequacy. The null sub hypothesis is therefore rejected.

The second null sub hypothesis was:

H_{1b}: The Relationship between Corporate Governance and Asset Quality of Commercial Banks in Kenya is Not Significant.

This hypothesis was tested by using a multiple regression model as described in chapter three was as follows:

$$A= \beta_0 + \beta_1 BC + \beta_2 BS + \beta_3 BI + \varepsilon_i$$

The results were as presented in Table 5.2 below:

Table 5.2: Effect of Corporate Governance on Asset Quality

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1					.10	.01	.01	2.08
Constant	.06	.01		6.61**				
Board Composition	-.02	.01	-.10	-1.44				
Model 2					.17	.03	.02	2.87
Constant	.08	.02		5.28**				
Board Composition	-.01	.01	-.03	-.39				
Board Size	-.04	.02	-.15	-1.91				
Model 3					.61	.38	.37	41.10**
Constant	-.01	.02		-.52				
Board Composition	.09	.02	.51	6.31**				
Board Size	-.04	.02	-.17	-2.73*				
Board Independence	2.85	.27	.79	10.70**				

Note: *p < .05, **p < .01
Dependent Variable: Asset Quality

Source: Research Findings

In Table 5.2, a three stage hierarchical multiple regression was conducted with Asset Quality as the dependent variable. Board Composition was entered at stage one, Board Size at stage two and Board Independence stage three. The results show that Board Composition had no effect on Asset Quality ($F= 2.08$, $p>.05$). The addition of Board size added an insignificant effect ($F= 2.87$, $p>.05$) while the inclusion of Board Independence at stage three changed the result significantly ($F= 41.10$, $p<.01$, $R^2=.38$, $\Delta R^2=.37$). The results of the overall model show that Corporate Governance (especially Board Independence attribute) significantly predicts Asset Quality (38%).

The slope (Beta coefficients) for Board Composition and Board Independence in stage three were positive, $\beta=.09$ and $\beta=2.85$ respectively while Board Size was negative, $\beta= -.04$. Similarly, the t values for Board composition and Board Independence were highly significant ($p<.01$) while Board Size was also statistically significant at $p<.05$. Thus the three variables (collectively) were good predictors of Asset Quality The null hypothesis that the relationship between Corporate Governance and Asset Quality of Commercial Banks in Kenya is not significant is therefore rejected.

The third null sub hypothesis was:

H_{1c}: The Relationship between Corporate Governance and Management Capacity of Commercial Banks in Kenya is Not Significant.

This hypothesis was tested by using a multiple regression model as described in chapter three was as follows:

$$\mathbf{M= \beta_0 + \beta_1 BC + \beta_2 BS + \beta_3 BI + \varepsilon_i}$$

The results were as presented in Table 5.3 below:

Table 5.3: Effect of Corporate Governance on Management Efficiency

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1					.18	.03	.03	6.65*
Constant	.68	.04		18.52**				
Board Composition	.14	.05	.18	2.58*				
Model 2					.22	.05	.04	5.21*
Constant	.58	.07		8.78**				
Board Composition	.09	.06	.11	1.40				
Board Size	.16	.08	.15	1.92				
Model 3					.50	.25	.24	23.21**
Constant	.28	.07		4.00**				
Board Composition	.41	.07	.52	5.93**				
Board Size	.14	.07	.13	1.91				
Board Independence	9.41	1.26	.61	7.51**				

Note: *$p < .05$, **$p < .01$
Dependent Variable: Management Efficiency

Source: Research Findings

The Table 5.3 above shows the results of the three stage hierarchical multiple regression was conducted with Management Capacity as the dependent variable where Board Composition was entered at stage one, Board Composition and Board Size entered at stage two and finally Board Composition, Board Size and Board Independence entered at stage three.

The results show that Board Composition had a statistically significant effect on Management Capacity ($F= 6.65$, $p<.05$, $R^2=.03$, $\Delta R^2=.03$). The addition of Board Size in step 2 increased the significance of the model ($F= 5.21$, $p<.05$, $R^2=.05$, $\Delta R^2=.04$) and inclusion of Board Independence at stage three increased the significance of the overall model ($F= 23.21$, $p<.01$, $R^2=.25$, $\Delta R^2=.24$). The results of the overall model show that Corporate Governance significantly predicts Management Capacity (25%).

The slope for Board Composition, Board Size and Board Independence in stage three were positive, β=.41, β=.14 and β=9.41 respectively making Board Independence the largest contributor in the regression. The t values for Board composition and Board Independence were highly significant (p<.01) while the t value for Board Size was not significant. The null hypothesis which states that the relationship between Corporate Governance and Management Capacity of Commercial Banks in Kenya is not significant is rejected.

The fourth null sub hypothesis was:

H_{1d}: The Relationship between Corporate Governance and Earnings of Commercial Banks in Kenya is Not Significant.

This hypothesis was tested by using a multiple regression model below:

$$E= \beta_0 + \beta_1 BC + \beta_2 BS + \beta_3 BI + \varepsilon_i$$

The results were as presented in table 5.4 below:

Table 5.4: Effect of Corporate Governance on Earnings

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1					.099	.010	.005	2.049
Constant	.029	.004		7.905**				
Board Composition	-.008	.005	-.099	-1.431				
Model 2					.235	.055	.046	6.043*
Constant	.012	.006		1.872				
Board Composition	-.017	.006	-.212	-2.768*				
Board Size	.025	.008	.242	3.154*				
Model 3					.238	.057	.043	4.098*
Constant	.014	.008		1.830				
Board Composition	-.019	.008	-.243	-2.469*				
Board Size	.025	.008	.243	3.163*				
Board Independence	-.070	.139	-.046	-.502				

Note: *p < .05, **p < .01
Dependent Variable: Earnings

Source: Research Findings

A three stage hierarchical multiple regression was conducted with Earnings as the dependent variable. Board Composition was entered at stage one, Board Composition and Board Size at stage two finally Board Composition, Board Size and Board Independence entered at stage three. The results show that Board composition had no statistically significant effect on Earnings ($F = 2.049$, $p>.05$, $R^2=.010$, $\Delta R^2=.005$). The addition of Board size in step 1 ($F= 6.043$, $p<.05$, $R^2=.055$, $\Delta R^2=.046$) and Board independence at stage three increased significance of the overall model ($F= 4.098$, $p<.05$, $R^2=.057$, $\Delta R^2=.043$). The results of the overall model show that Corporate Governance significantly predicts Earnings (5.7%).

The slope for Board Composition and Board Independence in stage three were negative, $\beta=-.02$ and $\beta=-.07$ respectively while that of Board Size was positive, $\beta=.03$. The t values for Board composition and Board Size were statistically significant ($p<.05$) while the beta coefficient of Board Independence was not significant. From the overall results in model 3, the null hypothesis which stated that, the relationship between Corporate Governance and Earnings of Commercial Banks in Kenya is not significant, is rejected. The fifth null sub hypothesis was:

H_{1e}: The Relationship between Corporate Governance and Liquidity of Commercial Banks in Kenya is Not Significant.

This hypothesis was tested by using a multiple regression model below:

$$\mathbf{L= \beta_0 + \beta_1 BC + \beta_2 BS + \beta_3 BI + \varepsilon_i}$$

The results were as presented in Table 5.5 below:

Table 5.5: Effect of Corporate Governance on Liquidity

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1					.010	.00	-.01	.020
Constant	.051	.000		107.9**				
Board Composition	9.989	.001	.010	.143				
Model 2					.010	.00	-.01	.011
Constant	.051	.001		59.83**				
Board Composition	.000	.001	.011	.139				
Board Size	-2.818	.001	-.002	-.027				
Model 3					.020	.00	-.01	.028
Constant	.051	.001		49.64**				
Board Composition	-5.020	.001	-.005	-.049				
Board Size	-1.998	.001	-.001	-.019				
Board Independence	-.005	.018	-.023	-.252				

Note: *$p < .05$, **$p < .01$
Dependent Variable: Liquidity

Source: Research Findings

A three stage hierarchical multiple regression (Table 5.5 above) was conducted with Liquidity as the dependent variable. Board Composition was entered at stage one, Board Composition and Board Size at stage two and Board Composition, Board Size Board Independence stage three.

The results show that Board Composition, Board Size and Board Independence did not contribute significantly at any stage of the regression ($p>.05$). This is attributed to the fact that Liquidity is generally a constant explaining the reason the intercept is highly statistically significant ($P<.01$) in the three models. As none of the variables has significant t values, the significance of the beta coefficient values cannot be analysed further. The null hypothesis: The relationship between Corporate Governance and Liquidity of Commercial Banks in Kenya is not significant is not rejected.

The sixth null sub hypothesis was:

H_{1f}: The Relationship between Corporate Governance and Composite Financial Performance of commercial Banks is Not Significant.

This hypothesis was tested by using a multiple regression model below:

$$FP= \beta_0 + \beta_1 BC + \beta_2 BS + \beta_3 BI + \varepsilon_i$$

The results were as presented in Table 5.6 below:

Table 5.6: Effect of Corporate Governance on Composite Financial Performance (CAMEL ratio, FP)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1					.078	.006	.001	1.273
Constant	.216	.009		24.18**				
Board Composition	.015	.013	.078	1.13				
Model 2					.085	.007	-.002	.761
Constant	.223	.016		13.83**				
Board Composition	.018	.015	.096	1.23				
Board Size	-.010	.020	-.039	-.50				
Model 3					.502	.252	.241	23.145**
Constant	.145	.017		8.59**				
Board Composition	.104	.017	.544	6.24**				
Board Size	-.014	.017	-.057	-.83				
Board Independence	2.477	.302	.662	8.21**				

Note: *p < .05, **p < .01
Dependent Variable: CAMEL Ratio

Source: Research Findings

A three stage hierarchical multiple regression was conducted with CAMEL Ratio as the dependent variable. Board Composition was entered at stage one, Board Composition and Board Size at stage two Board Composition, Board Size and Board Independence at stage three.

The results show that Board Composition and Board size, entered at stage one and two respectively, had no statistically significant effect on CAMEL Ratio with the inferential statistics

for model 1 and model 2 as (F= 1.273, p>.05, R^2=.060, ΔR^2=.001) and (F= .761, p>.05, R^2=.007, ΔR^2= -.002) respectively. The inclusion of Board independence in step 3 increased significance of the overall model (F= 23.145, p<.01, R^2=.252, ΔR^2=.241). The results of the overall model show that Corporate Governance significantly predicts 25.2% of CAMEL Ratio with Board Independence being the largest contributor.

The slope for Board Composition and Board Independence in stage three were positive, β=.104 and β=2.477 respectively while that of Board Size was negative (β= -.014). Similarly the t values for Board composition and Board Independence were highly statistically significant (p<.01) while Board Independence was not (p>.05). Thus the null hypothesis, which stated that the relationship between Corporate Governance and Composite Financial Performance (CAMEL Ratio) of Commercial Banks in Kenya is not significant, is rejected.

5. 3 Intervening Effect Risk Management on the Relationship between Corporate Governance and Bank Financial Performance

The second objective was to assess the intervening effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. According to Baron and Kenny (1986) approach, four steps are followed to test the intervening effect of the intervening variable on the relationship between the independent and dependent variables. These steps were adopted in the study. In step one of the intervention; regression analysis was performed to assess the relationship between Financial Performance (dependent variable) and Corporate Governance (independent variable) while ignoring the intervening variable (Risk Management).

The second step of the intervening model involved performing a regression analysis to assess the relationship between Risk Management (intervening variable) and Corporate Governance (independent variable) ignoring the dependent variable (bank Financial Performance). The third step of the intervention, involved performing a regression analysis to assess the relationship between Risk Management (intervening variable) and Bank Performance (dependent variable) ignoring the independent variable (Corporate Governance). The fourth step of the intervention analysis was performed to assess the relationship between bank Financial Performance (dependent variable), Risk Management (intervening variable) and Corporate Governance (independent variable).

According to Baron and Kenny (1986) approach, for intervention effect to be considered positive, the analysis must fulfil four conditions namely: there must be a significant relationship between independent variable must the dependent variable in the absence of the intervening variable; there must be a significant relationship between the independent variable and the intervening variable; there must be a must be a significant relationship between the intervening variable and the dependent variable and finally when controlling for the effects of the intervening variable on the dependent variable, the effect of the independent variable on the dependent variable is insignificant in the presence of the intervening variable.

The composite measures of risk Corporate Governance and Risk Management were used whereas for bank Financial Performance five indicators and the composite CAMEL ratio were used in the analysis. Six null hypotheses were developed and tested for the intervening effect of

Risk Management on the relationship between Corporate Governance and bank Financial Performance indicators (Capital Adequacy, Asset Quality, Management Capacity, Earnings, Liquidity and the CAMEL ratio). The following null hypothesis was tested:

H_2: The Relationship between Corporate Governance and Financial Performance of Commercial Banks in Kenya is Not Intervened by Risk Management.

To evaluate effect on each Financial Performance indicators six sub hypotheses were tested .The first sub hypothesis was to assess the intervening effect of Risk Management on the relationship between Corporate Governance and Capital Adequacy. The hypothesis was stated as follows:

H_{2a}: The Relationship between Corporate Governance and Capital Adequacy (C) of Commercial Banks in Kenya is Not Intervened by Risk Management.

The results are as shown in table 5.7 below;

Table 5.7: Regression Results of Corporate Governance (CG), Risk Management (RM) and Capital Adequacy (C)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Step 1[a]					.188	.036	.031	7.626*
Constant	.337	.036		9.379**				
CG	-.190	.069	-.188	-2.762*				
Step 2[b]					.055	.003	-.002	.625
Constant	.113	.152		.740				
CG	.231	.292	.055	.791				
Step 3[c]					.144	.021	.016	4.403*
Constant	.234	.011		21.539**				
RM	.035	.016	.144	2.098*				
Step 4[d]					.244	.060	.050	6.518*
Constant	.332	.036		9.344**				
CG	-.199	.068	-.197	-2.911*				
RM	.037	.016	.155	2.292*				

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

a. Dependent variable: Financial Performance (Capital Adequacy)

b. Dependent variable: Risk Management

c. Dependent variable: Financial Performance (Capital Adequacy)

d. Dependent variable: Financial Performance (Capital Adequacy)

Source: Research Findings

A multiple linear regression was computed to assess the relationship Between Corporate Governance, Risk Management and Capital Adequacy of commercial banks in Kenya. As shown in Table 5.7 above, in step one of the analysis (the main effect), there was significant relationship between Corporate Governance and Capital Adequacy ($F=7.626$, $p<.05$, $\Delta R^2=.031$). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was -.190 with a significant t-value. This indicates that Corporate Governance is a significant predictor variable ($p<.05$) and therefore a significant relationship exist between Corporate Governance and Capital Adequacy.

In step two there was no significant relationship between Corporate Governance and Risk Management ($F=.625$, $p>.05$, $\Delta R^2=-.002$). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .231 with an in significant t-value of .791. This indicates that Corporate Governance is not a significant predictor variable ($p>.05$) and therefore no significant relationship exist between Corporate Governance and Risk Management.

In step three there was a significant relationship between Risk Management and capital adequacy ($F=4.403$, $p<.05$, $\Delta R^2=.016$). Tests of the slope show that the regression coefficient (β) value of Risk Management was .035 with a significant t-value of 2.098. This indicate that Risk Management is a significant predictor variable ($p<.05$) and therefore a significant relationship exist between Risk Management and Capital Adequacy.

In the fourth step, there was no significant relationship between Corporate Governance, Risk Management and Capital Adequacy ($F=6.518$, $p<.05$, $\Delta R^2=.050$). Tests of the slope show that

the regression coefficient (β) value of Corporate Governance was -.199 with a significant t-value of -2.911 ($p<.05$). The regression coefficient (β) value For Risk Management was .037 with a significant t-value of 2.292 ($p<.05$). This indicate that Risk Management is a significant predictor variable and therefore a significant relationship exist between Risk Management and Capital Adequacy. This indicates that both Corporate Governance and Risk Management are significant predictor variables of capital adequacy ($p < .05$) and therefore a relationship exist among Corporate Governance, Risk Management and Capital Adequacy. Since Risk Management significantly Predict Capital Adequacy (C) even when Corporate Governance is controlled ($p<.05$), Risk Management has an intervening effect on the relationship between Corporate Governance and Capital Adequacy. These findings reject sub hypothesis one.

The second sub hypothesis was to assess the intervening effect of Risk Management on the relationship between Corporate Governance and Asset Quality. The hypothesis was stated as follows:

H_{2b}: The Relationship between Corporate Governance (CG) and Asset Quality (A) of Commercial Banks in Kenya is Not Intervened by Risk Management.

The results are as shown in table 5.8 below:

Table 5.8: Regression Results of Corporate Governance (CG), Risk Management (RM) and Asset Quality (A)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Step 1[a]					.133	.018	.013	3.711
Constant	.071	.013		5.251**				
CG	-.050	.026	-.133	-1.926				
Step 2[b]					.055	.003	-.002	.625
Constant	.113	.152		.740				
CG	.231	.292	.055	.791				
Step 3[c]					.115	.013	.008	2.780
Constant	.048	.004		11.897**				
RM	-.010	.006	-.115	-1.667				
Step 4[d]					.190	.036	.027	3.840*
Constant	.080	.015		5.340**				
CG	-.010	.004	-.151	-2.202*				
RM	-.009	.006	-.106	-1.547				

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

a. Dependent variable: Financial Performance (Asset Quality)

b. Dependent variable: Risk Management

c. Dependent variable: Financial Performance (Asset Quality)

d. Dependent variable: Financial Performance (Asset Quality)

Source: Research Findings

As shown in Table 5.8 above, in step one of the analysis there was no significant relationship between Corporate Governance and Asset Quality ($F=3.711$, $p>.05$, $\Delta R^2=.013$). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was -.050 with an in significant t-value of -1.926 ($p>.05$). This indicates that Corporate Governance is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance and Asset Quality.

In step two there was no significant relationship between Corporate Governance and Risk Management ($F=.625$, $p>.05$, $\Delta R^2=-.002$). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .231 with an in significant t-value of .791 ($p>.05$). This indicates that Corporate Governance is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance and Risk Management.

In step three there was no significant relationship between Risk Management and Asset Quality ($F=2.780$, $p>.05$, $\Delta R^2=.008$). Tests of the slope show that the regression coefficient (β) value of Risk Management was -.010 with an insignificant t-value of -1.667 ($p>.05$). This indicates that Risk Management is not a significant predictor variable and therefore no significant relationship exists between Risk Management and Asset Quality.

In the fourth step, there was a significant relationship between Corporate Governance, Risk Management and Asset Quality ($F=3.840$, $p<.05$, $\Delta R^2=.027$). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was -.010 with a significant t-value of -2.202 ($p<.05$). The regression coefficient (β) value for Risk Management was -.009 with an insignificant t-value of -1.547 ($p>.05$). This indicates that Risk Management is not a significant predictor variable and therefore no significant relationship exists between Risk Management and Asset Quality. This indicates that Corporate Governance is a significant predictor whereas Risk Management is not a significant predictor variable of Asset Quality. However, a relationship exists among Corporate Governance, Risk Management and Asset Quality. Since Risk Management significantly predict Asset Quality (A) when Corporate Governance is controlled ($p<0.05$), Risk Management has an intervening effect on the relationship between Corporate Governance and Asset Quality. The second sub hypothesis is therefore rejected.

The third sub hypothesis was to assess the intervening effect of Risk Management on the relationship between Corporate Governance and Management Efficiency. The hypothesis was stated as follows:

H_{2c}: The Relationship between Corporate Governance and Management Capacity of Commercial Banks in Kenya is Not Intervened by Risk Management.

The results are as shown in table 5.9 below:

Table 5.9: Regression Results of Corporate Governance (CG), Risk Management (RM) and Management Capacity(M)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Step 1[a]					.189	.036	.031	7.672*
Constant	.593	.064		9.234**				
CG	.052	.019	.189	2.770*				
Step 2[b]					.060	.004	-.001	.753
Constant	.085	.170		.501				
CG	.043	.050	.060	.868				
Step 3[c]					.052	.003	-.002	.568
Constant	.770	.018		43.947**				
RM	-.020	.027	-.052	-.754				
Step 4[d]					.237	.056	.047	6.126*
Constant	.584	.057		10.240**				
CG	.374	.109	.231	3.414*				
RM	-.025	.026	-.065	-.959				

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

a. Dependent variable: Financial Performance (Managements Efficiency)

b. Dependent variable: Risk Management

c. Dependent variable: Financial Performance (Managements Efficiency)

d. Dependent variable: Financial Performance (Managements Efficiency)

Source: Research Findings

Table 5.9 shows the results of the regression analysis. In step one of the analysis there was a significant relationship between Corporate Governance and Management Capacity (F=7.672, $p<.05$, $\Delta R^2=.031$). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was -.052 with a significant t-value of 2.770 ($p<.05$). This indicates that Corporate Governance is a significant predictor variable and therefore a significant relationship exists between Corporate Governance and Management Capacity (M).

In step two there was no significant relationship between Corporate Governance and Risk Management (F=.753, p>.05, ΔR^2=-.001). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .043 with an in significant t-value of .868 (p>.05). This indicates that Corporate Governance is not a significant predictor variable of Risk Management and therefore no significant relationship exists between Corporate Governance and Risk Management.

In step three there was a significant relationship between Risk Management and Management Capacity (F=.568, p>.05, ΔR^2=-.002). Tests of the slope show that the regression coefficient (β) value of Risk Management was -.020 with an insignificant t-value of -.754 (p<.05). This indicates that Risk Management is not a significant predictor variable and therefore no significant relationship exists between Risk Management and Management Efficiency.

In the fourth step, there was a significant relationship between Corporate Governance, Risk Management and Management Capacity (F=6.126, p<.05, ΔR^2=.047). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .374 with a significant t-value of 3.414 (p<.05). The regression coefficient (β) value for Risk Management was -.025 with an insignificant t-value of -.959 (p>.05). This indicates that Risk Management is not a significant predictor variable and therefore no significant relationship exists between Risk Management and Management Efficiency. This indicates that Corporate Governance is a significant predictor whereas Risk Management is not significant predictor variables of Management Capacity(p > .05) and even though a relationship exists among Corporate Governance, Risk Management and Management Efficiency, Risk Management does not significantly predict Management Capacity

even when Corporate Governance is controlled (p>0.05). Risk Management has no intervening effect on the relationship between Corporate Governance and Management Efficiency. The third sub hypothesis is therefore not rejected.

The fourth sub hypothesis was to assess the intervening effect of Risk Management on the relationship between Corporate Governance and Earnings. The hypothesis was stated as follows:

H_{2d}: The Relationship between Corporate Governance and Earnings (E) of Commercial Banks in Kenya is Not Intervened by Risk Management.

The results are as shown in table 5.10 below:

Table 5.10: Regression Results of Corporate Governance (CG), Risk Management (RM) and Earnings (E)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Step 1[a]					.007	.000	-.005	.010
Constant	.024	.006		4.108**				
CG	.001	.011	.007	.098				
Step 2[b]					.055	.003	-.002	.625
Constant	.113	.152		.740				
CG	.231	.292	.055	.791				
Step 3[c]					.020	.000	-.004	.083
Constant	.024	.002		14.115**				
RM	-.001	.003	-.020	-.289				
Step 4[d]					.022	.000	-.009	.048
Constant	.024	.006		4.109**				
CG	.001	.011	.008	.114				
RM	-.001	.003	-.020	-.294				

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

a. Dependent variable: Financial Performance (Earnings)

b. Dependent variable: Risk Management

c. Dependent variable: Financial Performance (Earnings)

d. Dependent variable: Financial Performance (Earnings)

Source: Research Findings

A multiple linear regression was computed to assess the relationship between Corporate Governance, Risk Management and earnings of commercial banks. As shown in Table 5.10

above, in step one of the analysis there was no significant relationship between Corporate Governance and Earnings (F=.010, p>.05, ΔR^2=.-.005). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .001 with an in significant t-value of .098 (p>.05). This indicates that Corporate Governance is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance and Earnings.

In step two there was no significant relationship between Corporate Governance and Risk Management (F=.625, p>.05, ΔR^2=-.002). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .231 with an in significant t-value of .791 (p>.05). This indicates that Corporate Governance is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance and Risk Management.

In step three there was no significant relationship between Risk Management and Capital Adequacy (F=.083, p>.05, ΔR^2-.004). Tests of the slope show that the regression coefficient (β) value of Risk Management was -.001 with an in significant p-value of -.289 (p>.05). This indicate that Risk Management is not a significant predictor variable and therefore no significant relationship exist between Risk Management and Earnings.

In the fourth step, there was no significant relationship between Corporate Governance, Risk Management and Earnings (F=.048, p>.05, ΔR^2=-.009). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .001 with an in significant t-value of .114 (p>.05). The regression coefficient (β) value for Risk Management was -.001 with an insignificance level of p>.05. This indicates that Risk Management is not a significant predictor

variable and therefore no significant relationship exists between Risk Management and Earnings. This indicates that neither Corporate Governance nor Risk Management are significant predictor variables of Earnings (p>.05) and therefore no relationship exist among Corporate Governance, Risk Management and Earnings. Since Risk Management does not significantly predict Earnings even when Corporate Governance is controlled (p>0.05), Risk Management has no intervening effect on the relationship between Corporate Governance and Earnings. These findings fail to reject the sub hypothesis four.

The fifth sub hypothesis was to assess the intervening effect of Risk Management on the relationship between Corporate Governance and Liquidity. The hypothesis was stated as follows:

H_{5e}: The Relationship between Corporate Governance and Liquidity of Commercial Banks in Kenya is Not Intervened by Risk Management.

The results are as shown in table 5.11 below:

Table 5.11: Regression Results of Corporate Governance (CG), Risk Management (RM) and Liquidity (L)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Step 1[a]					.008[a]	.000	-.005	.012
Constant	.051	.001		68.713**				
CG	.000	.001	.008	.109				
Step 2[b]					.055[a]	.003	-.002	.625
Constant	.113	.152		.740				
CG	.231	.292	.055	.791				
Step 3[c]					.019[a]	.000	-.004	.073
Constant	.051	.000		230.086**				
RM	-9.09	.000	-.019	-.269				
Step 4[d]					.021[a]	.000	-.009	.044
Constant	.051	.001		68.484**				
CG	.000	.001	.009	.124				
RM	-9.32	.000	-.019	-.275				

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

a. Dependent variable: Financial Performance (Liquidity)

b. Dependent variable: Risk Management

c. Dependent variable: Financial Performance (Liquidity)

d. Dependent variable: Financial Performance (Liquidity)

Source: Research Findings

A multiple linear regression was computed to assess the relationship Between Corporate Governance, Risk Management and Liquidity of commercial banks. As shown in Table 5.11 above, in step one of the analysis there was no significant relationship between Corporate Governance and Liquidity (F=.012, p>.05, ΔR^2=.-.005). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .000 with an in significant t-value of .109 (p>.05). This indicates that Corporate Governance is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance and Liquidity.

In step two there was no significant relationship between Corporate Governance and Risk Management (F=.625, p>.05, ΔR^2=-.002). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was 231 with an in significant t-value of .791 (p>.05). This indicates that Corporate Governance is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance and Risk Management.

In step three there was no significant relationship between Risk Management and Liquidity (F=.073, p>.05, ΔR^2=-.004). Tests of the slope show that the regression coefficient (β) value of Risk Management was -9.09 with an in significant t-value of -.269 (p>.05). This indicates that Risk Management is not a significant predictor variable and therefore no significant relationship exists between Risk Management and Liquidity.

In the fourth step, there was no significant relationship between Corporate Governance, Risk Management and Liquidity (F=.044, p>.05, ΔR^2=-.009). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .000 with an in significant t-value

of .124 (p>.05). The regression coefficient (β) Value for Risk Management was -9.32 with an insignificance level of -.275 (p>.05). This indicates that Risk Management is not a significant predictor variable and therefore no significant relationship exists between Risk Management and Liquidity. This indicates that neither Corporate Governance nor Risk Management are significant predictor variables of Liquidity (p>.05) and therefore no relationship exist among Corporate Governance, Risk Management and Liquidity. Since Risk Management does not significantly predict Liquidity even when Corporate Governance is controlled (p>0.05), Risk Management has no intervening effect on the relationship between Corporate Governance and Liquidity. These findings fail to reject the sub hypothesis five.

The sixth sub hypothesis was to assess the intervening effect of Risk Management on the relationship between Corporate Governance and Composite Financial Performance measure. The hypothesis was stated as follows:

H_{2e}: The Relationship between Corporate Governance and Composite Financial Performance of commercial Banks in Kenya is Not Intervened by Risk Management.

The results are as shown in table 5.12 below:

Table 5.12: Regression Results of Corporate Governance (CG), Risk Management (RM) and Composite Financial Performance (FP)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Step 1[a]					.067	.004	.000	.929
Constant	.212	.014		15.111**				
CG	.026	.027	.067	.964				
Step 2[b]					.055	.003	-.002	.625
Constant	.113	.152		.740				
CG	.231	.292	.055	.791				
Step 3[c]					.010	.000	-.005	.020
Constant	.225	.004		53.420**				
RM	.001	.006	.010	.141				
Step 4[d]					.067	.004	-.005	.466
Constant	.212	.014		15.051**				
CG	.026	.027	.066	.955				
RM	.001	.006	.006	.088				

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

a. Dependent variable: Financial Performance (CAMEL Ratio)

b. Dependent variable: Risk Management

c. Dependent variable: Financial Performance (CAMEL Ratio)

d. Dependent variable: Financial Performance (CAMEL Ratio)

Source: Research Findings

Table 5.12 shows the results of the regression analysis. In step one of the analysis there was no significant relationship between Corporate Governance and composite CAMEL ratio (F=.929, p>.05, ΔR^2=-.000). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .026 with an in significant p-value of .791 (p>.05). This indicates that Corporate Governance is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance and composite CAMEL ratio.

In step two there was no significant relationship between Corporate Governance and Risk Management (F=.625, p>.05, ΔR^2=-.002). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .231 with an in significant p-value of .791 (p>.05). This indicates that Corporate Governance is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance and Risk Management.

In step three there was no significant relationship between Risk Management and Management Capacity (F=020, p>.05, ΔR^2=-.005). Tests of the slope show that the regression coefficient (β) value of Risk Management was -.001 with a significant p-value of .141 (p>.05). This indicates that Risk Management is not a significant predictor variable and therefore no significant relationship exists between Risk Management and composite CAMEL ratio.

In the fourth step, there was a significant relationship between Corporate Governance, Risk Management and Management Capacity (F=466, p>.05, ΔR^2=-.005). Tests of the slope show that the regression coefficient (β) value of Corporate Governance was .026 with an in significant t-value of .955 (p>.05). The regression coefficient (β) value For Risk Management was .001 with a significance level of p>.05. This indicates that Risk Management is not a significant predictor variable and therefore no significant relationship exists between Corporate Governance, Risk Management and CAMEL Ratio. This indicates that Corporate Governance and Risk Management are not significant predictors of the composite CAMEL ratio (p > .05) and therefore no relationship exist among Corporate Governance, Risk Management and the Composite CAMEL Ratio. Since Risk Management did not significantly predict CAMEL ratio even when Corporate Governance is controlled (p>0.05), Risk Management has no intervening effect on the relationship between Corporate Governance and the composite CAMEL ratio. The sixth sub hypothesis is therefore not rejected.

5.4 Moderating Effect of Firm Characteristics on the Relationship between Corporate Governance and Bank Financial Performance

The fourth objective of the study was to assess the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Bank Financial Performance. The study hypothesized that the relationship between Corporate Governance and Bank Financial Performance was not moderated by Firm Characteristics of commercial banks in Kenya. The following hypothesis was tested:

H_3: The Relationship between Corporate Governance and Bank Financial Performance is Not Moderated by Firm Characteristics.

The moderation effect was evaluated using the method proposed by Baron and Kenny (1986). The method involved testing the main effects of the independent variable (Corporate Governance, CG) on the dependent variable (bank Financial Performance), the effect of the moderating variable (Firm Characteristics, FC) on the dependent variable (bank Financial Performance) and finally the effect of the interaction term between Corporate Governance and Firm Characteristics (CG*FC) on the dependent variable (bank financial performance, FP).

To create an interaction term, CG and FC ratios were first centred and a single item indicator representing the product of the two measures calculated (CG*FC). The creation of a new variable by multiplying the scores of CG and FC risked the creation a multicollinearity problem. To solve the possible multicollinearity problem, which could have an effect on the estimation of the regression coefficients for the main effects, the two factors were converted to standardized (Z) scores that have mean zero and standard deviation one.

The two standardized variables (CG and FC) were then multiplied to obtain the interaction variable. Since there were six measures of Financial Performance sub hypotheses were tested for the intervening effect of Firm Characteristics on corresponding measures of Financial Performance and thereafter the composite measures. The sub hypotheses and results of the hierarchical multiple regression predicting bank Financial Performance from Corporate Governance, Firm Characteristics and the interaction between Corporate Governance and Firm Characteristics (CG*FC) are reported below. The moderation hypothesis would be supported if the interaction (CG*FC) in predicting bank Financial Performance yields a statistically significant coefficient. The first sub hypothesis was to test the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Capital Adequacy. The null hypothesis tested was as follows:

H_{3a}: The Relationship between Corporate Governance and Capital Adequacy is Not Moderated by Firm Characteristics

The results follow in the table below:

Table 5.13: Regression Results of Capital Adequacy, Corporate Governance, Firm Characteristics and Interaction Term (CG*FC)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.362	.131	.123	15.532**
Constant	1.226	.190		6.451**				
CG	-.068	.070	-.068	-.974				
FC	-.114	.024	-.332	-4.758**				
Model 2[b]					.372	.139	.126	11.000**
Constant	2.096	.673		3.113*				
CG	-3.705	2.701	-3.674	-1.372				
FC	-.215	.079	-.628	-2.723				
CG*FC	3.886	2.885	3.725	1.347				

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

a. Predictors: (Constant), Corporate Governance, Firm Characteristics

*b. Predictors: (Constant), Corporate Governance, Firm Characteristics, CG*FC*

c. Dependent Variable: Capital Adequacy

Source: Research Findings

Table 5.13 shows the results of the hierarchical regression conducted to assess the moderating effect of Composite Firm Characteristics on the relationship between Corporate Governance and Capital Adequacy. Model 1 shows that there was a statistically significant relationship between Corporate Governance, Composite Firm Characteristics and Capital Adequacy ($F=15.532$, $p<.01$, $\Delta R^2 = .123$). Further, model 1 shows that Corporate Governance and Composite Firm Characteristics explain 12.3% of Capital Adequacy. The introduction of the interaction variable (CG*FC) in model 2 increased the ΔR^2 by 0.3% and reduced the F values by 4.532. The full model (model 2) shows that Corporate Governance, Composite Firm Characteristics and the interaction variable (CG*FC) significantly predict Capital Adequacy ($F =11.000$ $p<.01$, $\Delta R^2 = .126$). Model 2 further shows that the variation in Capital Adequacy explained by Corporate Governance and Composite Firm Characteristics is 12.6% with the inclusion of the interaction term (CG*FC). Model 1 is useful for prediction but model 2 is not acceptable for prediction.

Tests of the regression coefficients (β) shows that the Composite Firm Characteristics ($p<.01$) in model 1 is statistically significant. In model 2 the (β) of Corporate Governance, Composite Firm Characteristics and the interaction term (CG*FC) were all not statistically significant ($p>0.05$). Given the fact that the interaction term was not statistically significant ($p>0.05$), the study find that Composite Firm Characteristics has no moderation effect on the relationship between Corporate Governance and Capital Adequacy. The findings fail to reject the null sub hypothesis.

The second sub hypothesis was to tests the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Asset Quality. The null hypothesis tested was as follows:

H_{3b}: The Relationship between Corporate Governance and Asset Quality (A) is Not Moderated by Firm Characteristics (FC)

The results are as presented in table 5.14 below:

Table 5.14: Regression Results of Asset Quality, Corporate Governance, Firm Characteristics and Interaction Term (CG*FC)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.352	.124	.115	14.537**
Constant	.419	.071		5.908**				
CG	-.002	.026	-.006	-.080				
NAF	-.045	.009	-.350	-4.993**				
Model 2[b]					.427	.182	.170	15.230**
Constant	1.317	.244		5.396**				
CG	-3.752	.979	-10.003	-3.833**				
NAF	-.149	.029	-1.170	-5.210**				
CG*NAF	4.007	1.046	10.327	3.832**				

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

a. Predictors: (Constant), Corporate Governance, Firm Characteristics
*b. Predictors: (Constant), Corporate Governance, Firm Characteristics, CG*FC*
c. Dependent Variable: Asset Quality

Source: Research Findings

The results of the hierarchical regression analysis to assess the moderating effect of Composite Firm Characteristics on the relationship Between Corporate Governance and Asset Quality are presented in Table 5.14 above. Model 1 shows that there was a statistically significant relationship between Corporate Governance and Asset Quality ($F=14.537$, $p<.01$, $\Delta R^2 =.115$). Model 1 shows that Corporate Governance and Composite Firm Characteristics explain 11.5% of Asset Quality. The introduction of the interaction variable (CG*FC) in model 2 changes the ΔR^2 to 17% (by 5.5%), with an increase in the F value by .693. The full model (model 2) shows that Corporate Governance, Composite Firm Characteristics and the interaction variable (CG*FC) significantly predicted asset quality ($F=15.230$, $p<.01$, $\Delta R^2 =.170$). Model 2 further shows that the variation in Asset Quality explained by Corporate Governance and Composite Firm

Characteristics is 17% with the inclusion of the interaction term (CG*FL). Both model 1 and 2 are acceptable for prediction subject to tests of the slope.

Tests of the regression coefficients in the full model (model 2) show that the beta of Corporate Governance, Composite Firm Characteristics and the interaction term (CG*FC) are all statistically significant ($p<.01$). Given that there was an increase in the coefficient of determination (ΔR^2) with the introduction of the interaction term (CG*FC), and further the fact that beta of the interaction term was statistically significant ($p<0.01$), the study find that Composite Firm Characteristics has a moderation effect on the relationship between Corporate Governance and Asset Quality The sub hypothesis is therefore rejected

The third sub hypothesis was to tests the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Management Efficiency. The null hypothesis tested was as follows:

H_{3c}: The Relationship between Corporate Governance and Management Capacity is Not Moderated by Firm Characteristics

The results are as presented in table 5.15 below:

Table 5.15: Regression Results of Management Capacity (M), Corporate Governance, Firm Characteristics and Interaction Term (CG*FC)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.228	.052	.043	5.662*
Constant	.520	.318		1.636				
CG	.360	.118	.223	3.058*				
FC	.008	.040	.014	.196				
Model 2[b]					.239	.057	.043	4.122*
Constant	1.626	1.129		1.440				
CG	-4.259	4.527	-2.637	-.941				
FC	-.121	.132	-.220	-.914				
CG*FC	4.935	4.835	2.954	1.021				

*Note: *p < .05, **p < .01*
a. Predictors: (Constant), Corporate Governance, Firm Characteristics
*b. Predictors: (Constant), Corporate Governance, Firm Characteristics, CG*FC*
c. Dependent Variable: Management Efficiency

Source: Research Findings

Table 5.15 shows the results of the hierarchical regression computed to assess the moderating effect of Composite Firm Characteristics on the Relationship between Corporate Governance and Management Efficiency. Model 1 shows that there was a statistically significant relationship between Corporate Governance, Firm Characteristics and Management Capacity (F= 5.662, $p<.05$, $\Delta R^2 =.043$). Further, model 1 shows that Corporate Governance and Firm Characteristics explain 4.3% of Management Efficiency. The introduction of the interaction variable (CG*FC) in model 2 did not change the ΔR^2, and the F value reduced by 1.54. The full model (model 2) shows that Corporate Governance, Firm Characteristics and the interaction variable (CG*FC) significantly predict Management Capacity ($F =4.122$, $p<.05$, $\Delta R^2 =.043$). Model 2 further shows that the variation in Management Capacity Explained by Corporate Governance and Composite Firm Characteristic 4.3% with the inclusion of the interaction term (CG*FC). Both models (1 and 2) are not acceptable for prediction.

Tests of the regression coefficients (β) of Corporate Governance, Composite Firm Characteristics and the interaction term (CG*FC) shows that all the regression coefficients were not statistically significant ($p>0.05$). Given that there was no change in the coefficient of determination (ΔR^2) with the introduction of the interaction term (CG*FC), and further the fact that the interaction term was not statistically significant ($p>0.05$), the study finds that Composite Firm Characteristics has no moderation effect on the relationship between Corporate Governance and Management Efficiency. The findings fail to reject the null sub hypothesis.

The fourth sub hypothesis was to tests the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Earnings. The null hypothesis tested was as follows:

H_{3d}: The Relationship between Corporate Governance and Earnings is Not Moderated by Firm Characteristics

The results are as presented in table 5.16 below:

Table 5.16: Regression Results of Earnings (E), Corporate Governance Firm Characteristics and Interaction Term (CG*FC)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.446	.199	.191	25.608**
Constant	-.179	.029		-6.217**				
CG	-.027	.011	-.167	-2.499*				
FC	.026	.004	.479	7.156**				
Model 2[b]					.450	.202	.191	17.349**
Constant	-.088	.102		-.859				
CG	-.408	.410	-2.562	-.994				
FC	.015	.012	.282	1.273				
CG*FC	.407	.438	2.474	.930				

*Note: *p < .05, **p < .01*
a. Predictors: (Constant), Corporate Governance, Firm Characteristics
*b. Predictors: (Constant), Corporate Governance, Firm Characteristics, CG*FC*
c. Dependent Variable: Earnings
Source: Research Findings

Table 5.16 shows the results of the hierarchical regression computed to assess the moderating effect of Composite Firm Characteristics on the relationship between Corporate Governance and Earnings. Model 1 shows that there was a statistically significant relationship between Corporate Governance, Firm Characteristics and Earnings ($F=25.608$, $p<.01$, $\Delta R^2 = .191$). Further, model 1 shows that Corporate Governance and Composite Firm Characteristics explain 19.1% of Earnings. The introduction of the interaction variable (CG*FC) in model 2 did not change the ΔR^2, but reduced the F value by 12.259. The full model (model 2) shows That Corporate Governance, Composite Firm Characteristics and the interaction variable (CG*FC) significantly predict Earnings ($F =17.349$, $p<.01$, $\Delta R^2=.191$). Model 2 further shows that the variation in

Earnings explained by Corporate Governance and Composite Firm Characteristics is 19.1 % with the inclusion of the interaction term (CG*FC). Model 1 is acceptable for prediction but model 2 is not.

Tests of the regression coefficients (β) of Corporate Governance, Composite Firm Characteristics and the interaction term (CG*FC) (in model 2) show that the regression coefficients were not statistically significant (p>0.05). Given the fact that the interaction term was not statistically significant (p>0.05), the study find that Firm Characteristics has no moderation effect on the relationship between Corporate Governance and Earnings. The findings fail to reject the null sub hypothesis. The fifth sub hypothesis was to tests the moderating effect of Composite Firm Characteristics on the relationship between Corporate Governance and Liquidity. The null hypothesis tested was as follows:

H_{3e}: The Relationship between Corporate Governance and Liquidity is Not Moderated Composite Firm Characteristics

The results are as presented in table 5.17 below:

Table 5.17: Regression Results of Liquidity (L), Corporate Governance Firm Characteristics and Interaction Term (CG*FC)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.060	.004	-.006	.372
Constant	.049	.003		19.403**				
CG	.000	.001	-.006	-.088				
FC	.000	.000	.061	.856				
Model 2[b]					.146	.021	.007	1.503
Constant	.037	.006		5.825**				
CG	.021	.011	1.029	1.909				
FC	.002	.001	.384	2.120*				
CG*FC	-.024	.012	-1.160	-1.938				

*Note: *p < .05, **p < .01*
a. Predictors: (Constant), Corporate Governance, Firm Characteristics
*b. Predictors: (Constant), Corporate Governance, Firm Characteristics, CG*FC*
c. Dependent Variable: Liquidity

Source: Research Findings

Table 5.17 shows the results of the hierarchical regression computed to assess the moderating effect of Composite Firm Characteristics on the relationship between Corporate Governance and Liquidity. Model 1 shows that there was no statistically significant relationship between Liquidity, Composite Firm Characteristics and Corporate Governance ($F=.372$, $p>.05$, $\Delta R^2 = -.006$). Further, model 1 shows that Corporate Governance and Firm Characteristics explain -0.6% of liquidity. The introduction of the interaction variable (CG*FC) in model 2 increases the ΔR^2 and the F value by 1.3% and by 1.131 respectively. The full model (model 2) shows that Corporate Governance, Composite Firm Characteristics and the interaction variable (CG*FC) did not significantly predict liquidity ($F =1.503$, $p>.05$, $\Delta R^2 =.007$). Model 2 further shows that the variation in Liquidity explained by Corporate Governance and Composite Firm Characteristics is 0.7% with the inclusion of the interaction term (CG*FC). Both models (1 and 2) are not acceptable for prediction.

Tests of the regression coefficients (β) of Corporate Governance, Composite Firm Characteristics and the interaction term (CG*FC) show that the regression coefficients were not statistically significant ($p>0.05$). Given the fact that the interaction term was not statistically significant ($p>0.05$), the study finds that Composite Firm Characteristics has no moderation effect on the relationship between Corporate Governance and Liquidity. The findings fail to reject the null sub hypothesis.

The sixth sub hypothesis was to tests the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Composite Financial Performance (CAMEL ratio). The null hypothesis tested was as follows:

H_{3f}: The Relationship between Corporate Governance and Financial Performance is Not Moderated by Firm Characteristics

The results are as presented in table 5.18 below

Table 5.18: Regression Results of Composite Financial Performance (FP), Corporate Governance (CG), Firm Characteristics (FC) and Interaction Term (CG*FC)

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.093[a]	.009	-.001	.902
Constant	.169	.048		3.554**				
CG	.020	.028	.052	.726				
FC	.005	.006	.066	.936				
Model 2[b]					.304[b]	.092	.079	6.999**
Constant	.640	.117		5.462**				
CG	-.852	.202	-2.192	-4.226**				
FC	-.052	.014	-.635	-3.636**				
CG*FC	.969	.222	2.515	4.363**				

*Note: *p < .05, **p < .01*
a. Predictors: (Constant), Corporate Governance, Firm Characteristics
*b. Predictors: (Constant), Corporate Governance, Firm Characteristics, CG*FC*
c. Dependent Variable: CAMEL Ratio

Source: Research Findings

The results of the hierarchical regression analysis to assess the moderating effect of Composite Firm Characteristics on the relationship between Corporate Governance and CAMEL ratio are presented in Table 5.18 above, Model 1 shows that there was no statistically significant relationship between Corporate Governance Composite, Composite Firm Characteristics and CAMEL ratio (F=.902, p>.05, ΔR^2 = -.001). Model 1 shows that Corporate Governance and Composite Firm Characteristics explain -0.1% of CAMEL ratio. The introduction of the interaction variable (CG*FC) in model 2 increases the ΔR^2 and the F value by 8.0%, and 6.097 respectively. The full model (model 2) shows that Corporate Governance, Composite Firm Characteristics and the interaction variable (CG*FC) significantly predict CAMEL ratio (F=6.999, p<.01, ΔR^2 =.079). Model 2 further shows that the variation in CAMEL ratio explained by Corporate Governance and Composite Firm Characteristics is 7.9% with the inclusion of the interaction term (CG*FC). Model 1 is not acceptable for prediction but model 2 is acceptable, subject to tests of the slopes.

Tests of the regression coefficients (β) show that the beta of Corporate Governance, Composite Firm Characteristics and interaction term (CG*FC) were all statistically significant ($p<.01$). Given that model 2 was acceptable for prediction and the (β) of the interaction term was statistically significant ($p<0.01$), the study find that Composite Firm Characteristics has a moderation effect on the relationship between Composite Firm Characteristics and CAMEL ratio; the findings reject the sub hypothesis.

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

The fourth objective of the study was to determine 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_4: 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 effect on each Financial Performance indicators 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_{4a}: 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:

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

The results are as shown in table 5.19 below:

Table 5.19: Regression Results of CG, Firm Characteristics, Risk Management and Capital Adequacy

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.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 Findings

Table 5.19 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 (β=.082, p>.05), Business Risk Management (β=-.002, p>.05), Liquidity Risk Management (β=.459, p<.01), Firm Size (β=-.020, p<.01), Firm Leverage (β=.182, p<.01) and Nature of Audit Firm (β=-.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<0.01), Corporate Governance, Risk Management and Firm Characteristics jointly have a significant relationship with 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_{4b}: The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Asset Quality of Commercial Banks in Kenya is Not Significant.

The regression equations were of the form:

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

The results were as presented in table 5.20 below:

Table 5.20: Regression Results of CG, Firm Characteristics, Risk Management and Asset Quality

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.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 Findings

Table 5.20 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 (β=.044, p<.01), Board Independence (β=1.919, p<.01), Credit Risk Management (β=.320, p<.01), Liquidity Risk Management (β=-.042, p<.05), Firm Size (β=-010, p<.01) and Leverage (β=-.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 (β=.004, p>.05), Business Risk Management (β=.001, p>.05) and Nature of Audit Firm (β=.011, p>.05).

From the findings the relationship between Asset Quality and Board Size, Business Risk Management as well as Nature of Audit Firm were 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 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_{4c}: The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Management Capacity of Commercial Banks in Kenya is Not Significant.

The regression equations were of the form:

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

The results were as presented in table 5.21 below:

Table 5.21: Regression Results of CG, Firm Characteristics, Risk Management and Management Efficiency

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.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 Findings

The results 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 Table 5.21 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 were 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 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_{4d}: **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:

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

The results were as presented in table 5.22 below:

Table 5.22: Regression Results of CG, Firm Characteristics, Risk Management and Earnings

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.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 Findings

Table 5.22 above shows the results 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 ($F=11.554$, $p<.01$, $\Delta R^2 =.313$). 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 Nature of Audit firm were 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 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_{4e}: **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:

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

The results were as presented in table 5.23 below:

Table 5.23: Regression Results of CG, Firm Characteristics, Risk Management and Liquidity

Variables	β	SE	Std. β	t	R	R^2	ΔR^2	F
Model 1[a]					.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	-.326				
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 Findings

Table 5.23 shows the results 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 (β=.001, p>.05), Board Independence (β=.001, p>.05), Board Size (β=-.003, p<.05), Credit Risk Management (β=-.003, p>.05), Business Risk Management (β=-3.858, p>.05), Liquidity Risk Management (β=-.002, p>.05), Firm Size (β=.001, p<.05), Firm Leverage (β= .002, p>.05) and Nature of Audit Firm (β=.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 Firm 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 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:

H_{4f}: **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:

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

The results are as presented in table 5.24 below:

Table 5.24: 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 1[a]					.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 Findings

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 5.24 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, ΔR^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 (β=083, p<.01), Board Independence (β=1.862, p<.01), Board Size (β=-.033, p>.05), Credit Risk Management (β=.111, p<.05), Business Risk Management (β=.001, p>.05), Liquidity Risk Management (β=-.072, p<.01), Firm Size (β=-.002, p>.05), Firm Leverage (β=.079, p<.01) and Nature Of Audit Firm(β=.014, p>.05).

From the findings the relationship between Financial Performance and Board Size, Business Risk Management, Firm Size and Nature of Audit Firm 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 Financial Performance of commercial banks. The sub hypothesis was rejected.

5.6 Discussion of the Hypotheses Tests and Research Findings

The general objective of this study was to determine the relationships among Corporate Governance, Risk Management, Firm Characteristics and Financial Performance of commercial banks in Kenya. This section presents a discussion of the results the results and of test of the hypotheses. A summary of the research findings is presented at the end.

5.6.1 The Influence Corporate Governance on Bank Financial Performance

The first objective of the study was to determine the effect of Corporate Governance on Financial Performance of commercial banks in Kenya. The three attributes of Corporate Governance used in the study were Board Composition, Board Independence and Board Size while the indicators of Financial Performance were based on the CAMEL model namely; Capital Adequacy, Asset Quality, Management Capacity, Earning Ability, Liquidity and the composite CAMEL ratio. The detailed results are shown in Table 5.25 below. The Findings were that: the relationship between Corporate Governance and Capital Adequacy of commercial Banks in Kenya is significant ($F= 41.10$, $p<.01$, $R2=.38$, $\Delta R2=.37$), the relationship between Corporate Governance and Asset Quality of commercial Banks in Kenya is significant ($F= 41.10$, $p<.01$, $R2=.38$, $\Delta R2=.37$), the relationship between Corporate Governance and Management Capacityof commercial Banks in Kenya is significant ($F= 23.21$, $p<.01$, $R2=.25$, $\Delta R2=.24$), the relationship between Corporate Governance and Earnings of Commercial Banks in Kenya is significant ($F= 4.10$, $p<.05$, $R2=.057$, $\Delta R2=.043$), the relationship between Corporate Governance and Liquidity of Commercial Banks in Kenya is not significant ($F= 4.10$, $p<.05$, $R2=.057$, $\Delta R2=.043$), and the relationship between Corporate Governance and CAMEL ratio of Commercial Banks in Kenya is significant ($F= 23.15$, $p<.01$, $R2=.252$, $\Delta R2=.241$). Except for the Liquidity measure of Financial Performance (that is generally set by the CBK), Corporate Governance has a statistically relationship with Financial Performance of commercial banks in Kenya, leading to the rejection of the null hypothesis.

The results are consistent with previous studies that found a positive relationship between Corporate Governance and Financial Performance (Rechner & Dalton, 1991; Brown & Caylor,

2004; Naushad & Malik; 2015). However the results were inconsistent with past studies that found no significant relationship between Corporate Governance and Financial Performance (Aluchna, 2009; Klein et al., 2005) and those that found a negative relationship between Corporate Governance and Financial Performance (Beltratti & Stulz, 2012; Erkens,et al., 2012).

Table 5.25: Summary of Results of Hypothesis Testing Relating to Objective One

OBJECTIVE	HYPOTHESIS	SUB HYPOTHESIS	RESULT	TABLE	CONCLUSION /INTERPRETATION
To determine the effect of Corporate Governance on Financial Performance of commercial banks in Kenya	The Relationship between Corporate Governance and Financial Performance of commercial Banks in Kenya is Not Significant	The Relationship between Corporate Governance and Capital Adequacy of Commercial Banks in Kenya is Not Significant	Reject	5.1	The Relationship between Corporate Governance and Capital Adequacy of Commercial Banks in Kenya is significant (F= 41.10, p<.01, R^2=.38, ΔR^2=.37).
		The Relationship between Corporate Governance and Asset Quality of Commercial Banks in Kenya is Not Significant.	Reject	5.2	The Relationship between Corporate Governance and Asset Quality of Commercial Banks in Kenya is Significant ((F= 41.10, p<.01, R^2=.38, ΔR^2=.37).
		The Relationship between Corporate Governance and Management Capacity of Commercial Banks in Kenya is Not Significant.	Reject	5.3	The Relationship between Corporate Governance and Management Capacity of Commercial Banks in Kenya is Significant. (F= 23.21, p<.01, R^2=.25, ΔR^2=.24).
		The Relationship between Corporate Governance and Earnings of Commercial Banks in Kenya is Not Significant.	Reject	5.4	The Relationship between Corporate Governance and Earnings of Commercial Banks in Kenya is significant (F= 4.10, p<.05, R^2=.057, ΔR^2=.043).
		The Relationship between Corporate Governance and Liquidity of Commercial Banks in Kenya is Not Significant.	Fail to reject	5.5	The Relationship between Corporate Governance and Liquidity of Commercial Banks in Kenya is Not Significant (F= 4.10, p<.05, R^2=.057, ΔR^2=.043).
		The Relationship between Corporate Governance and Composite Financial Performance of commercial Banks is Not Significant.	Reject	5.6	The Relationship between Corporate Governance and CAMEL Ratio of Commercial Banks in Kenya is Significant. (F= 23.15, p<.01, R^2=.252, ΔR^2=.241)

Source: Research Findings

5.6.2 The Effect of Risk Management on the Relationship between Corporate Governance and Bank Financial Performance

The second objective of the study was to investigate the intervening effect of Risk Management on the relationship between Corporate Governance and bank Financial Performance. The null hypothesis was that the relationship between Corporate Governance and bank Financial Performance of commercial banks in Kenya was not intervened by the Risk Management. Using the Baron and Kenny (1986) approach of testing intervention.

The findings were as follows: the relationship between Corporate Governance and Capital Adequacy (C) of Commercial Banks in Kenya is intervened by Risk Management ($F= 6.518$, $p <.05$, $R^2=.60$, $\Delta R^2= .50$); the relationship between Corporate Governance and Asset Quality (A) of Commercial Banks in Kenya is intervened by Risk Management ($F=3.840$, $p <.05$, $R^2=.036$, $\Delta R^2= .027$), the relationship between Corporate Governance and Management Capacity(M) of Commercial Banks in Kenya is intervened by Risk Management ($F=6.126$,$p<.05$,$R^2=.047$,$\Delta R^2=.056$); the relationship between Corporate Governance and Earnings (E) of Commercial Banks in Kenya is not Intervened by Risk Management ($F=.048$, $p >.05$, $R^2=.000$, $\Delta R^2=-.009$); the relationship between Corporate Governance and Liquidity (L) of Commercial Banks in Kenya is not Intervened by Risk Management ($F=.044$, $p>.05$, $R^2=.000$, $\Delta R^2= -.009$) and finally, the Relationship between Corporate Governance and Composite Financial Performance (FP) of Commercial Banks in Kenya is not Intervened by Risk Management ($F=.466$, $p >.05$, $R^2=. 004$, $\Delta R^2=-.005$).

Based on the Composite Financial Performance measure the findings were that Risk Management did not intervene the relationship between Corporate Governance and bank financial performance. The summary results relating to the third objective are presented in table 5.26 below.

Table 5.26: Summary of Results of Hypothesis Testing Relating to Objective Two

OBJECTIVE	HYPOTHESIS	SUB HYPOTHESIS	RESULT	TABLE	INTERPRETATION
To assess the effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya	The Relationship between Corporate Governance and Capital Adequacy of Commercial Banks in Kenya is Not Intervened by Risk Management.	The Relationship between Corporate Governance and Capital Adequacy of Commercial Banks in Kenya is Not Intervened by Risk Management.	Reject	5.7	The Relationship between Corporate Governance and Capital Adequacy (C) of Commercial Banks in Kenya is Intervened by Risk Management ($F= 6.518$, $p <.05$, $R^2=.60$, $\Delta R^2= .50$)
		The Relationship between Corporate Governance and Asset Quality of Commercial Banks in Kenya is Not Intervened by Risk Management.	Reject	5.8	The Relationship between Corporate Governance and Asset Quality of Commercial Banks in Kenya is Intervened by Risk Management. ($F=3.840$, $p <.05$, $R^2=.036$, $\Delta R^2= .027$)
		The Relationship between Corporate Governance and Management Capacity of Commercial Banks in Kenya is Not Intervened by Risk Management.	Reject	5.9	The Relationship between Corporate Governance and Management Capacity (M) of Commercial Banks in Kenya is Intervened by Risk Management. ($F=6.126$,$p<.05$,$R^2=.047$, $\Delta R^2=.056$)
		The Relationship between Corporate Governance and Earnings (E) of Commercial Banks in Kenya is Not Intervened by Risk Management.	Fail to Reject	5.10	The Relationship between Corporate Governance and Earnings (E) of Commercial Banks in Kenya is Not Intervened by Risk Management. ($F= .048$, $p >.05$, $R^2=.000$,$\Delta R^2=-.009$)
		The Relationship between Corporate Governance and Liquidity (L) of Commercial Banks in Kenya is Not Intervened by Risk Management.	Fail to Reject	5.11	The Relationship between Corporate Governance and Liquidity (L) of Commercial Banks in Kenya is Not Intervened by Risk Management. ($F=.044$, $p>.05$, $R^2=.000$, $\Delta R^2= -.009$)
		The Relationship between Corporate Governance and Composite Financial Performance (FP) of Commercial Banks in Kenya is Not Intervened by Risk Management.	Fail to Reject	5.12	The Relationship between Corporate Governance and Composite Financial Performance (FP) of Commercial Banks in Kenya is Not Intervened by Risk Management. ($F=.466$, $p >.05$,$R^2=. 004$,$\Delta R^2=-.005$)

Source: Research Findings

5.6.3 The Moderating Effect of Firm Characteristics on the Relationship between Corporate Governance and Bank Financial Performance

The third objective of the study was to assess the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. The study hypothesized that the relationship between Corporate Governance and Financial Performance of commercial banks was not moderated by Firm Characteristics of commercial banks in Kenya. Composite Firm Characteristic was based on three attributes namely; Firm Size, Firm Leverage and Nature of Audit Firm.

The findings were: The Relationship between Corporate Governance and Capital Adequacy (C) Asset Quality (A) is not Moderated by Firm Characteristics ($F=11.000$, $p<.01$, $R^2=.139$, $\Delta R^2=.126$), The Relationship between Corporate Governance and Asset Quality (A) is Moderated by Firm Characteristics, ($F=15.230$, $p<.01$, $R^2=.182$, $\Delta R^2=.170$); The Relationship between Corporate Governance and Management Capacity is Not Moderated by Composite Firm Characteristics ($F= 4.122$, $p<.05$, $R^2=.057$, $\Delta R^2=.043$); The Relationship between Corporate Governance and Earnings is Not Moderated by Composite Firm Characteristics ($F=17.349$, $p<.01$, $R^2=.20$,$\Delta R^2=.191$); The Relationship between Corporate Governance and Liquidity is not Moderated Composite Firm Characteristics ($F=1.503$, $p>.05$, $R^2=.021$, $\Delta R^2=.007$); The Relationship between Corporate Governance and Composite Financial Performance is Moderated by Firm Characteristics, ($F= 6.999$, $p<.01$, $R^2=.092$, $\Delta R^2=.079$)

The summary results of the hypotheses and sub hypotheses relating to the third objective are presented in Table 5.27. Based on the indicators of Firm Characteristics the findings of this study are consistent with that of Mang'unyi (2011) who found that foreign-owned banks performed slightly better than domestically-owned banks.

Table 5.27: Summary of Results of Hypothesis Testing Relating to Objective Three

OBJECTIVE	HYPOTHESIS	SUB HYPOTHESIS	RESULT	TABLE	INTERPRETATION
The investigate the effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of commercial bank in Kenya	The Relationship between Corporate Governance and Bank Financial Performance is Not Moderated by Firm Characteristics.	The Relationship between Corporate Governance and Capital Adequacy (C) Asset Quality (A) is Not Moderated by Firm Characteristics (FC)	Fail to Reject	5.13	The Relationship between Corporate Governance and Capital Adequacy (C) Asset Quality (A) is Not Moderated by Firm Characteristics (FC) ($F=11.000$, $p<.01$, $R^2=.139$, $\Delta R^2=.126$)
		The Relationship between Corporate Governance and Asset Quality is Not Moderated by Firm Characteristics (FC)	Reject	5.14	The Relationship between Corporate Governance and Asset Quality is Moderated by Firm Characteristics (FC) ($F=15.230$, $p<.01$, $R^2=.182$, $\Delta R^2=.170$)
		The Relationship between Corporate Governance and Management Capacity is Not Moderated by Composite Firm Characteristics	Fail to Reject	5.15	The Relationship between Corporate Governance and Management Capacity is Not Moderated by Composite Firm Characteristics ($F= 4.122$, $p<.05$, $R^2=.057$, $\Delta R^2=.043$)
		The Relationship between Corporate Governance and Earnings is Not Moderated by Composite Firm Characteristics	Fail to Reject	5.16	The Relationship between Corporate Governance and Earnings is Not Moderated by Composite Firm Characteristics ($F=17.349$, $p<.01$, $R^2=.20$,$\Delta R^2=.191$)
		The Relationship between Corporate Governance and Liquidity is Not Moderated Composite Firm Characteristics	Fail to Reject	5.17	The Relationship between Corporate Governance and Liquidity is Not Moderated Composite Firm Characteristics ($F=1.503$, $p>.05$, $R^2=.021$, $\Delta R^2=.007$)
		The Relationship between Corporate Governance and Composite Financial Performance is Not Moderated by Firm Characteristics	Reject	5.18	The Relationship between Corporate Governance and Composite Financial Performance is Moderated by Firm Characteristics ($F= 6.999$, $p<.01$, $R^2=.092$, $\Delta R^2=.079$)

Source: Research Findings

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

The last objective of the study was to establish the joint effect Corporate Governance, Risk Management and Firm Characteristics on bank financial performance. The prediction of the study was that the joint effect 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 5.28

The findings are consistent with that of Tandelilin et al. (2007) who investigated the relationships among Corporate Governance, Risk Management, and bank performance in 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.

Table 5.28: Summary of Results of Hypothesis Testing Relating to Objective Four

OBJECTIVE	HYPOTHESIS	SUB HYPOTHESIS	RESULT	TABLE	INTERPRETATION
To evaluate the joint effect of Corporate Governance, Risk Management and Firm Characteristics on the financial performances of commercial bank in Kenya	The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Financial Performance of commercial Banks in Kenya is Not Significant	The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Capital Adequacy of Commercial Banks in Kenya is Not Significant.	Reject	5.19	The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Capital Adequacy of Commercial Banks in Kenya is Significant. ($F=99.262$, $p<.01$, $R^2=.818$, $\Delta R^2=.810$)
		The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Asset Quality of Commercial Banks in Kenya is Not Significant.	Reject	5.20	The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Asset Quality of Commercial Banks in Kenya is Significant. ($F=65.859$, $p<.01$, $R^2=.749$, $\Delta R^2=.737$)
		The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Management Capacity of Commercial Banks in Kenya is Not Significant.	Reject	5.21	The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Management Capacity of Commercial Banks in Kenya is Significant. ($F=33.755$, $p<.01$, $R^2=.604$, $\Delta R^2=.586$)
		The Joint Effect Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Earnings of Commercial Banks in Kenya is Not Significant	Reject	5.22	The Joint Effect Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Earnings of Commercial Banks in Kenya is Significant ($F=11.554$, $p<.01$, $R^2=.343$, $\Delta R^2=.313$)
		The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Liquidity of Commercial Banks in Kenya is Not Significant.	Failed to Reject	5.23	The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Liquidity of Commercial Banks in Kenya is Not Significant. ($F=1.113$, $p>.05$, $R^2=.048$, $\Delta R^2=.005$)
		The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Composite Financial Performance of commercial Banks in Kenya is Not Significant	Reject	5..24	The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Composite Financial Performance of commercial Banks in Kenya is Significant ($F=30.315$, $p<.01$, $R^2=.578$, $\Delta R^2=.559$)

Source: Research Findings

5.7 Summary of Research Findings

This chapter has presented the testing of the four hypotheses of the study as well as discussion of the findings. The null hypotheses were tested using the inferential statistics of both correlation as well as regression analysis. Using the composite measures, the findings of the study failed to reject hypothesis two, however it rejected null hypotheses one, three and four.

The first hypothesis (H_1) investigated the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. The results of hierarchical multiple regression analysis were that there was a statistically significant relationship ($p<.05$) between Corporate Governance and all the attributes Financial Performance except Liquidity. Further, there was a statistically significant relationship ($p<.05$) between Corporate Governance and the composite measures of Financial Performance (CAMEL ratio). In general it can be concluded that there is a statistically significant relationship between Corporate Governance and bank Financial Performance, thus null hypothesis one was rejected.

Hypothesis two (H_2) investigated the intervening effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. The findings were Risk Management intervened the relationship between Corporate Governance and Capital Adequacy; Corporate Governance and Asset Quality as well Corporate Governance and Management Efficiency. However, Risk Management did not moderate the relationships between Corporate Governance and Earnings, Corporate Governance and Liquidity as well as Corporate Governance and the Composite Financial Performance (CAMEL ratio). Given the mixed findings between some of the attributes and the composite Financial Performance

measures, on the balance Risk Management did not moderate the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. In general it can therefore be concluded that Risk Management does not significantly moderate the relationship between Corporate Governance and bank Financial Performance. The findings fail to reject the null hypothesis two.

Hypothesis three (H_3) examined the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. The findings of the study were that Firm Characteristics did not moderate the relationships between Corporate Governance and Capital Adequacy; Corporate Governance and Management Capacityas well as Corporate Governance and Liquidity. Firm Characteristics however moderated the relationships between Corporate Governance and Asset Quality as well Corporate Governance and Composite Financial Performance (CAMEL ratio). From the findings, on a balance, Firm characteristics moderate the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. The null hypothesis three is therefore rejected.

Hypothesis four (H_4) assessed the joint effect of Corporate Governance, Risk Management, Firm Characteristics and 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 the 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. The summary results (based on the composite Financial Performance measure and interpreted using the inferential statistics as well as existing body of relevant theoretical/empirical literature, are presented in Table 5.29 below.

Table 5.29: Summary of Research Objectives, Hypotheses Results and Test Results

Research objective	Hypothesis	Test Result
1. To determine the effect of Corporate Governance on Financial Performance of commercial banks in Kenya	1. The Relationship between Corporate Governance and Financial Performance of commercial Banks in Kenya is Not Significant	REJECTED
2. To assess the intervening effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya	2. The Relationship between Corporate Governance and Financial Performance of commercial Banks in Kenya is Not Intervened by Risk Management.	FAILED TO REJECT
3. To investigate the moderating effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of commercial bank in Kenya	3. The Relationship between Corporate Governance and Bank Financial Performance is Not Moderated by Firm Characteristics.	REJECTED
4. To establish the joint effect of Corporate Governance, Risk Management and Firm Characteristics on the financial performances of commercial bank in Kenya	4. The Joint Effect of Corporate Governance, Risk Management and Firm Characteristics on the Financial Performance of commercial Banks in Kenya is Not Significant.	REJECTED

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The objective of the study was to establish the relationship among Corporate Governance, Risk Management, Firm Characteristics and Financial Performance of commercial banks in Kenya. Four hypotheses were tested to achieve the objective. This chapter presents a summary of findings from the hypothesis testing, conclusion from the findings and the contribution of the study to knowledge, policy and practice. The limitations of the study are presented and finally the suggestions for future research recommended.

6.2 Summary

The main 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. To discharge the objective, four categories of the study variables were adopted. The variables were the independent (Corporate Governance), the intervening (Risk Management), the moderating (Firm Characteristics) and the dependent (bank Financial Performance). The independent variable had three attributes namely board size, board composition and board independence, the mediating variable also three attributes namely Credit Risk Management, Liquidity Risk Management and Business Risk Management. The moderating variable had three attributes namely Size, Leverage and Nature of Audit Firm while the dependent variable was based on the CAMEL model with five attributes namely; Capital Adequacy, Asset Quality, Management Capacity,

Earnings and Leverage. Based on the attributes the CAMEL ratio was computed as a geometric mean of the five variables to provide the composite Financial Performance ratio.

The study was guided by the Agency Theory proposes that the separation of ownership from control leads to an agency problem whereby management operates the firm aligning with their own interests, not those of shareholders. Agency relationships in commercial banks create opportunities for managers to spend firm resources maximizing their utilities rather than maximizing the shareholders wealth. The study was based on the positivism research philosophy since there was evidence of formal propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about the relationships among the study variables. The study adopted a longitudinal descriptive design as there were clearly stated hypotheses and investigative questions. The population of the study consisted of all the forty three (43) commercial banks registered in Kenya as at December 31, 2014.

Secondary data was be collected from the annual reports and accounts of the commercial banks as well as the CBK Bank Supervision and Banking Sector Reports, Descriptive measures of the data involved mean, maximum, minimum, standard error of estimate, skewness and kurtosis. The diagnostic tests done on the data included linearity, multivariate normality, multicollinearity, independence and homoscedasticity. The correlation analysis, multiple (hierarchical) regression analysis and the Baron and Kenny

(1986) approach for testing intervention and moderation were used in the hypothesis testing.

The first objective was to determine the effect of Corporate Governance on Financial Performance of commercial banks in Kenya. The study established that a statistically significant relationship exist between Corporate Governance and bank Financial Performance attributes except for Liquidity .The second objective was to assess the effect of Risk Management on the relationship between Corporate Governance and Financial Performance of commercial banks in Kenya. It was established that Risk Management intervened the relationships between Corporate Governance and Capital Adequacy; Corporate Governance and Asset Quality as well Corporate Governance and Management Efficiency. However, Risk Management did not intervene the relationships between Corporate Governance and Earnings, Corporate Governance and Liquidity as well as Corporate Governance and the Composite Financial Performance (CAMEL ratio). Based on the composite measures Risk Management did not intervene the relationship between Corporate Governance and bank Financial Performance.

The third objective was to investigate the effect of Firm Characteristics on the relationship between Corporate Governance and Financial Performance of commercial bank in Kenya. The findings were that Firm Characteristics moderated the relationships between Corporate Governance. The fourth objective was to evaluate the joint effect of Corporate Governance, Risk Management and Firm Characteristics on the bank financial performances of commercial bank in Kenya. The study found that Corporate Governance,

Risk Management, Firm Characteristics jointly significantly predicted bank financial performance.

6.3 Conclusions

The study concludes that Corporate Governance affects bank Financial Performance; Risk Management did not influence the relationship between Corporate Governance and bank Financial; Firm Characteristics had an effect on the relationship between Corporate Governance and bank Financial Performance and finally Corporate Governance, Risk Management and Firm Characteristics jointly affected bank Financial Performance. The study concludes that Corporate Governance significantly influences bank Financial Performance of commercial banks. The implication is that Corporate Governance is a key driver on bank Financial Performance.

The study concludes that Risk Management does not intervenes the relationship between Corporate Governance and bank Financial Performance. Whereas Corporate Governance, in isolation, significantly affect bank Financial Performance, when intervened by Risk Management, there is an insignificant relationship. The implication of this conclusion is that the Risk Management committees of the board may not be very effective in influencing the corporate risk management practices adopted within the commercial banks, however the overall board of directors appear to be effective in ensuring commercial bank maximize shareholders wealth.

The study concludes that Firm Characteristics moderated the relationships between Corporate Governance and Asset Quality as well Corporate Governance and Composite Financial Performance (CAMEL ratio). Firm Characteristics however did not moderate the relationships between Corporate Governance and Capital Adequacy; Corporate Governance and Management Capacity as well as Corporate Governance and Liquidity. The implication is that commercial banks need to seek optimal levels of the individual Firm Characteristics like Size, Leverage and Audit Firms that that ensure effective and efficient planning, investing, financing and operating activities that translate into performance.

Finally 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 board of directors and corporate make optimal decisions, corporate entities tend to perform better.

6.4.1 Contributions of the Study

The findings of this study makes several contributions to knowledge on Corporate Governance, Risk Management, Firm Characteristics and bank Financial Performance. Further it has several implications for board of directors, corporate management, bank regulators and the investors. Finally it makes significant contribution to the Agency theory by showing interaction mechanisms among the variables. The contribution of the study to existing knowledge is discussed in the first section then contribution to policy

and practice articulated in the next section, finally contribution to theory in the last section.

6.4.1 Contribution to Knowledge

The findings of this study adds 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.

A second 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, Tobins 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 measure of earnings/profitability.

A third contribution of the study was to evaluate the intervening effect of Risk Management on the relationship between Corporate Governance and bank Financial Performance. The direct effect of Risk Management on Financial Performance has been evaluated by a number of past studies (Hakim & Neamie, 2001; Ellul & Yerramilli, 2013; Ndung'u, 2013; Adeusi et al., 2014). Other studies have assessed the direct effect of Corporate Governance on Financial Performance (Rechner & Dalton, 1991; Brown & Caylor, 2004; Aluchna, 2009; Beltratti & Stulz, 2012; Erkens et al., 2012, Naushad & Malik, 2015; Love & Rachinsky, 2015). The findings of these previous studies have been not only contradictory but also inconclusive. This study sheds light by evaluating the intervening effect of Risk Management on the relationship between Corporate Governance and financial performance. Given that the Baron and Kenny approach was used in the analysis, both the direct intervening effects were evaluated.

A forth contribution of the study was to establish the moderating effect of Firm Characteristics on the relationship between Corporate Governance and bank Financial Performance. Some previous studies have evaluated the effect of institutional characteristics on Financial Performance (Boateng, Huang & Kufuor, 2015; Phuong et al., 2015; Olweny & Shipho, 2011). Others have evaluated the moderating effect of Firm Characteristics on the relationship between Corporate Governance and firm performance (Klein et al., 2005; Mang'unyi, 2011). The findings were however contradictory and inconclusive. This study provides additional contribution by assessing the moderating effect of Firm Characteristics on different attributes of bank Financial Performance as well as the composite measure (CAMEL ratio). Since the findings based on some of the

attributes and composite measure were contradictory, it may help resolve the findings of the previous studies.

Finally the study has provided evidence to resolve the contradictory findings on the previous studies done on the relationships between Corporate Governance and Financial Performance. The relationship may not be direct but either intervened/moderated by Risk Management depending on the attributes used in the study. These findings can help resolve the contradictory findings from previous studies on the relationship between Corporate Governance and Firm Performance. Whereas some studies found a positive relationship (Rechner & Dalton, 1991; Brown & Caylor, 2004; Naushad & Malik; 2015) others found a negative relationship (Beltratti & Stulz, 2012; Erkens et al., 2012) yet another study found no significant relationship (Aluchna, 2009). The current study also finds a statistically significant relationship between Corporate Governance and all attributes of bank Financial Performance (except Liquidity). The current study finds that the effect of Corporate Governance on bank Financial Performance can be understood by evaluating the intervening and moderating effects of Risk Management and Firm Characteristics respectively.

6.4.2 Contributions to Policy and Practice

The findings of this study has several contributions to board of directors, corporate managers, regulators, depositors and investors in general. The effect of Corporate Governance on bank Financial Performance as found in the current study has implication to board of directors. The fact that a relationship exist between Corporate Governance

and bank Financial Performance shows that board oversight activities directly impact on bank Financial Performance. There is the need for corporate Governance principles/mechanisms to be improved to enhance bank Financial Performance. Bank boards that are properly constituted translates into better bottom line, Financial Performance. Effective Corporate Governance, through board committees, and efficient corporate management aligned the interest of the agents with those of the principal (shareholders).

The study assist corporate management to appreciate the linkages between board activities, management function and bank Financial Performance. The fact that risk management does not intervene the relationship between Corporate Governance and bank Financial Performance could be an indicator that Risk Management committees of the board do not have a significant impact of corporate Risk Management. There could therefore be need to re-evaluate the composition, size and independence of the Risk Management committees to align them with corporate risk management function.

Regulators like Central Bank of Kenya and Capital Market Authority (CMA) may use the findings of this study when undertaking their supervisory role and issuance of prudential guidelines on Corporate Governance. Prudential Corporate Governance guidelines and bank supervision by the regulators should the tightened to ensure effective Risk Management of banks and improved Financial Performance. Given the cases of reported malpractices in banking institutions, the regulators should tighten the regulatory framework to align all bank activities with better Financial Performance.

The findings of this study will be beneficial to investors in bank debt and equity instruments who bear risks when banks fail to perform as per contractual obligations. Depositors in banks face inconveniences and losses whenever weak Corporate Governance and poor Risk Management leads to losses, statutory management and finally bankruptcy. This study shows the linkage between Corporate Governance mechanisms, Risk Management and proper Firm Characteristics translates to better bank Financial Performance that benefits all stakeholders.

6.4.3 Contribution to Theory

The current study was guided by the positivism research philosophy intended to empirically test hypotheses to either validate or falsify existing theories in the discipline. The findings of the study makes contribution to theory by revealing the linkages among the variables. Agency theory (Jensen and Mecling, 1976) used to understand the relationships between agents and principals. The agent (in this case directors and Managers) represents the principal (in this case shareholders) in a particular business transaction (oversight and Management) and is expected to represent the best interests of the principal (enhancing firm value through financial performance) without regard to personal interests.

The Agency problem occurs when the interests of a principal and agent (Corporate Governance and Risk Management) are in conflict. Banks must seek ways minimizing situations of conflict between Corporate Governance and Risk Management as well as Risk Management and Bank Financial Performance through solid corporate policy. Since Risk Management does not intervene the relationship between Corporate Governance and

Bank Financial Performance, the study provides support to agency problems among commercial banks in Kenya. As a theoretical contribution, incentives through regulation and monitoring, should be provided to managers' redirect their behaviour (Risk Management) to realign these interests with the principal's. Bank manager must have incentives encouraging them to act in unison with the principal's interests. Further Corporate Governance mechanisms in terms of board composition, board size and board independence of commercial banks are aligned to shareholders interests.

6.5 Limitations of the Study

Precautions were taken to deal with limitations cited here below, as with every research it is never possible to eliminate them. 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.

The study adopted a descriptive research design since it had clearly stated hypotheses or investigative questions. The design however has the disadvantage that it cannot establish causality among variables. Thus while the study could establish the direction and nature of relationships among variables, it could not establish the causality effects among the variables.

The study used three attributes of Corporate Governance and three attributes of Risk Management due to sensitivity/confidentiality of information. The findings of this study are limited to the attributes used in the study. There are other attributes of the variables that could potentially have an influence on the relationships tested, but could not be

availed by the researcher due to sensitivity/confidentiality of such information by commercial banks.

6.6 Suggestions for Future 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 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 both qualitative and quantitative measures 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 in 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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APPENDICES

Appendix I: Licensed Commercial Banks in Kenya as at 31st December 2014

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank Kenya
6. CFC Stanbic Holdings
7. Chase Bank Kenya
8. Citibank
9. Commercial Bank of Africa
10. Consolidated Bank of Kenya
11. Cooperative Bank of Kenya
12. Credit Bank
13. Development Bank of Kenya
14. Diamond Trust Bank
15. Dubai Bank Kenya
16. Ecobank Kenya
17. Equatorial Commercial Bank
18. Equity Bank
19. Family Bank
20. Fidelity Commercial Bank Limited
21. First Community Bank
22. Giro Commercial Bank
23. Guaranty Trust Bank Kenya
24. Guardian Bank
25. Gulf African Bank
26. Habib Bank
27. Habib Bank AG Zurich
28. Housing Finance Company of Kenya
29. I&M Bank
30. Imperial Bank Kenya
31. Jamii Bora Bank
32. Kenya Commercial Bank
33. K-Rep Bank
34. Middle East Bank Kenya
35. National Bank of Kenya
36. NIC Bank
37. Oriental Commercial Bank
38. Paramount Universal Bank
39. Prime Bank (Kenya)
40. Standard Chartered Kenya
41. Trans National Bank Kenya
42. United Bank for Africa
43. Victoria Commercial Bank

Source: Central Bank of Kenya