CORPORATE GOVERNANCE, FINANCIAL RISK MANAGEMENT, FIRM CHARACTERISTICS AND PERFORMANCE OF INSURANCE FIRMS IN KENYA

ISAAC KIBET KIPTOO

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DECLARATION

This thesis is my original work and has not been presented elsewhere for a degree or any other award.

Signature: _____   Date: _____

Isaac Kibet Kiptoo

Department of Business Studies

D860/198/2017

This thesis has been submitted for examination with our approval as the University Supervisors

Signature: _____   Date: _____

Dr. Samuel Nduati Kariuki

Department of Business Studies

University of Embu

Signature: _____   Date: _____

Dr. Kennedy Nyabuto Ocharo

Department of Economics

University of Embu

DEDICATION

I dedicate this research to my wife, parents, brothers and sisters for their invaluable support, encouragement and prayers

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ABBREVIATIONS AND ACRONYMS

AKI	Association of Kenya Insures
AUDC	Audit committee
BT	Business Telecommunication
CEO	Chief Executive Officer
CG	Corporate Governance
EIOPA	European Insurance and Occupational Pension Authority
ERM	Enterprise Risk Management
FGLS	Feasible Generalized Least Squares
FP	Firm Performance
FSCA	Financial Sector Conduct Authority
GCC	Gulf Cooperation Council
GLS	Generalized Least Squares
IRA	Insurance Regulatory Authority
NACOSTI	National Commission for Science, Technology and Innovation
NAIC	National Association of Insurance Commissioners
OECD	Organization for Economic Co-operation and Development
PA	Prudential Authority
PLS	Partial Least Squares
PSE	Pakistan Stock Exchange
ROA	Return on Assets
ROE	Return on Equity
SB	Shariah Board
SMEs	Small and Medium-Sized Enterprises
UK	United Kingdom
USA	United States of America
USD	United States Dollar

DEFINITION OF TERMS

Corporate Governance

The relationship that exist between an organization's management, board of directors, shareholders and other stakeholders and determines the structure used to define a firm's objectives, how to achieve them and how the results will be monitored.

Financial Risk Management

Financial risk management is a systematic process of identifying, analyzing, assessing, monitoring and controlling financial risks in order to protect a firm from adverse effects and create value.

Financial Risks

Financial risks are liquidity risks, market risks, operational risks and credit risk.

Firm Characteristics

Features unique to a firm which influence variation in the strategies and performance between one firm and another. They include size and age of the firm, leverage and capital intensity.

Performance of insurance firms

Achievement of a certain task expressed in terms of net premiums earned, underwriting profits or losses, returns on assets and return on equity.

Risk

Anything that may cause hindrances to attainment of certain objectives and create financial loss.

ABSTRACT

The insurance industry plays a pivotal role in providing innovative solutions to the significant social, economic and environmental challenges the country faces. Despite the contribution of the sector, insurance firms are faced with various financial risks. The sector has also been reporting losses while some firms have been put under statutory management due to inability to honor customer claims. This indicates that the firms are not properly managed. This study investigated the relationship between corporate governance, financial risk management, firm characteristics and performance of insurance firms in Kenya. The study was anchored on six theories namely: stewardship theory, agency theory, resource-based theory, credit risk theory, modern portfolio theory and Keynesian liquidity preference theory. The study adopted positivist research philosophy and causal research design. The target population was 55 insurance firms registered by IRA to operate in Kenya as at December, 2018. The study employed secondary data obtained from the audited financial statements of the insurance firms covering a six-year period from the year 2013 to 2018. The data was collected from 51 insurance firms and regression analysis was used to evaluate the relationship between the variables. The findings indicated that corporate governance significantly affect the financial performance of insurance firms in Kenya. Specifically, board composition negatively and significantly affects financial performance. The results implied that increasing the number of executive directors in the board hinders the performance of insurance firms. Similarly, Board size negatively and significantly affects financial performance implying that bigger board sizes are detrimental to insurance firm performance. Board diversity positively and significantly affects financial performance. The results implied that boards consisting of more professionally qualified directors enhance firm performance. Similarly, board independence positively and significantly affects financial performance implying that allowing company directors to be independent promotes better firm performance. The results also indicated that financial risk management significantly affects firm performance. Specifically, credit risk negatively and significantly affects financial performance while market risk, operational risk and liquidity risk positively and significantly affects financial performance. The findings also indicated that firm characteristics significantly affect performance. Specifically, firm size positively and significantly affects performance while firm age negatively and significantly affects performance. The results imply that young and large insurance firms perform better than small and old insurance firms. The findings also indicated that financial risk management intervenes the relationship between corporate governance and performance of insurance firms. Similarly, firm characteristics moderate the relationship between corporate governance and performance. The study concluded that corporate governance is critical as it ensures better financial performance. The study also concluded that firm characteristics enhances corporate governance which in turn boosts financial performance. The study recommends that directors should put in place proper corporate governance structures and risk management strategies to boost financial performance. The Insurance Regulatory Authority should also ensure insurance firms adopt appropriate governance structures and risk management strategies in order to enhance performance.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The insurance industry plays a crucial role in achieving sustainable growth of an economy by facilitating financial security, capital formation and funding development initiatives as well as promoting trade and commerce (Insurance Regulatory Authority (IRA), 2017). In spite of the vital role it plays, the insurance sector has been recording poor performance globally. In the USA, insurers saw underwriting losses more than double to USD 5.1 billion, for the first half of the year 2017 compared with the year 2016. Life and health sector aggregate net premiums decreased by six percent to USD 600 billion in 2016, compared to USD 638 billion in 2015. Net income for the life and health sector decreased to USD 39 billion from USD 40 billion in 2015, largely due to an increase in net realized capital losses. The property and casualty sector reported net income of USD 44 billion in 2015, lower than the USD 58 billion reported in 2015 and the USD 65 billion reported in 2014. Underwriting losses of USD 2 billion as compared to underwriting gains of USD 11 billion in 2015 primarily caused the overall decline in net income (Federal Insurance Office, 2017).

In Europe there has been a negative effect of the continued low interest rate environment on the insurance industry which has led to poor investment returns. In the year 2016, total premiums in Europe declined by 0.4% after three years of relative growth of an average of 3.3% per year. The average insurance penetration in Europe amounted to 7.19% in 2016, a decrease of 0.6 percentage points compared with the year 2015. The decrease in average penetration was due to the decline in life premiums, where the penetration rate declined to 4.21% in 2016 from 4.49% the year before. A major reason for this reduction was the protracted low interest-rate environment in Europe and the resulting reduced attractiveness of guaranteed products (Deloitte, 2019). In Africa, volatility of returns and underwriting capacity are dominant challenges across all countries. Insurance penetration is also low averaging 3% compared to world average of 6%. Africa's life insurance premiums have stagnated over the years. In the year 2017, the life premiums grew marginally by 0.3% to USD 44.9. The non- life premiums in Africa also grew marginally by 1% to USD 21.9 billion in 2017 (Swiss-Re, 2017).

In Kenya, the insurance sector was ranked high in premium growth globally and is leading in Sub-Saharan Africa. However, the expense ratios for Kenyan insurance firms were high whereas solvency ratios were approaching dangerous lows. In addition, the insurance firms were worse off in terms of combined ratio, indicating the poor profitability of the core insurance business in Kenya (Cyton, 2017). The heightened insurance regulations and modest topline growth were also putting pressure on insurance profitability (Deloitte, 2019). The firms have also witnessed an increase in merger and acquisition activities through buyouts and consolidation as new companies enter the market (Association of Kenya Insurers (AKI), 2017). Insurance firms were therefore facing financial risks which need to be managed.

1.1.1 Corporate Governance

Corporate governance refers to the structure adopted in controlling and directing organizations (Jiang, Feng & Zhang, 2012). It entails the obligations of an organization's board and the association between the directors and the shareholders. Directors perform a crucial role in an organization by monitoring performance, providing resources, and offering advisory services (Ntim, 2015). Corporate governance is a method of management that minimizes agency conflicts, increases shareholders' wealth, boosts investors' confidence, firm goodwill, and investment opportunities (Ngatno, Apriatni & Youlianto, 2021). Many countries have formulated policies and regulations aimed at promoting proper governance. The United States government for instance introduced the Sarbanes-Oxley Act in the year 2002 with the objective of mitigating conflict of interest by those entrusted to manage a firm (Act, 2002). In the United Kingdom, a corporate governance code was established in the year 2003 (Council, 2003). The Republic of South Africa reviewed the King code of governance in the year 2009 to resolve governance issues (King, 2009).

In Kenya, the insurance regulatory authority (IRA), in recognition of the fact that corporate governance is key for the stability and development of the insurance industry, developed corporate governance guidelines in the year 2011 to promote prudent management of insurers in Kenya (IRA, 2017). The efforts made by the various countries and regulatory bodies to ensure institutions put in place good corporate governance practices have however not resolved the cases of corporate malpractices and failures.

Some of the firms found engaged in scandals in the recent past include Colonial Bank and Wells Fargo Bank in the USA in the year 2018, Carillion in the UK in 2018, Petrobas in Brazil in 2017, BT in Italy in 2017, Alberta Motor Association in Canada in 2016 and Toshiba in Japan in 2015 (Bhaskar & Flower, 2019). In Kenya, there have been cases of malpractices by insurance firms and some of the firms for instance Blue Shield Insurance, United Insurance, Standard Assurance, and Concord Insurance were put under statutory management (IRA, 2017).

The continued scandals and corporate failures motivated studies to examine the effectiveness of the various corporate governance structures (Ntim, 2015). The results of the studies are however inconclusive and give mixed results. Some of the studies indicate a positive effect of some of the corporate governance indicators like board size, composition, diversity, and board independence on performance (Chen, Cheung, Stouraitis & Wong, 2015; Jackling & Johl, 2019; Maqbool, Ali & Numan, 2019; Riyadh, Sukoharsono & Alfaiza, 2019).

In contrast, findings of other studies indicated a negative relationship between some of the corporate governance indicators like board size, composition, diversity, and board independence on performance (Conyon & Peck, 1998; Mak & Kusnadi, 2015; Guest, 2019; O'Conell & Crammer, 2010; Afrifa & Tauringana, 2015; Malik & Makhdoom, 2016) while others have found that there is no relationship between corporate governance and performance (Bhagat & Black, 2012, Ghazali, 2010; Ferrer & Banderlipe, 2012; Haji, 2014). Most of these studies have focused on developed nations whose findings may not be generalized to other nations because the cultures and corporate governance structures differ (Tricker & Tricker, 2015; Arora & Sharma, 2016). This begs the question of which governance structure is ideal and for which type of organization.

The corporate governance structures in Kenya are different than other nations necessitating a replication of the studies that are already documented. This study sought to address these gaps by investigating the effect of corporate governance on the financial performance of insurance firms in Kenya which is a developing nation. Specifically, the study investigated the effect of board independence, board size, board diversity, and board composition on the performance of insurance firms in Kenya.

1.1.2 Financial Risk Management

In an ever dynamic and uncertain world, insurance firms continuously face risks that emerge in all fields conceivable. It is inevitable for an insurance firm to triumph unless proper risk mitigation measures are put in place. Risky decisions are necessary for every institution and a firm may not realize its objectives without taking risks (Fama & MacBeth, 1973; Mushafiq et al., 2021). Risk is the possibility that an event will occur and adversely affect the achievement of objectives, creates financial loss, and arises from uncertainties of given situations plus certainties of exposing oneself to such situations (Shafiq & Nasr, 2010).

Financial risk management is a systematic process of identifying, analyzing, assessing, monitoring and controlling financial risks in order to protect a firm from adverse effects and create value (Ekinci, 2016). The risk from the financial services sector like the insurance firms has contributed to large-scale bankruptcies, institution failures, government intervention, and rapid consolidation (Quon, Zéghal & Maingot, 2012). The major risks facing the insurance firms are credit, liquidity, market, and operational risks (OECD, 2014). Liquidity risk is the risk that a business will have insufficient funds to meet its financial commitments in a timely manner (Khidmat & Rehman, 2014). Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Operational risk is the risk of direct or indirect loss due to inadequate or failed internal processes, people, and systems, or from external events. Credit risk arises when counterparties do not pay their ongoing obligations at all or within the stipulated time leading to non performing receivables (IRA, 2017).

The persistence of risks and their effect on the insurance industry prompted the creation of regulatory bodies to oversee the performance of insurance companies, come up with policies and guidelines that assist in mitigating the risks. In the USA the National Association of Insurance Commissioners (NAIC) was established to offer standard-setting and regulatory support in all the states. In Europe, the European Insurance and Occupational Pension Authority (EIOPA) was mandated to promote a sound regulatory framework and supervision of the insurance industry. In South Africa, the insurance sector was supervised and regulated jointly by Prudential Authority (PA) and Financial Sector Conduct Authority (FSCA) (Swiss-Re, 2017).

In Kenya, the Insurance Regulatory Authority (IRA) was established to develop, supervise and regulate the insurance sector. The efforts made by the various regulatory bodies to ensure insurance firms put in place proper risk management practices have however not fully mitigated cases of financial distress or failures in insurance firms. Some of the firms which have had financial distress in the recent past include AIG, Conseco, Executive Life Insurance Company, and Penn Treaty Network America Insurance among others in the USA. In Europe, some of the firms that have collapsed include Horizon Insurance, Enterprise Insurance, Alpha Insurance, Qudos Insurance, and Gable Insurance (Bhaskar & Flower, 2019).

There were cases of customer complaints due to the inability of insurance firms in Kenya to honor customer claims. Some insurance firms were also put under statutory management for instance United Insurance, Blue Shield Insurance, Concord Insurance, and Standard Assurance (IRA, 2017). The continued failures of insurance firms have motivated studies to examine the effectiveness of the various risk management guidelines and risk management practices adopted by Insurance firms. The results of the studies are however inconclusive and give mixed results.

Extant literature reveals that most of the studies focused on enterprise risk management practices which include risk identification, risk analysis, risk monitoring, and risk management committee (Santomero & Babbel, 1997; Wang & Faber, 2006; McShane et al., 2011; Akotey et al., 2013; Hoyt & Liebenberg, 2011; Eckles et al., 2014; Jabbour & Abdel-Kader, 2016, Kokobe & Gamechu, 2016, Nguyen & Vo, 2020) while minimal efforts have been made to analyze the effect of the various risks on the financial performance of insurance firms. The studies also did not adequately reveal the strategy adopted in managing the specific risks and the effect of those risks on the performance of insurance firms. This study attempted to address this gap by examining the intervening effect of financial risk management on the relationship between corporate governance and financial performance of insurance firms in Kenya. Specifically, the study investigated the intervening effect of credit risk, liquidity risk, market risk, and operational risk on the relationship between corporate governance and performance of insurance firms in Kenya.

1.1.3 Firm Characteristics

Firm characteristics are features unique to a firm which influence variation in the strategies and performance between one firm and another. The characteristics can be categorized into structural, market and capital related. Structural characteristics include size and age of the firm. Market characteristics include the type of industry the firm operates in while capital related characteristics include leverage (Demeke, 2016).

The Size of a firm can influence its performance in that large firms can exploit economies of scale and thus being more efficient compared to small firms. Age on the other hand can influence the performance given that older firms are more experienced, have enjoyed the benefits of learning, are not prone to the liabilities of newness, and can therefore enjoy superior performance (Ahmed, Ahmed & Ahmed, 2010). In terms of leverage, firms always utilize debt in addition to equity because the cost of debt is lower than the cost of equity. However, firms cannot operate on debts alone since this will subsequently increase the risk of bankruptcy due to inability to meet their fixed obligations. A firm should therefore establish an optimal amount of debt and equity that will be utilized in order to minimize risk and increase performance (Cheluget, 2014).

1.1.4 Performance of Insurance Firms

Performance is the achievement of a certain task measured against preset standards. In a financial institution like an insurance firm, performance refers to the degree to which financial objectives have been accomplished and is an important aspect of financial risk management. This is the process of measuring the results of a firm's policies and operations in monetary terms. It aids in evaluating a firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry (Mwangi & Iraya, 2014). High performance indicates management efficiency and effectiveness in employing company's resources and contributes to the entire economy. The performance of insurance firms can be expressed in terms of returns on assets and return on equity (Mwangi & Murigu, 2015). Return on assets (ROA) measures the ability of the management of an insurance firm to generate income by employing its assets (Wen, 2010).

An increasing trend of ROA indicates that the profitability of the firm is improving. Return on equity (ROE) measures the amount of profit a firm generated relative to the amount of shareholders' equity invested. Thus, a higher ROE indicates that management is very effective in employing shareholders' capital (Krawish, 2011).

1.1.5 Corporate Governance, Financial Risk Management, Firm Characteristics and Performance of Insurance Firms

The association between corporate governance and financial risk management is complementary in that through exercising good governance practices financial risks can be mitigated and thus better performance (Ochieng, 2016). In recognition of this, IRA guidelines on corporate governance emphasizes that robust corporate governance requires an insurance firm to have a risk management framework which meets three goals. First, identify systemically all the risks facing the organization. Secondly, develop risk mitigation strategies and finally manage the risks in an ongoing manner. The Authority therefore requires an insurer to have, as part of its corporate governance framework, effective systems of risk management (IRA, 2013).

Effective risk management activities create value and should be an integral part of the decision-making process. The objective of risk management is to maximize firm value by finding out which risks a business faces, finding ways to quantify and measure those risks, create methods to monitor the risks and finally come up with treatment methods to mitigate or eliminate the risks. Organizations which use risk management practices have high financial performance and competitive edge in the market (Saleem & Abideen, 2011). Firm characteristics such as leverage also affect the performance of a firm in that the more highly geared a firm is, the greater its vulnerability to any downturn in cash flows. This may cause financial crisis if it coincides with a time for repayment of debt. Highly geared firms have less capacity to absorb losses or obtain rollover funds (Cheluget, 2014). In relation to firm size, the extent to which large firms and smaller firms engage in risk management would not be the same (Yegon, 2014). Firms with more assets are able to give more security in terms of optimal insurance covers, operate with fewer constraints due to more capital and achieve economies of scale. Furthermore, firms that have been in operation for some time acquire skills and capabilities over time and are expected to operate efficiently than firms that are new in the industry (Angima, Mwangi, Kaijage & Ogutu 2017).

1.1.6 Insurance Firms in Kenya

Insurance firms in Kenya is regulated by the insurance regulatory authority (IRA). The number of registered companies as at 2018 were 55. The industry contributes to the economy through savings mobilization and investments in government securities, deposits, capital markets and the real estate sector. In 2016, Nairobi County accounted for 72.8% of the total industry premiums which was a drop from the 80.4% reported in 2015. Mombasa County reported 5.14%, Kiambu 2.4%, Nakuru 2.28% and other Counties reported 17.42% (IRA, 2018). The industry witnessed mergers and acquisition as a result of legal requirement that no single individual should own more than 25% of the share capital. The regulatory environment has also set pace for new entrants due to increasing capital requirements (AKI, 2018).

Despite the contribution made by the insurance sector to the Kenyan economy, the penetration of insurance in Kenya is 2.73 percent of the gross domestic product which is low in comparison with the global average of 6.28 percent (Swiss-Re, 2016). The reputation of the sector has also been eroded over the years due to malpractices. Some of the insurance firms have also been put under statutory management due to the inability to honor customer claims (AKI, 2018). The continued cases of malpractices and failure of insurance firms in Kenya made the insurance regulatory authority develop and introduce corporate governance and risk management guidelines in the year 2011. The guidelines were aimed at promoting the corporate governance of the insurers and mitigating risks facing the sector. The guidelines proposed the directors' responsibilities and governance structure (IRA, 2018).

The corporate governance guidelines recommended that the board should be composed of at least five members, a third of which shall be independent directors, some board members should be non-executive and some should be professionals. The risk management guideline on the other hand identified credit risks, liquidity risk, market risk, and operational risk as some of the various risks that need to be managed by an insurance firm (AKI, 2018). Despite the introduction of the corporate and risk management guidelines, cases of malpractices and failures persist in the insurance sector. The IRA received cases against insurance companies in Kenya each year related to the delayed settlement of claims, underpayment of claims, declined claims, and miss-selling of insurance products.

Some of the insurance firms have also been reporting losses, some have collapsed while others have been put under statutory management due to their inability to honor customer claims (AKI, 2018). This raised the question of whether the insurance firms have implemented the provisions of the IRA code of governance and risk management and what effect these provisions have had on the performance of the insurance firms. This study thus sought to determine the corporate governance and risk management strategies adopted by the various insurance firms in Kenya and how these structures have affected the performance of these firms.

1.2 Statement of the Problem

The insurance industry plays a pivotal role in providing innovative solutions to the significant social, economic and environmental challenges the country faces. However, the insurance sector has been facing many challenges which include poor governance leading to collapse of some firms, operational weaknesses, high claims leading to losses, delays in settlement of claims, delayed collection of premiums, lack of liquidity, and low penetration of insurance services. Insurance regulatory authority identified industry malpractices and delayed claim settlement as a major hindrance to uptake of insurance (IRA, 2016).

The sector has been reporting losses for instance, in the year 2016, the underwriting loss for the sector was KES 2.1 Million, KES 1.02 Million in the year 2017, KES 2.5 Million in the year 2018, KES 3.1 Million in the year 2019 and KES 1.1 million in 2020. The return on assets has also been decreasing for instance in the year 2016 the ROA was 3.6 percent which decreased to 3.2 percent in the year 2017, 2.3 percent in 2018, 2.3 percent in 2019 and 1.75 in 2020. In addition, some of the insurance firms which include Blue Shield Insurance, United Insurance, Standard Assurance and Concord Insurance were put under statutory management due to their inability to honor customer claims (IRA, 2020). This indicated that the firms were not properly managed and the sector was faced with various risks. The studies on corporate governance are inconclusive and conflicting, with some of the studies indicating that there was a positive relationship between some of the corporate governance indicators like board size, board composition, CEO duality and performance (Yasser, Entebang & Mansor 2015; Najjar, 2012; Khan et al., 2019; Riyadh et al., 2013) while others have indicated that there is a negative relationship (Mohan & Chandramohan, 2018; Wepukhulu, 2016).

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Some studies (Demeke, 2016; Manini & Abdillahi, 2015) have revealed that firm characteristics like age of the firm have a positive effect on financial performance while others (Nandi & Ghosh, 2013) have indicated that the relationship between corporate governance structures and performance is negative. Most of the studies (Halim, Mustika, Sari, Anugerah & Mohd-Sanusi, 2017; Salaudeen, Atoyebi & Oyegbile 2018; Aebi, Sabato & Schmid, 2012) have focused on risk management committee rather than on the effect of the specific financial risks. The present study was therefore an attempt to fill these gaps by investigating the relationship among corporate governance, financial risk management, firm characteristics and performance of insurance firms in Kenya.

1.3 Objectives of the Study

The study was guided by both the general and specific objectives.

1.3.1 General Objective

The general objective of this study was to establish the relationship between corporate governance, financial risk management, firm characteristics and performance of insurance firms in Kenya.

1.3.2 Specific Objectives

The specific objectives were:

1. To establish the effect of corporate governance on performance of insurance firms in Kenya.
2. To evaluate the intervening effect of financial risk management on the relationship between corporate governance and performance of insurance firms in Kenya.
3. To determine the moderating effect of firm characteristics on the relationship between corporate governance and performance of insurance firms in Kenya.
4. To assess the joint effect of corporate governance, financial risk management and firm characteristics on performance of insurance firms in Kenya.

1.4 Research Hypotheses

The hypotheses of the study were:

H_{01}: Corporate governance has no significant effect on the performance of insurance firms in Kenya.

H_{02}: Financial risk management has no significant intervening effect on the relationship between corporate governance and performance of insurance firms in Kenya.

H_{03}: Firm characteristics have no significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya.

H_{04}: Corporate governance, financial risk management and firm characteristics have no significant joint effect on the performance of insurance firms in Kenya.

1.5 Scope of the Study

This study focused on the relationship between corporate governance, financial risk management, firm characteristics and performance of 55 insurance firms in Kenya licensed by IRA as at December, 2018. The corporate governance indicators were board composition, board independence, board size and board diversity. Financial risk management indicators were liquidity risk, market risk, operational risk and credit risk. The firm characteristics on the other hand were size of the firm, leverage and age of the firm. The performance measures adopted were return on assets (ROA). Secondary data were obtained from the audited financial statements of the firms for a period of six years (2013-2018).

1.6 Significance of the Study

The findings of this study will benefit various stakeholders of the insurance sector. The study findings will enable managers of insurance firms and policy makers to understand the relationship between corporate governance, financial risk management, firm characteristics and performance of insurance firms in Kenya.

The findings will enable managers to establish proper corporate structures, proper risk management policies and utilize the features that exist in their firms to gain a competitive edge to maximize on the shareholders' and policyholders' interests. The study will also enable regulators to come up with policies that enhance good corporate practices and sustainability of the insurance sector. The study also contributes to the existing literature on corporate governance, risk management, firm characteristics and performance and open up areas for further research.

1.7 Limitations of the Study

The study used secondary data that was obtained from audited financial statements of the firms submitted to IRA and those maintained in the head offices of the insurance firms. However, some firms did not reveal some of the information required in the audited financial statements. The head of finance for the respective institutions was thus requested to provide the information. Some of the heads of finance were hesitant to provide the information but they were assured that the information was for academic purposes and confidentiality was maintained. The research permit from NACOSTI also provided evidence and assurance that the data was for academic purposes thus access to the data was granted.

1.8 Organization of the Study

This study is organized into five chapters as follows: the first chapter outlines the background of the study, statement of the problem, research objectives, research hypotheses, scope and limitation of the study. The second chapter provides a review of both the theoretical and empirical literature, conceptual framework and the research gaps. The third chapter outlines the research design and the methodology used to test the hypotheses. The empirical findings and discussions are presented in chapter four. Lastly, the summary of the findings, conclusions, recommendations and the suggested areas for further research are presented in chapter five.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed literature on corporate governance, financial risk management, firm characteristics and performance of a firm. The sections were organized to cover the theoretical review, empirical literature, conceptual framework, summary of literature and research gaps.

2.2 Theoretical Review

There are several theories that explain the relationship between corporate governance, financial risk management, firm characteristics and performance. This study adopted six theories namely: stewardship theory, agency theory, resource-based theory, credit risk theory, modern portfolio theory and Keynesian liquidity preference theory.

2.2.1   Stewardship Theory

Stewardship theory was proposed by Donaldson (1990) and asserts that directors of a firm act as stewards and do not focus on fostering their interests, but committed to ensuring the interest of the company is achieved. Besides, the directors will discharge their roles in a way that ensures collectivism or achievement of organizational utility instead of individual benefits (Donaldson & Davis, 1991). As the directors work towards achieving organizational objectives, their personal needs are also fulfilled (Kluvers & Tippett, 2011). The directors act as honest stewards of the firm and are committed to the collective good of the stakeholders in the firm regardless of the directors' interests (Donaldson & Davis, 1991). However, the stewards' performance depends on whether the organizational structure facilitates proper action (Davis, Schoorman & Donaldson, 1997).

This theory underscores the fact that managers or executives of a firm act as stewards and thus they should be part of the board of directors of a company. Extant literature supports this view and advocates that a proportion of the board should be executive directors (Coles, Daniel & Naveen, 2008; Mashayekhi & Bazaz, 2008; Pamburai et al., 2015). However, it is not clear what proportion of executive directors can enhance performance.

This study adopts the stewardship theory to investigate how the boards of various insurance firms are composed in terms of executive and non-executive directors and investigates the effect it has on the financial performance of the firms.

2.2.2 Agency Theory

The theory was proposed by Jensen and Meckling, (1976) and asserts that if a firm is managed by persons who are not the shareholders, then there is a possibility that the managers may not work for the owners' benefit. Agency relationship occurs when the shareholder(s) (principal) engages another individual(s) (the agent) to undertake some assignments on their behalf. If the principal and the agent are utility maximizers, the agent may not perform in the best interests of the shareholders (principal) at all times (Jensen & Meckling, 1976). There are different stakeholders in an organization who have different risk preference and objectives. The principal invests their funds in a firm and accepts risks to attain financial benefits. However, managers (agents) are risk-averse and focus on maximizing their benefits (Berle & Means, 1932). Therefore, the risk tolerance of the agent and the principal are not aligned causing agency conflict in an organization.

The agency theory suggests that non-executive directors should be included in the board to monitor the work of managers. The board should also be composed in a way that will guarantee independence in decision making for instance inclusion of independent directors to mitigate conflict of interest. Studies by Anderson et al. (2004) and Malik and Makhdoom (2016) affirmed that a board with independent directors positively affects the performance of a firm. This study adopts this theory to investigate the effect of board independence on the financial performance of insurance firms in Kenya.

2.2.3 Resource Dependency Theory

Resource based theory was proposed by Wernerfelt (1984) and asserts that variations in performance between firms from the same industry can be explained by the differences in their endowments of resources. Conventionally, organizations with resources that are rare, valuable, difficult to imitate and non-substitutable may achieve and maintain over time an advantageous position with respect to their competitors (Barney, 1995).

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Resources are assets, either tangible for instance machinery or intangible like brands that a firm uses to conceive of and implement their strategies (Barney & Arikan, 2001). To create competitive advantage, management of a firm should integrate and combine these resources into groups forming capabilities (Hitt, Ireland & Hoskisson, 1999; Hoskisson & Harrison, 2021). The resource-based theory focused managerial attention on the firm's internal resources in an effort to identify those assets, capabilities and competencies with the potential to deliver superior competitive advantages. As per resource-based view, strategists select the strategy or competitive position that best exploits the internal resources and capabilities relative to external opportunities. The theory was relevant in this study by explaining the influence of firm characteristics on the performance of an organization. This study thus investigated the moderating effect of firm characteristics on the relationship between corporate governance and performance of insurance firms in Kenya.

The resource dependency theory is also relevant in this study by explaining the role played by corporate governance in improving performance of a firm. The theory argues that a board of a firm is critical because it provides resources to the managers who in turn utilize them to achieve organizational objectives (Hillman & Dalziel, 2003). The theory recommends the board to provide support to the executive for instance financial, human, and intangible support. The board members who have the expertise and professional training should offer training and mentoring services to the executives to enhance their skills and improve performance. The board members link the organization with their network and attract valuable resources into the firm. The theory also recommends that the executives should be allowed to make most of the firms' decisions and some be presented to the board for approval (Barney, 1995). The resource-dependency theory thus advocates for the inclusion of professionals in a board of a firm and emphasizes that directors drawn from outside the firm are critical since they bring along best practices applied elsewhere and linkages (Hoskisson & Harrison, 2021). The theory also advocated for an increase in board size to accommodate more directors with diverse knowledge and expertise. A firm should thus incorporate in their boards' non-executive directors and professionals with diverse experience and skills. This view is supported by Cheng, Chan, and Leung (2010), Ujunwa (2012), Francis, Hasan, and Wu (2015), and Mori (2014).

This study investigated the effect of board diversity and board size on the performance of insurance firms in Kenya. The resource dependency theory also argues that variations in performance between firms from the same industry can be explained by the differences in their endowments of resources (Wernerfelt, 1984). Resources are assets, either tangible for instance, buildings or intangible like brands which do not physically exist, yet they have a monetary value since they represent potential revenue to a firm. To create a competitive advantage, the management of a firm should integrate and combine these resources into groups forming capabilities (Hoskisson et al., 1999; Hoskisson, & Harrison, 2021). The resource-based theory focused managerial attention on the firm's internal resources to identify those assets, capabilities, and competencies with the potential to deliver superior competitive advantages. As per resource-based view, strategists select the strategy or competitive position that best exploits the internal resources and capabilities relative to external opportunities. The theory was relevant to this study by explaining the influence of proper management of firms' resources (firm characteristics) to attain a competitive edge and better performance. This study investigated the effect of operation risk on performance.

2.2.4 Credit Risk Theory

Credit risk theory was introduced by Merton (1974) and asserts that the default event derives from a firm's asset evolution modeled by a diffusion process with constant parameters. Merton (1974) proposed a model for assessing the credit risk of a company. The model assumes that a company has a certain amount of debt that will become due in a future time. A firm can be able to detect the possibility of default if the value of its assets is less than the promised debt repayment at a specified time.

Extant literature indicates that several studies have adopted this theory to assess credit risk using the ratio of non-performing debt to total debt (Ekinci, 2016; Gadzo et al., 2019; Isanzu, 2017; Munangi & Bongani, 2020; Saleh et al., 2020). This study adopted the theory to determine credit risks using the ratio of non-performing receivables to total receivables for each of the various insurance firms and establish the effect it has on the financial performance of the firms.

2.2.5 Modern Portfolio Theory

Modern Portfolio Theory was introduced by Markowitz (1952) and asserts that risk-averse investors can construct portfolios to optimize or maximize expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward. The theory suggests that it is possible to construct an efficient frontier of optimal portfolios, offering the maximum possible expected return for a given level of risk. Empirical studies support the modern portfolio theory and indicate that market risks significantly affect performance (Kim et al., 1995; Pervan & Pavic´, 2010; Shiu, 2004). This study adopted the insights of this theory to examine how various insurance firms have managed their investment portfolio to mitigate market risks and its effect on their performance

2.2.6 Keynesian Liquidity Preference Theory

The theory was advanced by Keynes (1936) and asserts that liquidity is required for speculative, transaction, and precautionary motives. A precautionary motive is the need for a constant supply of cash and a financial reserve. The speculative motive is the necessity to hold cash to take advantage of investment opportunities. The transaction motive is the need to have cash on hand to discharge daily operations. A firm should thus manage its liquid assets in a way that there is sufficient cash to discharge its daily operations, invest any surplus to gain income, and still have some amounts that can be accessed easily when unexpected events occur. Studies have indicated that liquidity significantly affects the financial performance of a firm (Ahmed et al., 2010; Chen et al., 2018; Onsongo et al., 2020; Saleh et al., 2020). However, the studies do not indicate the optimal liquidity that a firm should maintain. This study adopted this theory to investigate the effect of liquidity risk on the financial performance of insurance firms.

2.3 Empirical Studies

This section reviewed extant literature on the relationship between corporate governance, financial, firm characteristics and performance of a firm.

2.3.1 Corporate Governance and Firm Performance

The board of directors plays an important role in an institution by offering policy direction and strategic guidance. An institution can gain immense resources from its board of directors which in turn reduces dependency on the environment.

Firms which have large board size can gain access to more resources from the external environment. Prior studies on corporate governance affirm this and indicate that increasing the size of the board positively impacts the performance of a firm. A study by Kiel and Nicholson (2013) investigated the relationship between board composition and corporate performance in Australian firms. The results indicated that board size positively affect performance. A study by Chen et al., (2015) on ownership concentration, firm performance, and dividend policy in Hong Kong also found positive effect of board size on performance.

An investigation on the relationship between board size, board composition, CEO duality and firm performance in Ghana by Kyereboah-Coleman and Biekpe (2016) indicated that board size positively affected performance. Jackling and Johl (2019) investigated the relationship between board structure and firm performance of India's top companies and found that board size positively impacted performance of the firms. A study by Najjar, (2012) investigated the impact of corporate governance on the insurance firm's performance in Bahrain. The findings of panel regression model indicated that board size positively and significantly affected performance. Yasser et al. (2015) examined corporate governance and firm performance in Pakistan. The findings indicated that a positive significant relationship existed between ROE and PM and board size. The study recommended that the board size should be limited to a sizeable members and the board must be a right mixture of executive and non-executive directors.

The mediating role of innovation between corporate governance and organizational performance in Pakistan was investigated by Khan et al. (2019). Data were collected from top management and 550 questionnaires distributed among respondents. Partial least squares (PLS) was used for analysis. Findings revealed that board size positively and significantly affected organizational performance. Riyadh et al. (2019) examined the impact of corporate social responsibility disclosure and board characteristics on corporate performance. The study employed a quantitative method using secondary data which was analyzed using smart partial least squares (PLS). The findings indicated that board size had a significant impact on corporate performance. However, Jensen (1993) argued that an organization with a big board size may experience problems in coordinating the group and ineffectiveness in arriving at decisions.

Extant studies support this view and in contrast to resource dependency theory, the studies found a negative relationship between the size of a board and performance. A study by Mak and Kusnadi, (2015) sought to determine whether board size really matters. The study focused on the impact of corporate governance mechanisms and firm value of Singapore and Malaysia firms. The findings indicated a negative relationship between board size and firm value.

The impact of board size on firm performance in the UK was investigated by Guest et al. (2019). The findings indicated a negative relationship between board size and performance. A study by Palaniappan (2017) examined the effect of board characteristics on firm performance in Indian manufacturing industry: The finding indicated a statistically significant negative relationship between board size and Tobins Q, ROA and ROE. Kumar and Singh (2013) investigated board size and promoter ownership on firm value in India. The study analyzed the corporate governance structure of 176 Indian firms listed on the Bombay Stock Exchange using linear regression analysis. The empirical findings indicated a negative relationship of board size with firm value and significant positive association of promoter ownership with corporate performance. The study suggests that only above a critical ownership level of 40 percent does promoter's interest become aligned with that of the company, resulting in positive effect on firm value.

The effect of corporate governance factors on the performance of listed small and medium-sized enterprises (SMEs) in the UK was examined Afrifa and Tauringana (2015). The paper used unbalanced panel data regression analysis on a sample of 234 SMEs listed on the Alternative Investment Market, for a 10-year period (2004-2013). The panel data analysis results indicated that for all SMEs, corporate governance factors board size, chief executive officer (CEO) age and tenure and directors' remuneration were significantly associated with performance of SMEs. The results also indicated that while board size was negatively associated with the performance of both small and medium enterprises, CEO age is significant only for medium firms and directors' remuneration was significant only for small ones, while CEO tenure and proportion of non-executive directors were not significant for either. Malik and Makhdoom (2016) sought to determine whether corporate governance beget firm performance in fortune global 500 companies. The findings indicated that smaller board sizes generated better firm performance in Fortune Global 500 Companies.

The relationship between corporate governance and firm performance in India was investigated by Arora and Sharma (2016). This empirical analysis focused on a large number of companies covering 20 important industries of the Indian manufacturing sector. Several alternative specifications and estimation techniques were used for analysis purposes, including system generalized methods of moments. The findings indicated that board size negatively affected performance of the firms. Mohan and Chandramohan, (2018) investigated the impact of corporate governance on firm performance in India. The results of the panel data analysis indicated that the corporate governance factors, namely CEO duality and board size had a significant negative impact on firm performance whereas board composition had no significant impact on firm performance. The relationship between corporate governance attributes and firm performance before and after the revised code in Malaysian was examined by Haji (2014). Multiple regression analysis was used to assess the influence of the governance and ownership structure attributes on firm performance. The findings indicated that there were cases of non-compliance of the basic requirements of the corporate governance code in Malaysia even after the revised code.

The relationship between corporate board diversity and financial performance of insurance companies in Nigeria was investigated by Garba and Abubakar (2014). The study selected 12 listed insurance companies using non-probability sampling method in the form of availability sampling technique for a period of 6 years. Using ROA, ROE and Tobin's Q as measures of firm performance and applying Feasible Generalised Least Squares (FGLS) and random effects estimators, the findings revealed that there is no significant relationship between board composition and performance of insurance companies in Nigeria. The corporate governance guideline issued by IRA recommends that insurance firms in Kenya should have at least five board members. However, the guideline does not provide the maximum number of members that a board can have. This raises the question of what board size do the various insurance firms maintain and how does it affect financial performance. Agency theory by Jensen and Meckling (1976) asserts that agency conflicts occur in a firm because top management (agents) are responsible for implementing policies while the shareholders (principals) assume the huge portion of the risk associated with the decisions made by the management.

The management, therefore, does not bear the significant portion of the effects of their decisions unlike the shareholders thus creating a conflict of interest. The management may also undertake projects that will benefit them more than the shareholders. The board of directors is thus entrusted by shareholders to control and monitor the actions of the management. Farma (1980) argued that the agency problem can be mitigated if the board comprise of independent directors. Despite the sentiments made by this theory on the role of independent directors, extant literature on board independence indicates mixed results with some studies (Bhagat & Bolton, 2013; Malik & Makhdoom, 2016) affirming that having independent directors in a board positively impact performance, others (Berthelot et al, 2012; Arora & Sharma, 2016) indicated that the relationships was negative while other studies (Bhagat & Black, 2012; Assenga & Hussainey, 2018) indicated that there was no relationship between independent directors and the financial performance of a firm.

The impact of corporate governance structures on performance of non-financial companies listed on the two main Vietnamese stock exchanges was investigated by Dang, Houanti and Vu (2018). The findings indicated a significant negative relationship between board independence and performance of the firm. A study by Malik and Makhdoom, (2016) investigated whether corporate governance beget firm performance in fortune global 500 companies. The study was a quantitative research based on a positivist paradigm using deductive reasoning and secondary data collection. Data were collected for 8 years and the findings indicated a strong positive relationship between corporate governance and firm performance. The study concluded that board independence improves transparency in board decision-making process.

Another study by Arora and Sharma, (2016) examined the relationship between corporate governance and firm performance in India. The findings indicated a negative relationship between board independence and performance. The impact of board characteristics on the financial performance of Tanzanian firms was investigated by Assenga and Hussainey (2018). The findings indicated that board independence does not affect performance of the firms. Khan et al. (2019) investigated the relationship between corporate governance and organizational performance in Pakistan textile sector.

The objective was to determine the influence of board size, board independence, board diversity, board meetings and a number of board committees on organizational performance with the use of innovation as mediating variable in Pakistan textile companies. PLS-SEM was used for analysis. The data was collected by using simple random sampling technique. The findings revealed that board independence had no influence on organizational performance. The IRA corporate governance guideline recommends that a third of the directors should be independent directors. This study thus investigated the effect of board independence on performance. The effect of board diversity on performance of Spanish non-financial firms was examined by Fernández-Temprano and Tejerina-Gaite (2020). The results revealed that age diversity had a positive effect on firm performance in both, insider and outsider directors, nationality mix was associated with higher performance levels just in the case of insiders. Educational diversity had a negative effect on performance for supervisory directors while there was no influence of gender diversity on performance.

The relationship between board members' education and firm performance from a developing economy perspective was investigated by Darmadi (2013). The study employed a sample comprising 160 firms listed on the Indonesia Stock Exchange. Tobin's Q and return on assets (ROA) were used as measures of financial performance. Four proxies for board members' educational qualifications were used, namely postgraduate degrees, degrees obtained from prestigious universities, degrees obtained from developed countries, and degrees in financial disciplines. The findings indicated that the educational qualifications of board members and the CEO matter, to a particular extent, in explaining either ROA or Tobin's Q. For example, CEOs holding degrees from prestigious domestic universities perform significantly better than those without such qualifications.

The relationship of professors in the boardroom and their impact on corporate governance and firm performance was examined by Francis et al (2015). The findings indicated that companies with directors from academia are associated with higher performance. Specifically, the results indicated that the presence of academic directors is associated with greater acquisition performance, a higher number of patents and citations, higher stock price, lower discretionary accruals, lower chief executive officer (CEO) compensation, and higher CEO forced turnover-performance sensitivity.

Overall, the results indicate that academic directors were valuable advisors and effective monitors and firms benefit from having academic directors. Mori (2014) investigated directors' diversity and board performance in East African microfinance institutions. The empirical analysis is based on a survey conducted with 105 board directors representing 63 microfinance institutions from three East African countries. The results indicated that the effect of directors' level of education on boards' performance was positive.

The impact of diversity of board members' educational qualifications on the financial performance of banks in Ghana was examined by Boadi and Osarfo (2019). The study utilized generalized methods of moments as an econometric model in carrying out the analysis. The findings indicated that educational qualifications of board members are relevant to banks' financial performance. Board members with a first degree had a significant positive impact on performance. The mediating role of innovation between corporate governance and organizational performance in Textile sector of Pakistan was investigated by Khan et al. (2019). The study adopted PLS-SEM for analysis and the data was collected by using simple random sampling technique. The findings revealed that board diversity had a positive influence on organizational performance. Khan and Subhan (2019) investigated the impact of board diversity and audit on firm performance. The study sample comprised of listed companies in Pakistan Stock Exchange (PSE) 100 Index. Panel data set was collected for the period 2008 to 2017. The study utilized quantitative techniques from econometrics on panel data. The findings suggested that diversity was positively associated with firm financial performance.

The relationship between workforce diversity, diversity management and organizational performance in social enterprises was investigated by Cho, Kim and Mor Barak (2017). Semi-structured in-depth interviews were conducted with 14 individuals working in the social enterprise sector in Los Angeles, California, including both top management and regular employees. Data were analyzed using thematic analysis rooted in grounded theory. Overall, high levels of diversity in gender, race, education, and sexual orientation were identified in social enterprises, while low levels of age and value diversity were found. The findings indicated that workforce diversity and diversity management were crucial factors that positively influenced organizational performance.

Extant literatures indicated that studies on board composition have supported the view that a bigger ratio of non-executive directors in a board positively affects the performance of a firm. Coles, Daniel and Naveen (2018) investigated the relation between firm value and board structure. The findings indicated that firms with larger boards and more independent directors performed better than those with few independent directors. The relationship between corporate governance and firm performance in Iran was examined by Mashayekhi and Bazaz (2018). The study used data from companies listed in the Tehran Stock Exchange (TSE). Board size, board independence, board leadership and institutional investors on the board were used as corporate governance indices and EPS, ROA and ROE as firm performance surrogates. The regression results indicated that the presence of outside directors strengthens the firms' performance.

An analysis of corporate governance and company performance in South Africa was done by Pamburai et al (2015). A multiple regression model was used to compare the association between the variables for 158 companies listed on the JSE. The findings indicated that the relationship between Tobin's Q and the proportion of non-executive directors (NEDs) was positive and significant, suggesting that companies with higher proportions of NEDs seem to perform better than those with lower proportions of NEDs.

Empirical studies also indicated that board composition does not affect performance. These studies include the work of Andres et al. (2015) which examined corporate boards in OECD countries. The study analyzed the effect of the size of the board, its composition and internal functioning on firm value in a sample of 450 non-financial companies from ten countries in Western Europe and North America. The econometric method combined regression analysis with simultaneous equations in order to control for the possibility of board size and composition endogeneity. The results indicated that there was no significant relationship between the composition of the board and the value of the firm. A study by Haniffa and Hudaib (2016) investigated the relationship between the corporate governance structure and performance of 347 companies listed on the Kuala Lumpur Stock Exchange (KLSE). The findings indicated that there was no significant relationship between board composition and performance. A study by Kajola (2018) on corporate governance and firm performance of Nigerian listed firms employed panel methodology and OLS as a method of estimation.

The study, however, could not find a significant relationship between the two performance measures and board composition. A study by Ehikioya (2019) on corporate governance structure and firm performance in developing economies. The study used the regression model to analyze publicly available data for a sample of 107 firms quoted in the Nigerian Stock Exchange. The results revealed no evidence to support the impact of board composition on performance.

The impact of board characteristics on firm performances in emerging economies was investigated by Borlea et al. (2017). The study sample consisted of 55 Romanian non-financial companies listed on the Bucharest Stock Exchange (BSE). No statistically significant association was found between any of the board characteristics and performances represented either by Tobin's Q or ROA. IRA corporate governance guidelines recommend that insurance firms should have a board composed of non-executive and executive directors. Given the recommendation of the studies and agency theory argument that a board composed of a bigger ratio of non-executive directors enhances independence in decision making and curb cases of conflict of interest from the executives.

2.3.2 Corporate Governance, Financial Risk Management and Firm Performance

This study investigated the intervening effect of financial risk management on the relationship between corporate governance and performance. Specifically, the study investigated the intervening effect of credit risk, market risk, liquidity risk and operation risk management. The Insurance Regulatory Authority of Kenya (IRA) identified credit risk as one of the risks that insurance companies should manage. IRA noted that insurance firms rely on being paid by third parties, including the company's reinsurers and investment counterparties. The counterparties may not be able to pay their ongoing obligations at all or within the stipulated time (AKI, 2013). This exposes the firms to credit risks due to non-performing receivables. The insurance firms may thus experience financial distress if proper measures are not put in place to ensure receivables are collected in time. Extant literature indicates that studies have adopted this theory and affirmed that credit risk negatively affects the financial performance of a firm.

The effect of credit risk, liquidity risk and bank capital on bank profitability from an emerging market was analyzed by Saleh et al. (2020). The findings indicated that credit risk significantly impact bank profitability. A study by Ekinci (2016) investigated the effects of credit and market risk on the bank performance for the Turkish banking sector. The results indicated that credit risk had a positive and significant effect on banking sector profitability. The current study investigated the intervening effect of credit risk on the relationship between corporate governance and performance of insurance firms.

The relationship between credit risk and operational risk on financial performance of universal banks in Ghana was evaluated by Gadzo et al (2019). The study adopted a partial least squared structural equation model (PLS SEM) approach. The findings indicated that that credit risk influences financial performance negatively. A study by Isanzu (2017) investigated the impact of credit risk on financial performance of Chinese banks. Secondary data was collected from five largest commercial banks in the country for the period of 7 years. The study used nonperforming loans, capital adequacy ratio, impaired loan reserve, and loan impairment charges as measures of credit risk and for a measure of financial performance return on asset was used. Data analysis was done using a balanced panel data regression model, and the study findings revealed that credit risk had a significant impact on financial performance of Chinese commercial banks.

The impact of credit risk on the financial performance of South African banks was examined by Munangi and Bongani (2020). The study focused on 18 South African banks for the period 2008 to 2018. Panel data techniques, namely the pooled ordinary least squares (pooled OLS), fixed effects and random effects estimators were employed to test the relationship between credit risk and financial performance (proxied by non-performing loans (NPLs) and by return on assets (ROA) or return on equity (ROE) respectively). The results of the study documented that credit risk was negatively related to financial performance. Thus, the higher the incidence of non-performing loans, the lower the profitability of the bank.

Insurance firms also participate in pooling funds from policyholders and investing them to generate income. The firms are thus faced with market risks that relate to the degree of risk inherent in the investment portfolio. Insurance firms should therefore manage their portfolio by investing in low-risk assets and avoiding risky investments. Risk levels are further influenced by the quality of individual investments (AKI, 2013). Empirical studies affirm that market risks negatively affect the performance of firms and need to be properly managed.

An investigation on the factors affecting the financial performance of life insurance companies in Ghana was done by Akotey et al (2013). The study used secondary data obtained from the annual financial statements of ten life insurance companies covering a period of 11 years which were analyzed through panel regression. The findings indicated that investment income negatively affected performance. Caporale, Cerrato and Zhang (2017) analyzed the determinants of insolvency risk for general insurance firms in the UK. The sample for the study was 515 firms investigated over a period of 30 years. The study indicated that market risk negatively affect performance of the firms. Ekinci (2016) investigated the effect of market risk on bank performance in Turkish banking sector. The results indicated that market risk have a positive and significant effect on conditional bank stock return volatility.

The performance of an investment, as reflected by the ratio of investment income to average income, discloses the efficiency and effectiveness of investment decisions. As such, the performance of investments is critical to the financial strength of an insurer (Chen & Wong, 2014). Sound investment decisions thus guarantee investment returns and better financial performance in line with modern portfolio theory. This study thus investigated how insurance firms manage market risks and whether it has any intervening effect on the relationship between corporate governance and performance.

Liquidity risk is the inability of the insurer to draw on sufficient cash to meet its liabilities as and when they fall due. Insurance firms primarily undertake payments of claims and benefits to policyholders. The company must therefore have processes in place to convert investments and other assets into sufficient cash, as needed to meet its liabilities (AKI, 2013). The guideline emphasized that liquidity is vital for a firm for speculative, transaction, and precautionary motives.

A firm should thus manage its liquid assets in a way that there is sufficient cash to discharge its daily operations, invest any surplus to gain income, and still have some amount that can be accessed easily when unexpected events occur. The relationship between bank liquidity risk and performance was investigated by Chen et al. (2018). The study employed an alternative measure of liquidity risk to investigate its determinants by using an unbalanced panel dataset of commercial banks in 12 advanced economies. Because of higher funding costs for obtaining liquidity, liquidity risk was regarded as a discount for bank profitability, yet liquidity risk indicateds a premium on bank performance in terms of banks' net interest margins. The study found that liquidity risk had reverse impacts on bank performance in a market-based financial system

The effect of financial risk on the financial performance of commercial and services listed companies in Nairobi Securities Exchange was evaluated by Onsongo et al (2020). The study applied explanatory research design. Secondary panel data contained in published annual reports for the period 2013–2017 was collected. Panel regression model was applied with the random effect model being used based on the Hausman specification test. Findings indicated that liquidity risk had a significantly negative effect on ROE. Saleh et al (2020) investigated the effect of credit risk, liquidity risk and bank capital on bank profitability from an emerging market perspective. The study was grounded on econometric panel data using GMM methods. The results indicated that liquidity risk had an impact on bank profitability. The studies argue that if a firm maintains high levels of liquid assets, translating to a higher liquidity ratio, usually does not add value to the company but increases maintenance cost and the opportunity cost of investment income it would have generated if it were invested.

The determinants of financial health of Asian insurance companies was examined by Chen and Wong (2014). The study focused on the solvency of general and life insurance companies in Asia using firm data and macro data separately. The findings of the study contradicted the studies which found positive effect on performance. The study indicated that liquidity negatively and significantly affect general insurers' financial health in Asian economies.

Another study by Wani and Ahmad (2015) investigated the rrelationship between financial risk and financial performance of Indian insurance industry. The results of the multiple linear regression model revealed that capital liquidity risk affected the financial performance of life insurance companies in India. Operational risk refers to all the risks associated with the operating units of an insurance company, such as the underwriting, claims, and investment departments. It relates to the risk of direct or indirect loss due to failed or inadequate internal processes, systems, and people (AKI, 2018). Empirical studies have affirmed that operational risk negatively affects financial performance. A study by Zainudin, Mahdzan and Leong (2018 Firm-specific internal determinants of profitability performance of selected life insurance firms in Asia. The results of random effect model revealed that size, volume of capital and underwriting risk are significantly related to the profitability of Asian life insurance firms, measured as return on assets.

The relationship between enterprise risk management and performance of Twenty (20) consumer goods companies listed on the Nigerian Stock Exchange was evaluated by Salaudeen et al. (2018). The collated data were analyzed using descriptive statistics and generalized least square. The results revealed that risk management committee, financial expertise and board size have significant positive effect on performance. The results also revealed that risk management committee, financial expertise and board size had significant positive effect on performance.

The relationship between corporate governance, risk management and financial performance of listed deposit money bank in Nigeria was investigated by Garba and Abubakar (2014). The result indicated a negative but a significant impact on bank's financial performance. However, a corporate-governance system that was sound increases the profitability of loans as well as the stability of banks. Furthermore, the study found that the coefficients of board size, board independence, directors' shareholdings and board meetings were negative while the coefficient for the number of board committee was positive on Tobin Q. The results implied that there exists a significant relationship between corporate governance and financial performance as measured by Tobin Q. The findings also indicated that the size of the board, board independence and board committees had a positive effect on Return on Equity (ROE).

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The effect of corporate board size, risk management on financial performance of listed deposit money banks in Nigeria was examined by Olalekan et al. (2018). The population of the study was fifteen (15) listed deposit money banks in Nigeria out of which a sample of fourteen (14) were used for the study due to the accessibility and availability of data. Corporate board size and risk management as the independent variable was represented by numbers of board of directors, liquidity risk, credit risk and operating risk, while the return on equity(ROE) and earnings per share (EPS) were used to represent financial performance. Data were collected from secondary source through the annual report and account of the banks for the period under study and the data was analysed using multiple panel regression techniques. The findings revealed that board size, credit risk and operating risk had significant negative effect on return on equity (ROE) and earnings per share (EPS). The study also indicated that liquidity risk had negative and insignificant effect on ROE and EPS.

The intervening effect of the risk management committee on the relationship between corporate governance, firm size, financial reporting risk, and firm performance was investigated by Halim et al. (2017). The study focused on the mediating effect of risk management committee on the relationship between corporate governance practices and financial performance at manufacturing firms. Using the purposive sampling method, 299 firms were selected as the sample. This study used secondary data obtained from the companies' annual reports. The results of this study indicated that the risk management committee affected firm performance, and that risk management committee acts as the intervening variable in the relationship between corporate governance, firm size, and financial reporting risk on firm performance. The study concluded that the existence of risk management committee would facilitate the company to control better the quality of financial reporting risks. The major determinants of the profitability of the life insurance industry in Ghana was investigated by Akotey et al. (2013). The study also examined the relationship among the three measures of insurers' profitability, which were investment income, underwriting profit and the overall (total) net profit. The annual financial statements of ten life insurance companies covering a period of 11 years were sampled and analyzed through panel regression.

The findings indicate that whereas gross written premiums had a positive relationship with insurers' sales profitability, its relationship with investment income was a negative one. In addition, the results indicated that life insurers had incurred large underwriting losses due to overtrading and price undercutting. The results further revealed a setting-off rather than a complementary relationship between underwriting profit and investment income towards the enhancement of the overall profitability of life insurers.

2.3.4 Corporate Governance, Firm Characteristics and Firm Performance

The intervening effect of firm characteristics on the relationship between corporate governance and financial performance of institutions in Uganda was investigated by Wakaisuka (2017). The findings indicated that there is a partial intervening effect of firm characteristics. However, a study by Nandi and Ghosh (2013) which investigated corporate governance attributes, firm characteristics and the level of corporate disclosure of Indian listed firms suggested that a positive relationship exists between board size, audit committee members, family control, CEO duality, firm size, profitability, liquidity and the extent of corporate disclosure but the board composition, leverage and age of the firm had a negative relationship. A study by Manini and Abdillahi (2015) examined corporate governance mechanisms and financial performance of commercial banks in Kenya. The study utilized a correlational research design and the results revealed that that board size negatively influenced financial performance whereas bank size was positively associated with financial performance.

The relationship between corporate governance mechanisms and firm performance of Ethiopian insurance industry was evaluated by Demeke, (2016). The study used panel data and Pooled OLS regression to analyze the relationship between corporate governance mechanisms and firm performance using a data set of 8 insurance companies of Ethiopia. The results indicated that proportion of outside directors, board size, debt ratio, and ownership have a significant negative effect on performance of insurance companies. However, boards meeting frequency, firm size and firm age, were identified to have a significant positive impact on firm performance.

The determinants driving Takaful and cooperative insurance financial performance in Saudi Arabia was investigated by Hemrit (2020). The results of dynamic panel generalized method of moment's system estimation indicated that company size, insurance penetration, risk reporting and board size significantly explain the financial performance of both types of insurance companies. Specifically, the effect of Shari'ah board and capital intensity on the financial performance of Takaful insurance was positive and significant. The non-executive directors negatively affected the financial performance. Additionally, positive relationship was also found between inflation rate and financial performance of cooperative insurance.

The association between specific internals and macroeconomic factors and the financial performance of insurance companies in Ethiopia was investigated by Meher and Zewudu (2020). A quantitative approach was applied by adopting inferential statistics with a balanced panel data of nine insurance companies for 15 years (2002–2016). Explanatory analysis was deployed where Pearson's correlation and OLS regression model were applied to examine the association between dependent and independent variables. GDP per capita and size of the companies demonstrated a positive and significant association, whereas leverage, liquidity, and underwriting risk were negative and significant with returns of assets. The findings also indicated that growth of assets accelerated financial performance through the establishment of more branches and improved living situation of the people. Additionally, reduction of underwriting risk by transferring surplus risk to the reinsurers, managing capital structure with minimum dependence on borrowed capital, and deployment of premium earned in return fetching investments improved the financial performance of insurance companies.

2.3.5 Corporate Governance, Financial Risk Management, Firm Characteristics and Financial Performance

A study to examine the effect of corporate governance and firm characteristics on the existence of risk management committee and the effect of the existence of the risk management committee on firm performance was conducted by Badriyah, Sari, and Basri (2015). The study also examined the intervening role of risk management committee on the relationship between corporate governance, firm characteristics and performance.

The population in the study were non-financial companies listed in Indonesian Stock Exchange and purposive sampling was used as sampling method. Data for this study were taken from company's annual report. The hypotheses were tested by using Partial Least Square (PLS). The result proved that corporate governance and firm characteristics affect the existence of risk management committee, and the existence of risk management committee affects firm performance. The relationship between corporate governance, risk management, firm characteristics and financial performance of commercial banks in Kenya was investigated by Ochieng (2016). The study used correlation and multiple regression analysis to establish the relationship between corporate governance and bank financial performance. The findings indicated that corporate governance, risk management and firm characteristics jointly significantly predicted all bank financial performance attributes except for liquidity.

The association between corporate governance, firm characteristics, external environment and performance of financial institutions in Uganda was analysed by Wakaisuka et al. (2016). The findings indicated that good corporate governance practices are regarded as important in reducing risk for investors, attracting investment capital, and improving the performance of companies and financial institutions inclusive. Companies need financial resources and better earnings to promote their objectives. Equally, firm characteristics play a pivotal role in determining the performance of the firm. The findings implied that firms that firm characteristics are essential determinants of firm performance and success.

The impact of internal mechanisms of corporate governance (CG) on firm performance (FP) in the Gulf Cooperation Council (GCC) countries was examined by Pillai and Al-Malkawi (2018). The study used firm level panel data set of 349 financial and non-financial companies listed in the stock exchanges of the GCC countries. The Generalized Least Squares (GLS) method was used to estimate the model parameters. The results indicated that governance variables such as government shareholdings, audit type, board size, corporate social responsibility and leverage significantly affect the performance in majority of the countries in the GCC.

The effect of a separate risk management committee (RMC) towards firms' performances on consumer goods sector in Malaysia was investigated by Rimin, Bujang, Chu, and Said (2021). The sample comprises 169 observations throughout a nine-year time frame starting from 2010 to 2018. The study used a dichotomous variable of "1" to represent a listed company that establishes a separate RMC and "0" as otherwise. The data analysis was based on a static panel data technique, which utilized the fixed effects model (FEM) and random effects model (REM). The results indicated that there was a significant positive relationship between a separate RMC and Tobin's Q which suggested that the establishment of a separate RMC that consists of a majority of independent non-executive directors would significantly improve the firm's performance. The findings supported the agency theory which suggested that independent non-executive directors can enhance the transparency of corporate boards as they improved the firm's compliance with the disclosure requirements.

The effect of board characteristics on firm value in India was investigated by Mishra and Kapil (2018). Corporate governance structures of 391 Indian companies listed on the National Stock Exchange were studied. Structural equation modeling methodology was employed on data for five financial years. Market-based measure (Tobin's Q) and accounting-based measure (return on asset) were employed for measuring firm performance. The empirical findings indicated that there was a significant positive association between board size, board independence, number of board meetings and firm value. Aslam and Haron (2020) evaluated the effect of corporate governance on the performance of Islamic banks. Stepwise, two-step system generalize method of moment estimation technique was used in the analysis and control variables were added into the model sequentially. The study used data on 129 banks from 29 Islamic countries (Middle East, South Asia and Southeast Asia) during the period of 2008 to 2017. The findings suggested that the audit committee (AUDC) and Shariah board (SB) had a positive impact on the performance of Islamic banks (return on assets and return on equity). However, board size and risk management committee had a negative and significant effect on performance. CEO duality and non-executive directors had mixed relationship with performance. These results supported the argument that banks need to improve their financial performance through appropriate governance mechanism.

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The role of corporate governance and risk management on banking financial performance in Indonesia was examined by Bastomi, Salim, and Aisjah (2017). The study used quantitative approach and the saturated sample method. Furthermore, Partial Least Square (PLS) was used for hypotheses and analysis test. Sobel Test version 4 for testing credit risk variables and operational risk as mediation. The results indicated that improving the implementation of corporate governance reduced credit risk and operational risk and increased financial performance. The results of mediation testing indicated that credit risk and operational risk positively mediated the effect of corporate governance on financial performance. The results implied that the implementation of good corporate governance minimized the conflicts of interest and asymmetry information that leads to the cost of non-performing loans and additional capital costs that in turn increased the company profitability.

The effect of board structure characteristics on bank performance was analyzed by Bouteska (2020). The study used a sample of 50 banks in five Eurozone countries, including the UK, Germany, France, Italy, and Spain, during the period 2000–2019. The study used fixed effects and random effects regressions, as well as a pooled OLS panel data estimation. The study found that a board size of between 7 and 10 had a significant impact on bank performance. Board independence had a positive and significant impact on bank performance. Furthermore, results indicated that the number of board meetings and financial experts plays an important role on bank performance. In contrast, there was no considerable increase in bank performance when the role of CEO and chairman was separated. The impact of board composition (proportion of the non-executive directors) and board size on the financial performance of companies was examined by Agrawal and Lakshmi (2020). The study employed panel data of 145 companies for a period of five years and panel regression model to study the relationship between the different variables. The findings indicated that a positive relation exist between non-executive directors and financial performance of the companies as these directors bring their expertise, network and resources to the organization which was crucial for the growth and performance of the enterprise. However, the study did not find any significant relationship between board size and financial performance of the companies.

2.4 Conceptual Framework

The conceptual framework for this study is as indicated in Figure 2.1. From the figure, the dependent variable was the performance of insurance firms while the independent variable was corporate governance. The intervening variable was financial risk management and firm characteristics was the moderating variable.

Moderating variable

Firm Characteristics
- Size of the Firm
- Leverage
- Age of the Firm

Corporate Governance
- Board Composition
- Board Independence
- Board Size
- Board Diversity

Performance of Insurance firms
- ROA

Financial risk Management
- Liquidity Risk
- Operation Risk
- Market Risk
- Credit Risk

Independent Variable   **Intervening Variable**   **Dependent Variable**
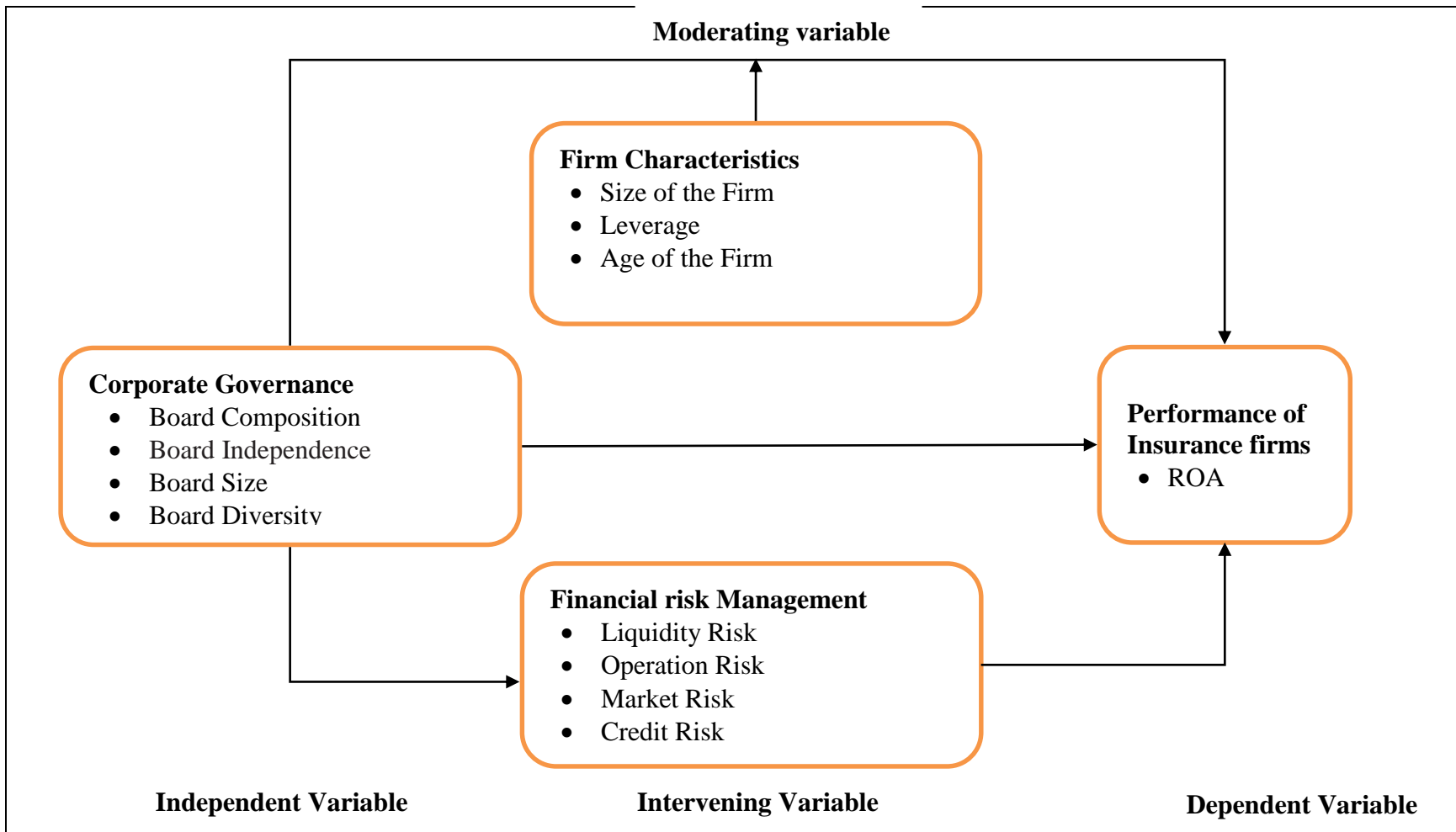
Figure 2. 1: Conceptual Framework

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2.4.1 Corporate Governance

Corporate governance is the structures and processes by which the affairs and business of an organization are managed and directed in order to advance long-term value to shareholders by enhancing corporate accountability and performance, while taking into consideration the interest of other stakeholders (Jiang, Feng & Zhang, 2012). The study focused on the effect of board composition, board independence and board size on performance.

2.4.2 Financial Risk Management

Financial risk management is a systematic process of identifying, analyzing, assessing, monitoring and controlling financial risks in order to protect a firm from adverse effects and create value (Ekinci, 2016). The study investigated the intervening effect of liquidity risk management, operation risk management, market risk management and credit risk management on the relationship between corporate governance and performance.

2.4.3 Firm Characteristics

Firm characteristics are features unique to a firm which influences variation in the strategies and performance between one firm and another (Demeke, 2016). The study evaluated the moderating effect of leverage, size of the firm and age of the firm on the relationship between corporate governance and performance insurance firms.

2.4.4 Performance of Insurance firms

Performance is the achievement of a certain task measured against preset standards. In a financial institution like an insurance firm, performance refers to the degree to which financial objectives have been accomplished (Mwangi and Murigu, 2015). Performance was measured in terms of return on assets.

2.5 Summary of Literature Review

The extant literature on corporate governance, risk management, firm characteristics and performance of a firm give theoretical and contextual gaps. Stewardship theory argues that directors and managers discharge their roles as stewards and thus corporate governance will be aligned with the interests of the shareholders.

Agency theory on the other hand explains that inefficiencies or risks can occur in a firm due to agency problems caused by separation of ownership and management. Resource based theory focus managerial attention on the firm's internal resources in an effort to identify those assets, capabilities and competencies with the potential to deliver superior competitive advantage. The empirical studies indicate that even when similar variables were used, conflicting results were obtained. Some of the studies indicated that there was a positive relationship between some of the corporate governance indicators like board size, board composition, CEO duality and performance (Yasser et al., 2015; Najjar, 2012) while others indicate that there was negative relationship (Mohan & Chandramohan, 2018; Wepukhulu, 2016). Some of the studies (Demeke, 2016; Manini & Abdillahi, 2015) also revealed that firm characteristics like age of the firm had a positive effect on financial performance while others (Nandi & Ghosh, 2013) indicated that the relationship was negative. Most of the studies (Halim et al., 2017; Salaudeen et al., 2018) have also focused on the intervening effect of risk management committee rather than the effect of the specific financial risks which are leverage risk, operation risk and market risk. This implies that the studies did not find a clear relationship among corporate governance, financial risk management, firm characteristics and performance.

2.6   Research Gaps

The foregoing theories indicate contradictory suggestions on corporate governance. This is because stewardship theory advocates that directors and managers of an organization discharge their roles as stewards and their interest will be achieved when those of the shareholders are achieved while agency theory on the other hand argues that agency problems for instance conflict of interest can occur in a firm due to separation of ownership and management. The empirical studies also indicate that the findings are conflicting and inconclusive. Some of the studies indicate that there is a positive relationship while others indicate that there is negative relationship between the variables. Some of the studies also indicate that the effect of the risks was significant while others indicate that there was no effect or the effect was insignificant. The research gaps are summarized in Appendix III. The present study is therefore an attempt to fill these gaps by investigating the relationship among corporate governance, financial risk management, firm characteristics and performance of insurance firms in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covered the research philosophy, theoretical model, research design, target population, sampling technique and sample size, data collection and procedures, pretesting, data processing and analysis.

3.2 Research Philosophy

This study adopted positivist research philosophy. The philosophy was appropriate because the study investigated the relationship among corporate governance, financial risk management, firm characteristics and performance of insurance firms empirically using quantitative data. The study appreciated the positivism ontology which emphasizes that there is a single, external and objective reality to any research question regardless of the researcher's belief (Saunders & Lewis, 2017). The study was also founded on theories to generate hypotheses which were tested to give statistical justification of conclusions from the empirically testable hypotheses (McMillan & Schumacher, 2010).

3.3 Research Design

The study employed causal research design. The design enabled the study to test the hypotheses, measure, analyze and describe the effect and relationship among the variables using panel data which were analyzed using linear and multiple regression. Panel data was adopted because it takes care of heterogeneity associated with individual insurance firms by allowing for individual specific variables. Also, panel data provides more informative, more variability, less collinearity among variables, more degrees of freedom and efficiency. Besides, panel data minimizes bias that can result if individual insurance firms are aggregated (Ogboi & Unuafe, 2013).

3.4 Target Population

The target population of the study was 55 insurance firms in Kenya registered by IRA as at December 2018. The study of all the insurance firms registered by IRA as at December 2018 was done. This eliminated any errors associated with sampling.

3.5 Data Collection Instruments

The study employed secondary data obtained from audited financial statements of the insurance firms covering a six-year period (2013 to 2018). The period of six years was chosen because this was the period that had lapsed since the introduction of risk management guidelines for insurance firms by IRA which was done in the year 2013. In addition, the performance of the firms and variables like interest rates and foreign exchange rate have been changing over the years. A record survey sheet presented in Appendix I was used to collect the data required for the study.

3.6 Data Collection Procedure

The data was obtained from the financial statements of the firms submitted to IRA and those maintained in the head offices of the insurance firms. Research assistants were employed and trained on the data required and how to fill the survey sheet in order to assist in collection of the data. A request was also made to NACOSTI, IRA and the firms to allow the study to be conducted, access of the financial statements and the data required.

3.7 Operationalization and Measurement of Research Variables

The dependent variable was the performance of insurance firms while the independent variable was corporate governance, the intervening variable was financial risk management and the moderating variable was firm characteristics. The details of how each of the study variables were measured and operationalized is presented in Table 3.1.

Table 3.1: Operationalization of Variable

Variable	Indicator (s)	Measurement
Dependent	ROA	$\dfrac{\text{Net profit after tax} *100}{\text{Total Assets}}$
Independent variable	Board Composition	The proportion of executive directors on the board.
	Board Independence	Proportion of independent non-executive directors
	Board Size	The number of members on a board
	Board Diversity	Number of professionals in the board (members registered by a professional body)
Intervening variable	Liquidity Risk Management	$\dfrac{\text{Current Assets}}{\text{Current Liabilities}}$
	Market Risk Management	$\dfrac{\text{Investment Income}}{\text{Average Investments}}$
	Operational Risk Management	$\dfrac{\text{Net Earned Premiums}}{\text{Total Assets}}$
	Credit Risk Management	$\dfrac{\text{None performing receivables}}{\text{Total receivables}}$
Moderating variable	Leverage	$\dfrac{\text{Long term debt} *100}{\text{Equity or Net worth}}$
	Size of insurance firm	Log of total assets.
	Age of insurance firm	Log of the number of years since incorporation

3.8 Pretesting of Research Instruments

Pretesting was done to establish validity of the research instruments. The study used secondary data thus content validity of the record survey sheet was evaluated by seeking the opinions of experts in the field of study especially financial practitioners in insurance sector. This enabled the necessary modification and revision of the research instruments to enhance the validity.

3.9 Data Processing and Analysis

The study used correlation and regression analysis to evaluate the relationship between the variables. Karl Pearson's correlation was used to measure the degree of association between the variables under consideration while regression analysis was done to determine the strength of the relationship between the variables. The study assumed that the independent variables and the dependent variable had a general multiplicative Cobb-Douglas functional relationship. The analytical models and their interpretation were as follows.

The first objective was to establish the effect of corporate governance on performance of insurance firms in Kenya. The hypothesis was that corporate governance had no significant effect on the performance of insurance firms in Kenya. The following multiple linear regression was used.

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \varepsilon \ \dots\dots\dots\dots\dots\dots\dots 3.4$$

Where:

ROA was the return on assets, β_0 was the regression constant, *i* is 1… 51 firms, t is 1… 6 years, $\beta_{1…}$ B_4 were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity and ε was the error term.

The results were interpreted that a relationship existed if at least one of $\beta_1 - \beta_4$ was significant.

The second objective was to evaluate the intervening effect of financial risk management on the relationship between corporate governance and performance of insurance firms in Kenya. Four step process proposed by Barron and Kenny (1986) as indicatedn in Figure 3.1 was adopted.
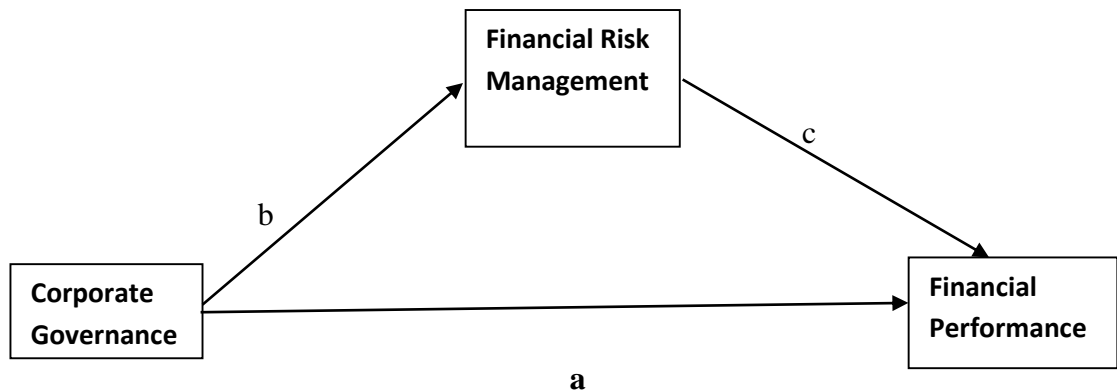
Figure 3. 1: Barron and Kenny Model

Step One (Path a)

The first step was to assess the relationship between dependent and independent variable using the following regression model:

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.5$$

Where:

ROA was the return on assets, β_0 was the regression constant, *i* was 1… 51 firms, t was 1… 6 years, $\beta_{1\ldots}$ B_4 were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity and ε is the error term.

The results were interpreted that a relationship existed if at least one of $\beta_1 - \beta_4$ was significant.

Step Two (Path b)

The second step was to assess the relationship between the intervening variable and the independent variable using the following regression model:

$$FRM = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.6$$

Where:

FRM was the is the composite ratio of financial risk management computed as a geometric mean of the attributes of financial risk management variables, β_0 was the regression constant, *i* was 1, …., 51 firms, t was 1, …., 6 years, $\beta_{1\ldots}$ *B4* were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity and ε is the error term.

The results were interpreted that a relationship existed if at least one of $\beta_1 - \beta_4$ was significant.

Step Three (path c)

The third step was to assess the relationship between the intervening variable and the dependent variable using the following regression model.

$$ROA_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 MR_{it} + \beta_3 OR_{it} + \beta_4 LR_{it} + \varepsilon \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots 3.7$$

Where:

ROA was the return on assets,

β_0 was the regression constant, *i* was 1, …., 51 firms, t was 1, …., 6 years, $\beta_{1\dots}$ B_4 were coefficients estimated, CR was credit risk, MR was market risk, OR was operation risk, LR was liquidity risk and ε was the error term.

The results were interpreted that a relationship existed if at least one of $\beta_1 - \beta_4$ was significant.

Step Four

The fourth step was to assess the relationship between dependent variable, intervening variable and independent variable using the following regression model

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \beta_5 CR_{it} + \beta_6 MR_{it} + \beta_7 OR_{it} + \beta_8 LR_{it} + \varepsilon \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3.8$$

Where:

ROA was the return on assets, β_0 was the regression constant, *i* was 1, …., 51 firms, t was 1, …., 6 years, $\beta_{1\dots}$ B_8 were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity, CR was credit risk, MR was market risk, OR was operation risk, LR was liquidity risk and ε was the error term.

The interpretation of the results was that intervention occurs if corporate governance in step one predicts performance of insurance firms, corporate governance in step two predicts financial risk management, financial risk management in step three predicts performance of insurance firms and still corporate governance in step four predicts performance of insurance firms when financial risk management is in the model.

The third objective was to examine the moderating effect of firm characteristics on the relationship between corporate governance and performance of insurance firms in Kenya. The hypothesis was that firm characteristics had no significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya. The hypothesis was tested by undertaking a three step process proposed by Barron and Kenny (1986).

The first step was to determine the relationship between the moderating variable (firm characteristics) and the dependent variable (financial performance) using the following model:

$$ROA_{it} = \beta_0 + \beta_1 AGE_{it} + \beta_2 LEV_{it} + \beta_3 SIZE_{it} + \varepsilon \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots.3.9$$

Where:

ROA was the return on assets, *β₀* was the regression constant, *i* was 1… 51 firms, t was 1… 6 years, *β₁… B₃* were coefficients estimated, *AGE* was the age of the firm, *LEV* was the leverage of the firm, *SIZE* was the size of the firm and ε was the error term.

The results were interpreted that a relationship existed if at least one of **β₁ − β₃** was significant.

The second step was to assess the relationship between the independent variable (board composition), moderating variable (firm characteristics) and the dependent variable (financial performance) using the following multiple regression model:

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \beta_5 AGE_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \varepsilon \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots...3.10$$

Where:

ROA was the return on assets, *β₀* was the regression constant, *i* was 1… 51 firms, t was 1… 6 years, *β₁… B₇* were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity, *AGE* was the age of the firm, *LEV* was the leverage of the firm, *SIZE* was the size of the firm and ε was the error term.

The results were interpreted that a relationship existed if at least one of β₁ − β₇ was significant.

The third step was to evaluate the relationship between the independent variable (board composition), moderating variable (firm characteristics), interaction of the independent variable with the moderating variable and the dependent variable (financial performance) using the following multiple regression model

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \beta_5 AGE_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \beta_8 (BC * FC)_{it} + \beta_9 (BI * FC)_{it} + \beta_{10}(BS * FC)_{it} + \beta_{11}(BD * FC)_{it} + \varepsilon \ldots\ldots\ldots 3.11$$

Where:

ROA was the return on assets, β_0 was the regression constant, *i* was 1 …. 51 firms, t was 1 …. 6 years, $\beta_{1\ldots}$ B_{11} were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity, *AGE* was the age of the firm, *LEV* was the leverage of the firm, *SIZE* was the size of the firm, BC*FC was the multiplication of Board Composition and Composite ratio of Firm Characteristics, BI*FC was the multiplication of Board independence and Composite ratio of Firm Characteristics, BS*FC was the multiplication of Board Size and Composite ratio of Firm Characteristics, BD*FC was the multiplication of Board Diversity and Composite ratio of Firm Characteristics, Characteristics and ε was the error term.

The interpretation of the results was that firm characteristics qualified as a moderating variable if **β_8 - β_{11}** coefficients were statistically significant.

The fourth objective was to assess the joint effect of corporate governance, financial risk management and firm characteristics on performance of insurance firms in Kenya. The hypothesis was that corporate governance, financial risk management and firm characteristics have no significant joint effect on the performance of insurance firms in Kenya. The following multiple regression analysis was used.

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \beta_5 CR_{it} + \beta_6 MR_{it} + \beta_7 OR_{it} + \beta_8 LR_{it} + \beta_9 AGE_{it} + \beta_{10} LEV_{it} + \beta_{11} SIZE_{it} + \varepsilon \ldots\ldots 3.12$$

Where:

β_0 was the regression constant, i was 1, …., 51 firms, t was 1, …., 6 years, $\beta_{1...}B_8$ were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity, CR was credit risk, MR is market risk, OR was operation risk, LR was liquidity risk and AGE was the age of the firm, LEV was the leverage of the firm, SIZE was the size of the firm and ε was the error term.

The results were interpreted that the relationship existed if at least one of $\beta_1 - \beta_{11}$ was significant.

3.10 Model Specification Tests

To determine the nature of the panel data and the best model for analysis, diagnostic tests for autocorrelation, linearity, multi-collinearity, heteroskedasticity and normality were carried out. A summary of the tests carried out and the criteria for making the decision is presented in Table 3.2

Table 3.2: Model Specification Tests

Test	Test to be used	Conclusion
Autocorrelation Test	Durbin –Watson statistic	There is no first order linear auto-correlation in the multiple linear regression data if P value is $1.5<d<2.5$
Multi-collinearity Test	VIF (Tolerance) test	No multi-collinearity in the multiple linear regression model if all the variables meet the Tolerance threshold of $0.1<VIF<10$.
Heteroskedasticity	Breusch-Pagan-Godfrey (BPG)	If P value is <0.05, presence of Heteroscedasticity
Normality	Histogram normality test	If Jarque-Bera statistic $P>0.05$ then this implies normality
Use of pooled or random effects model	Breusch Pagan LM test	If P value >0.05, use pooled effects model.
Random or fixed effects	Hausman test	If p value>0.05, use random effects model.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1   Introduction

This study investigated the relationship between corporate governance, financial risk management, firm characteristic and financial performance of insurance firms in Kenya. The chapter outlines the findings and discussion of the study.

4.2 Success Rate

The target population was all the 55 insurance firms in Kenya registered by IRA as at December 2018. Data for 51 Insurance firms was obtained which translates to 92% success rate. The study targeted firms which had operated for all the six-year period (2013 to 2018). Data for four of the firms which were established within the period of the study were not included in the analysis because the firms had not operated for all the six-year period that the study examined in order to ensure balanced panel data for detailed analysis.

4.3 Descriptive Statistics of the Variables

This section presents the descriptive statistics of the independent, intervening, moderating and dependent variable.

4.3.1   Descriptive Results of the Dependent and Independent Variables

The dependent variable was financial performance measured as return on assets. The independent variable was corporate governance measured by four indicators which were board size, board independence, board diversity and board composition. The descriptive results are presented in Table 4.1

Table 4.1: Descriptive Statistics of the Dependent and Independent Variables

Variable	Mean	Maximum	Minimum	Std. Dev.	Observations
ROA	1.61	5.66	-4.71	2.36	306
BS	7.12	9.00	5.00	1.68	306
BI	0.41	0.60	0.33	0.03	306
BD	0.66	1.00	0.28	0.21	306
BC	0.77	0.88	0.66	0.04	306

Notes: This table presents the distribution of the dependent and independent variables used in this study. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018. ROA denotes return on assets, BS denotes board size, BI is board independence, BD is board diversity, BC is Board Composition.

The results in Table 4.1 indicate that the return on assets was between -4.71 and 5.66 with a mean of 1.61. This implied that on average the insurance firms in Kenya registered positive returns but some registered negative returns. The results indicate that the board size of the firms was between 5 and 9 members with a mean of 7 members. This implied that the firms had adhered to the IRA guideline that the firms should have a minimum of five members. The findings also indicated that the ratio of independent non-executive directors to the board was between 0.33 and 0.60 with an average of 0.41. This implied that the firms had adhered to the code of governance which recommended that a third of the board should be independent. In terms of board diversity, the proportion of directors with professional qualifications was between 0.28 and 1 with an average of 0.66. This implied that the majority of the board members were professionals in line with the guideline that the firms should have some professionals to provide technical or professional advice and chair key committees. The ratio of non-executive directors was between 0.66 and 0.88 with a mean of 0.77. This suggested that the insurance firms had implemented the corporate governance guidelines which recommended that a board should consist of executive and non-executive directors.

4.3.4 Descriptive Results for the Intervening Variable

The intervening variable was financial risk management measured by credit risk, market risk, operation risk and liquidity risk. The descriptive results of financial risk management are presented in Table 4.2.

Table 4.2: Descriptive Statistics for the Intervening Variables

Variable	Mean	Maximum	Minimum	Std. Dev.	Observations
CR	0.34	0.57	0.02	0.10	306
MR	0.35	0.71	0.03	0.12	306
OR	0.22	0.50	0.01	0.08	306
LR	0.39	0.79	0.06	0.14	306

Notes: This table presents the distribution of the intervening variables used in this study. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018. CR denotes credit risk, MR market risk, OR is operation risk, LR is liquidity risk.

The results in Table 4.2 indicated that the level of credit risk was between 0.02 and 0.57 with a mean of 0.34. This implied that all the firms experienced cases of non-performing receivables which varied from one firm to another. The results also confirm the presence of credit risks facing the insurance firms. The findings also indicated that market risk was between 0.03 and 0.71 with an average of 0.35. The results indicated that the firms were registering varying rates of investment income which could imply that the firms had adopted different investment strategies to counter market risks.

In terms of operational risk, the proportion of net earned premiums to total assets was between 0.01 and 0.50 with an average of 0.22. This implied that some firms were managing their operations better than others thus registering a high ratio of net premiums to net assets of 0.50 compared to those which registered a ratio of 0.03. The results also indicated that liquidity risk was between 0.06 and 0.79 with a mean of 0.39. This suggested that the insurance firms had adopted different liquidity management strategies.

4.3.5 Descriptive Results for the Moderating Variables

The moderating variable was firm characteristics measured by leverage, size and age of the insurance firms. The descriptive results are presented in Table 4.3.

Table 4.3: Descriptive Results for the Moderating Variables

Variable	Mean	Maximum	Minimum	Std. Dev.	Observations
LEV	0.62	0.94	0.10	0.13	306
SIZE	7.06	9.91	0.34	2.28	306
AGE	3.26	4.58	0.69	0.83	306

Notes: This table presents the distribution of the moderating variables used in this study. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018. LEV denotes leverage, SIZE is the natural logarithm of total Assets, AGE is the natural logarithm of the number of years the insurance firm has been in operation.

The results in Table 4.3 indicate that the level of leverage was between 0.10 and 0.94 with a mean of 0.62. This implied that all the insurance firms in Kenya were utilizing debt to finance their operations. The results also indicated that the size of the firms was between 0.34 and 9.91 with a mean of 7.06. This implied that the firms were of different sizes in terms of assets. The results also indicated that the age of the firms was between 0.69 and 4.53 with a mean of 3.26. This implied that the firms had been in operation for some time and the duration varied from one firm to another.

4.4 Testing of Hypotheses

Multiple linear regression analysis was used to test the hypotheses in the study and determine the relationship between the variables. This section presents the results of the following four hypotheses that were tested.

H_{O1}:   Corporate governance has no significant effect on the performance of insurance firms in Kenya.

H_{O2}:   Financial risk management has no significant intervening effect on the relationship between corporate governance and performance of insurance firms in Kenya.

H_{O3}:   Firm characteristics have no significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya.

H_{O4}:   Corporate governance, financial risk management and firm characteristics have no significant joint effect on the performance of insurance firms in Kenya.

4.4.1 Corporate Governance and Performance of Insurance Firms

The first objective was to determine the effect of corporate governance on the financial performance of insurance firms in Kenya. The following hypothesis was thus tested using multiple linear regression model.

H_{01}: Corporate governance has no significant effect on the performance of insurance firms in Kenya.

The null hypothesis was tested using the following multiple linear regression model:

Model:

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \varepsilon \dots\dots\dots\dots\dots\dots\dots\dots 4.1$$

Where:

ROA was the return on assets, *β₀* was the regression constant, i was 1, …., 51 firms, t was 1, …., 6 years, $\beta_{1...}$ *B₄* were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity and ε was the error term.

4.4.1.1 Diagnostic Tests

Diagnostic tests were done in order to determine the appropriate analytic model. The tests were normality, heteroscedasticity, multi-collinearity, autocorrelation and serial correlation. Breusch Pagan LM test and Hausman test were also carried out in order to determine whether to use pooled OLS, fixed or random-effects model. The results are presented in Table4.4.

Table 4.4: Diagnostic Test Results

Test	Test adopted	Results	Conclusion
Normality	Histogram normality	Jarque-Bera statistic was 1.745 with a probability of 0.615	The P value of Jarque-Bera statistic was more than 5% suggesting that the error term was normally distributed.
Heteroskedasticity	Breusch-Pagan-Godfrey (BPG) test	The p-value for Breusch-Pagan statistic was 0.0976	The P value is more than 0.05 implying no presence of Heteroskedasticity
Autocorrelation Test	Durbin –Watson statistic	The Durbin Watson statistic was 2.09.	There is no first order linear auto-correlation in the multiple linear regression data because the value of Durbin Watson statistic is within the threshold 1.5<d<2.5
Serial correlation	Breusch-Godfrey Serial Correlation LM Test:	The P value was 0.078	The P value was more than 0.05, thus there was no serial correlation.

Notes: This table reports the Diagnostic Test Results for normality, heteroscedasticity, multi-collinearity, autocorrelation and serial correlation. The test was done to determine the appropriate analytic model. The dependent variable was financial performance (ROA) while the dependent variables were corporate governance measures (Board Size, board independence, board diversity and board composition). The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

Histogram normality test was carried out to determine normality. The null hypothesis for this test is that the data is normally distributed while the alternative hypothesis is that the data is not normally distributed. The results presented in Table 4.4 indicated that the Jarque-Bera statistic was 1.745 with a probability of 0.615 which was insignificant at a 5% level of significance, suggesting that the data was normally distributed. The alternative hypothesis was thus rejected and the study concluded that the data was normally distributed. Breusch-Pagan-Godfrey (BPG) test was carried out to test for heteroscedasticity. The null hypothesis for this test was that there was no heteroscedasticity while the alternative hypothesis was that heteroscedasticity exists. The results presented in Table 4.4 indicated that the p-value for Breusch-Pagan statistic was 0.0976 which was more than 0.05. The null hypothesis that there was no heteroscedasticity was thus accepted.

Autocorrelation was tested using Durbin Watson statistic. The Durbin Watson statistic should range between 1.5 and 2.5. The results in Table 4.4 indicated that the Durbin Watson statistic was 2.09 implying that there was no autocorrelation problem. The study used the Breusch-Godfrey Serial Correlation LM test to examine the presence of serial correlation. In this test the null hypothesis is that there is no serial correlation. The results in Table 4.4 indicated that the p-value was 0.078 which was more than 0.05 indicating that there existed no serial correlation.

Multi-collinearity was tested using variance inflation factor. A VIF of 1 indicates no correlation between predictors; a value of between 1 and 10 indicates a moderate correlation and a value above 10 indicates that predictor variables are highly correlated (Gujarati, 1995). The results presented in Table 4.5 indicates that the VIF values for all the variables are below 10 and the tolerance value (1/VIF) is below 1. The findings suggesting that there was no multi-collinearity problem

Table 4.5: Variance Inflation Factors

INDICATOR	VIF	1/VIF
Board Size	1.136937	0.879556
Board Independence	1.073175	0.931814
Board Diversity	1.023198	0.977328
Board Composition	1.095519	0.912809
Mean VIF	**1.082207**	

Notes: This table reports the multi-collinearity test results where the corporate governance measures (Board Size, board independence, board diversity and board composition) were assessed using variance inflation factor test. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

Correlation analysis was also done to further confirm multi-collinearity and the relationship of the variables. The correlation results in Table 4.6 indicate that the correlation between return on assets and board size was negative and significant ($r = -0.137$, p-value < 0.05). The results suggest that an increase in board size of a firm is associated with a decrease in ROA. The correlation results also indicated that the correlation between ROA and board independence was positive but not significant ($r = 0.061$, p-value > 0.01). The correlation between return on assets and board diversity was positive and significant ($r = 0.176$, p-value < 0.01). The results imply that an increase in the proportion of professionals to the board is associated with an increase in ROA. The correlation between board composition and return on assets was negative and significant ($r = -0.213$, p-value < 0.01). The results suggest that an increase in the proportion of executives to the board is associated with a decrease in ROA. The correlation results also indicated that the correlation between ROA and leverage was positive and significant ($r = 0.525$, p-value < 0.01). The results imply that an increase in the level of leverage in a firm is associated with an increase in ROA.

The correlation between return on assets and size of the firm was also positive and significant (r = 0.408, p-value < 0.01). The results imply that an increase in the size of a firm is associated to an increase in ROA. The correlation between the age of the firm and return on assets was negative but not significant (r = -0.0727, p-value > 0.01). The results of the correlation matrix presented in Table 4.6 also indicated that the correlation between the variables was below 0.80. The results implied that there was no multi-collinearity problem. Gujarati (1995) suggested that when the correlation between variables exceeds 0.80, then there may be a problem of multi-collinearity.

Table 4.6: Pearson Correlation Matrix

VARIABLE	ROA	BS	BI	BD	BC
Return on Assets (ROA)	1.0000 -----				
Board Size (BS)	-0.1371* 0.0164	1.0000 -----			
Board Independence (BI)	0.0613 0.2845	0.2052** 0.0003	1.0000 -----		
Board Diversity (BD)	0.1756** 0.0020	0.0605 0.2913	0.1316* 0.0210	1.0000 -----	
Board Composition (BC)	-0.2136** 0.0002	-0.2704** 0.0000	0.0430 0.4528	-0.0660 0.2496	1.0000 -----

Note: This table reports the correlation matrix for firm performance (ROA) and corporate governance variables (Board Size, board independence, board diversity and board composition). The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018. The **, * represents Correlation is significant at the 0.01 & 0.05 level (2-tailed) respectively.

To determine whether pooled OLS, random-effects, or fixed-effects model was appropriate, Breusch and Pagan Lagrangian multiplier test was carried out. The results indicated that the P value was 0.000 which was less than 0.05 suggesting that pooled OLS was not appropriate. The Hausman test was carried out to determine whether the random or fixed-effects model was appropriate. The results in Table 4.7 indicated that the p-value was 0.0067 which was less than 0.05 suggesting that the fixed effects model was appropriate.

The results in Table 4.8 also indicated that there was a difference between the values of fixed effect and random effect models. The fixed effect regression model was thus adopted to analyze the variables.

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Table 4.7: Hausman Test Cross-Section Random Effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.199718	4	0.0067

Table 4. 8: Cross-Section Random Effects Test Comparisons

Variable	Fixed	Random	Var. (Diff.)	Prob.
Board Size	-0.314509	-0.335403	0.000709	0.4325
Board Independence	11.213967	8.083614	2.064410	0.0294
Board Diversity	1.194896	1.643737	0.062667	0.0730
Board Composition	-10.625635	-14.180945	1.726919	0.0068

Note: Table 4.7 and 4.8 reports the Hausman test Cross-Section Random Effects and Test Comparisons for firm performance (ROA) and corporate governance variables (Board Size, board independence, board diversity and board composition). The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

4.4.1.2 Regression Results

The regression results in Table 4.9 indicated that the board size negatively and significantly affects the financial performance of insurance firms (β = -0.314509, $p <$ 0.05). The results suggested that firms with smaller board sizes perform better than firms with larger board sizes. The results were in agreement with the findings of Conyon and Peck (1998), Mak and Kusnadi (2015), Guest (2019), O'Conell and Crammer (2010), Afrifa and Tauringana (2015), Malik and Makhdoom (2016), and Arora and Sharma (2016). The findings also supported the views of Jensen (1993) that a firm with a large board size may experience problems in coordinating the group and ineffectiveness in arriving at decisions.

The results indicated that board independence positively and significantly affected the financial performance of insurance firms in Kenya (β = 11.21397, $p <$ 0.05). The results were consistent with the finding of Anderson et al. (2004), Bhagat and Bolton (2013), and Malik and Makhdoom (2016). The findings support the agency theory that the agency problem can be mitigated if the board is composed of independent directors. The results also indicated that board diversity positively and significantly affected financial performance (β = 1.19489, $p <$ 0.05). The findings suggested that increasing the proportion of professionals on the board impacted positively the performance of a firm.

The results confirm the work of Cheng et al. (2010), Ujunwa (2012), Darmadi, (2013), and Francis et al. (2015). The results also supported the resource dependency theory that a larger board consisting of more professionally qualified directors may provide guidance and acquire resources better than a smaller board. The results also indicated that board composition negatively and significantly affected financial performance (β = -10.6256, p < 0.5). The results implied that increasing the ratio of non-executive directors impacted negatively the performance of a firm. The finding was consistent with the work of Agrawal and Knoeber (1996), Yermack (1996), Andres et al. (2015), Wintoki, Linck, and Netter (2012). The hypothesis that corporate governance has no significant effect on the performance of insurance firms in Kenya was thus rejected and the alternative hypothesis that corporate governance significantly affects the performance of insurance firms in Kenya was accepted.

Table 4.9: Corporate Governance and Financial Performance Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	6.605994	3.056903	2.161009	0.0316
Board Size	-0.314509	0.082910	-3.793362	0.0002
Board Independence	11.21397	4.162475	2.694062	0.0075
Board Diversity	1.194896	0.636387	1.877626	0.0061
Board Composition	-10.62564	3.308030	-3.212074	0.0015
R^2	0.330			
Adjusted R^2	0.186			
Prob (F statistic)	0.000			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial performance measure (ROA) and corporate governance measures (Board Size, board independence, board diversity and board composition) are regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

Further analysis was done using different models to check the robustness of the model. The results presented in Table 4.10 indicated that the results generated by the different models were similar to the findings of the fixed effects model that was adopted. The results from all the models indicate that the relationship between board size, board composition, firm age, and financial performance was negative.

The results of all the models also indicated that the relationship between board independence, board diversity, leverage, firm size, and financial performance was positive. The hypothesis that corporate governance had no significant effect on the performance of insurance firms in Kenya was thus rejected and the alternative hypothesis that corporate governance significantly affect the performance of insurance firms in Kenya was accepted

Table 4.10: Robustness Regression Analysis Results

Variables	Pooled OLS Model	Generalized Linear Model (GLM)	Random effect Model	Fixed Effect Model	Robust Least Squares Model
C	11.4167	11.4167	10.5065	6.6059	6.1891
(t-statistic)	(3.9319)		(3.7030)	(2.1610)	
(Z-statistic)		(3.9319)			(2.4096)
Board Size	-0.3394*	--0.3394*	-0.3354*	-0.3145*	-0.3411*
(t-statistic)	(-4.2002)		(-4.2715)	(-3.7933)	
(Z-statistic)		(-4.2002)			(-5.0863)
Board Independence	7.3060*	7.3060*	8.0836*	11.2139*	10.5640*
(t-statistic)	(1.8225)		(2.0692)	(3.7933)	
(Z-statistic)		(1.8225)			(3.1754)
Board Diversity	1.7411*	1.7411*	1.6437*	1.1948*	3.0826*
(t-statistic)	(2.9131)		(2.8094)	(1.8776)	
(Z-statistic)		(2.9131)			(6.2147)
Board Composition	-14.9868*	-14.9868*	-14.1809*	-10.6256*	-10.5109*
(t-statistic)	(-4.8360)		(-4.6712)	(-3.2107)	
(Z-statistic)		(-4.8360)			(-4.0869)
F.Stat.	10.8020	-	10.0761	2.2960	-
Prob(F-Stat)	0.000		0.000	0.0000	
Prob(LR-Stat)		0.000			
Prob (Rn-squared. Stat)					0.000
R-Squared	0.1255	-	0.11809	0.33064	0.1396
Adjusted R-Squared	0.1139	-	0.10637	0.18664	0.1281
Durbin-Watson Statistic	1.6575		1.7326	2.0996	

Notes: This table reports the estimation results where the financial performance measure (ROA) and corporate governance measures (Board Size, board independence, board diversity and board composition) are regressed using different models. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

 * = Significant at the 0.05 level.

4.4.2 Corporate Governance, Financial Risk Management and Performance

The second objective was to evaluate the intervening effect of financial risk management on the relationship between corporate governance and performance of insurance firms in Kenya. The following hypothesis was tested using multiple linear regression model.

H_{02}: Financial risk management has no significant intervening effect on the relationship between corporate governance and performance of insurance firms in Kenya.

4.4.2.1 Diagnostic Tests

Diagnostic tests were done in order to determine the appropriate analytic model for evaluating the intervening effect of financial risk management. The tests were normality, heteroscedasticity, multi-collinearity and autocorrelation. Breusch-Pagan LM test and Hausman test were also carried out in order to determine whether to use pooled OLS, fixed or random-effects model. The results are presented in this section.

Histogram normality test was carried out to determine normality. The results in Table 4.11 indicated that the Jarque-Bera statistic was 0.180928 with a probability of 0.913507 which was insignificant at a 5% level of significance, suggesting that the data was normally distributed. Breusch-Pagan-Godfrey (BPG) test was carried out to test for heteroscedasticity. The results in Table 4.11 indicated that the p-value for Breusch-Pagan statistic was 0.0976 which was more than 0.05 suggesting that there was no presence of heteroscedasticity.

Autocorrelation was tested using Durbin-Watson statistic. The Durbin-Watson statistic should range between 1.5 and 2.5. The results in Table 4.11 indicated that the Durbin-Watson statistic was 2.05 implying that there was no autocorrelation problem. The study used the Breusch-Godfrey Serial Correlation LM test to examine the presence of serial correlation. In this test the null hypothesis is that there is no serial correlation. The results in Table 4.11 indicated that the p-value was 0.086 which was more than 0.05 indicating that there existed no serial correlation.

Table 4.11: Diagnostic Test Results

Test	Test adopted	Results	Conclusion
Normality	Histogram normality	Jarque-Bera statistic was 0.180928 with a probability of 0.913507	The P value of Jarque-Bera statistic was more than 5% suggesting that the error term was normally distributed.
Heteroskedasticity	Breusch-Pagan-Godfrey (BPG) test	The p-value for Breusch-Pagan statistic was 0.0976	The P value is more than 0.05 implying no presence of Heteroskedasticity
Autocorrelation Test	Durbin –Watson statistic	The Durbin Watson statistic was 2.05.	There is no first order linear auto-correlation in the multiple linear regression data because the value of Durbin Watson statistic is within the threshold $1.5<d<2.5$
Serial Correlation	Breusch-Godfrey Serial Correlation LM Test:	The P value was 0.086	The P value was more than 0.05, thus there was no serial correlation.

Multi-collinearity was tested using variance inflation factor. A VIF of 1 indicates no correlation between predictors; a value of between 1 and 10 indicates a moderate correlation and a value above 10 indicates that predictor variables are highly correlated (Gujarati, 1995). The results in Table 4.12 indicate that the VIF values for all the variables were below 10 and the tolerance value (1/VIF) was below 1. The findings suggested that there was no multi-collinearity problem

Table 4.12: Variance Inflation Factors

INDICATOR	VIF	1/VIF
Board Size	1.165192	0.858228
Board Independence	1.093305	0.914658
Board Diversity	1.066072	0.938023
Board Composition	1.249008	0.800635
Credit Risk	1.786917	0.559623
Market Risk	1.732997	0.577035
Operation Risk	1.203292	0.831053
Liquidity Risk	1.159759	0.862248
Mean VIF	**1.307067**	

Notes: This table reports the multi-colinearity test results where the corporate governance measures (Board Size, board independence, board diversity and board composition) and financial risk management variables (credit risk, market risk, operation risk and liquidity risk) were assessed using variance inflation factor test. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

Correlation analysis was also done to further confirm multi-collinearity and the relationship of the variables. The correlation results in Table 4.13 indicate that the correlation between return on assets and board size was negative and significant ($r = -0.137$, p-value < 0.05). The results suggested that an increase of the board size in a firm is associated with a decrease in ROA. The correlation results indicated that the correlation between ROA and board independence was positive but not significant ($r = 0.061$, p-value > 0.01.

The correlation between return on assets and board diversity was positive and significant ($r = 0.176$, p-value < 0.01). The results implied that an increase in the proportion of professionals to the board is associated with in an increase in ROA. The correlation between board composition and return on assets was negative and significant ($r = -0.213$, p-value < 0.01). The results suggested that an increase in the proportion of executives to the board is associated with a decrease in ROA. The correlation between return on assets and credit risk was negative and significant ($r = -0.489$, p-value < 0.01). The results suggested that an increase in the proportion of non-performing receivables to total receivables is associate with a decrease in the return on assets. The correlation results also indicated that the correlation between ROA and market risk was positive but not significant ($r = 0.116$, p-value > 0.01).

The correlation between return on assets and operation risk was positive and significant ($r = 0.232$, p-value < 0.01). The results implied that an increase in the proportion of net premiums earned to total assets is associated with an increase in ROA. Similarly, the correlation between liquidity risk and return on assets was positive and significant ($r = 0164$, p-value < 0.01). The results suggest that an increase in the proportion of current assets to total assets is associated to an increase in ROA. The results of the correlation matrix also indicated that the correlation between the variables was below 0.80. The results imply that there was no multi-collinearity problem. Gujarati (1995) suggested that when the correlation between variables exceeds 0.80, then there may be a problem of multi-collinearity.

Table 4.13: Pearson Correlation Matrix

Indicator	ROA	BS	BI	BD	BC	CR	MR	OR	LR
Return on Assets (ROA)	1.000								

Board Size (BS	-0.137**	1.000							
	0.0164	-----							
Board Independence (BI	0.0613	0.205**	1.000						
	0.2845	0.0003	-----						
Board Diversity (BD)	0.175**	0.0605	0.131**	1.0000					
	0.0020	0.2913	0.0213	-----					
Board Composition (BC)	-0.213**	-0.270**	0.043	-0.066	1.000				
	0.0002	0.0000	0.4528	0.2496	-----				
Credit Risk (CR)	-0.489**	-0.093	-0.094**	0.133**	-0.131**	1.000			
	0.0000	0.1035	0.0975	0.0195	0.0216	-----			
Market Risk (MR)	0.116*	0.085	0.078	-0.161**	-0.159**	-0.580**	1.000		
	0.0421	0.1348	0.1704	0.0047	0.0051	0.0000	-----		
Operation Risk (OP)	0.232**	0.056	0.035	-0.048	-0.079	-0.278**	0.211**	1.000	
	0.0000	0.3273	0.5377	0.3970	0.1630	0.0000	0.0002	-----	
Liquidity Risk (LR)	0.164**	-0.051	0.084	0.053	0.076	-0.140**	-0.047	0.296**	1.000
	0.0038	0.3693	0.1410	0.3540	0.1848	0.0141	0.4052	0.0000	-----

Note: This table reports the correlation matrix for firm performance (ROA), corporate governance variables (Board Size, board independence, board diversity and board composition) and financial risk management variables (credit risk, market risk, operation risk and liquidity risk). The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018. The **, * represents Correlation is significant at the 0.01 & 0.05 level (2-tailed) respectively.

To determine whether pooled OLS, random-effects, or fixed-effects model was appropriate, Breusch and Pagan Lagrangian multiplier test was carried out. The results indicated that the P value was 0.000 which was less than 0.05 suggesting that pooled OLS was not appropriate.

Hausman test was further carried out to determine whether the random or fixed-effects model was appropriate. The results in Table 4.14 indicated that the p-value was 0.0007 which was less than 0.05 suggesting that the fixed effects model was appropriate. The results in Table 4.15 also indicated that there was a difference between the values of fixed effect and random effect models. Fixed effect regression model presented in Table 4.14 was thus adopted to analyze the variables.

Table 4.14: Hausman Test Cross-Section Random Effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	27.096654	8	0.0007

Table 4.15: Cross-Section Random Effects Test Comparisons

Indicator	Fixed	Random	Var. (Diff.)	Prob.
Board Size	-0.020633	-0.051315	0.000348	0.1001
Board Independence	-3.710310	-6.104674	1.143100	0.0251
Board Diversity	0.196517	0.525926	0.031209	0.0622
Board Composition	-7.722651	-9.931305	0.924038	0.0216
Credit Risk	16.432143	17.046023	0.266907	0.2347
Market Risk	7.150605	6.471398	0.108210	0.0389
Operation Risk	7.786081	8.385373	0.280204	0.2576
Liquidity Risk	2.496344	3.238711	0.101829	0.0200
Credit Risk	-0.020633	-0.051315	0.000348	0.1001

Note: Table 4.14 and 4.15 reports the Hausman test Cross-Section Random Effects and Test Comparisons for firm performance (ROA), corporate governance variables (Board Size, board independence, board diversity and board composition) and financial risk management variables (credit risk, market risk, operation risk and liquidity risk). The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

4.4.2.2 Regression Results

The study adopted a four step process proposed by Barron and Kenny (1986) to test the null hypothesis that financial risk management has no significant intervening effect on the relationship between corporate governance and performance of insurance firms in Kenya.

The first step was to assess the relationship between the dependent variable (ROA) and independent variables (corporate governance) using the following multiple regression model

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \varepsilon \dots\dots\dots\dots\dots\dots\dots\dots\dots 4.2$$

Where:

ROA was the return on assets, *β₀* was the regression constant, *i* was 1, …., 51 firms, t was 1, …., 6 years, *β₁, …., B₄* were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity and ε was the error term.

The results presented in Table 4.16 indicate that the F statistic was 0.000 and the p values for all the independent variables were less than 0.05 which implied that the independent variables significantly affected the dependent variable. The results were consistent with the findings of prior studies by Conyon and Peck (1998), Chen, Cheung, Stouraitis and Wong (2015), Mak and Kusnadi (2015), Guest (2019), Jackling and Johl, (2019), O'Conell and Crammer (2010), Afrifa and Tauringana (2015), Malik and Makhdoom (2016), Maqbool, Ali and Numan (2019), and Riyadh, Sukoharsono and Alfaiza (2019).

Table 4.16: Corporate Governance and Financial Performance Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	6.605994	3.056903	2.161009	0.0316
Board Size	-0.314509	0.082910	-3.793362	0.0002
Board Independence	11.21397	4.162475	2.694062	0.0075
Board Diversity	1.194896	0.636387	1.877626	0.0061
Board Composition	-10.62564	3.308030	-3.212074	0.0015
R^2	0.330			
Adjusted R^2	0.186			
Prob (F statistic)	0.000			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial performance measure (ROA) and corporate governance measures (Board Size, board independence, board diversity and board composition) are regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

The second step was to assess the relationship between the intervening variable (financial risk management) and the independent variable (corporate governance) using the following regression model 4.3.

$$FRM = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \varepsilon \ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 4.3$$

Where:

FRM was the composite ratio of financial risk management computed as a geometric mean of the attributes of financial risk management, β_0 was the regression constant, *i* was 1, …., 51 firms, t was 1, …., 6 years, $\beta_1, \ldots, B_4$ were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity and ε was the error term.

The results presented in Table 4.17 indicate that the F statistic was 0.001 and the p values for all the independent variables were less than 0.05, which implied that the independent variable (corporate governance) significantly affected the dependent variable (financial risk management).

The results were consistent with the findings of prior studies by Wakaisuka (2017), Nandi and Gosh (2013), Permatasari (2020), Kafidipe et al. (2021) and Rehman et al. (2021).

Table 4.17: Corporate Governance and Financial Risk Management Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0.392144	0.072415	5.415237	0.0000
Board Size	-0.002456	0.002268	-1.082824	0.0027
Board Independence	0.283782	0.105414	2.692082	0.0075
Board Diversity	0.004064	0.014424	0.281734	0.0077
Board Composition	-0.272456	0.075638	-3.602122	0.0004
R^2	0.084			
Adjusted R^2	0.056			
Prob (F statistic)	0.001			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial risk management (FRM) and corporate governance measures (Board Size, board independence, board diversity and board composition) are regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

The third step was to assess the relationship between the intervening variable (financial risk management) and the dependent variable (ROA) using the regression model 4.4.

$$ROA_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 MR_{it} + \beta_3 OR_{it} + \beta_4 LR_{it} + \varepsilon \dots\dots\dots\dots\dots\dots\dots 4.4$$

Where:

ROA was the return on assets, β_0 was the regression constant, *i* was 1… 51 firms, t was 1… 6 years, $\beta_{1…}$ B_4 were coefficients estimated, CR was credit risk, MR was market risk, *OR* was operation risk, *LR* was liquidity risk and ε was the error term.

The results presented in Table 4.18 indicate that the F statistic was 0.000 and the p values for all the independent variables were less than 0.05 which implied that the intervening variable (financial risk management) significantly affected the dependent variable (financial performance). The result confirms prior findings by Zou and Li (2014), Ekinci (2016), Isanzu (2017), Chen *et al*. (2018), Gadzo et al. (2019), Saleh et al (2020), Munangi and Bongani (2020) and Onsongo et al. (2020).

Table 4.18: Financial Risk Management and Performance Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.930184	0.682144	-13.09134	0.0000
Credit Risk	-18.53208	1.148824	-16.13134	0.0000
Market Risk	7.125773	0.873488	8.157838	0.0000
Operation Risk	8.879421	1.240356	7.158767	0.0000
Liquidity Risk	3.140890	0.651395	4.821791	0.0000
R^2	0.538518			
Adjusted R^2	0.424486			
Prob (F statistic)	0.000			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial performance measure (ROA) and financial risk management measures (Credit risk, market risk, operation risk and liquidity risk) are regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

The fourth step was to assess the relationship between dependent variables, intervening variables and independent variable using the regression model 4.5.

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \beta_5 CR_{it} + \beta_6 MR_{it} + \beta_7 OR_{it} + \beta_8 LR_{it} + \varepsilon \dots\dots\dots\dots\dots 4.5$$

Where:

ROA was the Return on Assets, β_0 was the regression constant, *i* was 1… 51 firms, t was 1… 6 years, $\beta_{1…} B_8$ were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity, CR was credit risk, MR was market risk, OR was operation risk, LR was liquidity risk and ε was the error term.

The results presented in Table 4.19 indicate that the F statistic was 0.000 and the p values for all the independent variables were less than 0.05 which implied that the independent variable (corporate governance) and the intervening variables (financial risk management) significantly affected the dependent variable (financial performance). The result was consistent with prior studies by Aebi et al. (2012), Nandi and Gosh (2013), Manini and Abdillahi (2015), Demeke (2016), Wakaisuka (2017); Permatasari (2020), Kafidipe *et al.* (2021) and Rehman *et al.* (2021).

Table 4.19: Corporate Governance, Financial Risk Management and Performance Regression Results

Indicator	Coefficient	Std. Error	t-Statistic	Prob.
Constant	4.176333	2.510333	1.663657	0.0973
Board Size	-0.151207	0.069753	-2.167757	0.0310
Board Independence	7.302913	3.209992	2.275056	0.0236
Board Diversity	0.562820	0.442674	1.271409	0.0046
Board Composition	-10.99645	2.440211	-4.506354	0.0000
Credit Risk management	-16.68057	1.171260	-14.24156	0.0000
Market Risk management	6.155739	0.877443	7.015545	0.0000
Operation Risk management	8.510341	1.196253	7.114162	0.0000
Liquidity Risk	3.226517	0.631553	5.108860	0.0000
R^2	0.586138			
Adjusted R^2	0.467713			
Prob (F statistic)	0.000			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial performance measure (ROA), financial risk management measures (Credit risk, market risk, operation risk and liquidity risk) and corporate governance measures (Board Size, board independence, board diversity and board composition) are regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

The results of the first step presented in Table 4.16 indicated that corporate governance significantly affected performance of insurance firms. Similarly, the findings of the second step presented in Table 4.17 indicated that corporate governance significantly affected the financial risk management of insurance firms. The results of the third step presented in Table 4.18 also indicated that financial risk management significantly affected the performance of insurance firms.

The findings of the fourth step presented in Table 4.19 indicated that corporate governance and financial risk management significantly affected performance of insurance firms when analyzed in the same model. The findings implied that financial risk management intervenes the relationship between corporate governance and financial performance. The finding is consistent with the work of Nandi and Gosh (2013), Manini and Abdillahi (2015), Demeke (2016), Wakaisuka (2017), Permatasari (2020), Kafidipe et al. (2021) and Rehman et al. (2021). The hypothesis that financial risk management had no significant intervening effect on the relationship between corporate governance and performance of insurance firms in Kenya was thus rejected.

4.4.3 Corporate Governance, Firm Characteristics and Performance

The third objective was to determine the moderating effect of firm characteristics on the relationship between corporate governance and performance of insurance firms in Kenya. The following hypothesis was therefore tested using multiple linear regression model.

H_{O3}:   Firm characteristics have no significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya.

4.4.3.1 Diagnostic Tests

Diagnostic tests were done in order to determine the appropriate analytic model. The tests were normality, heteroscedasticity, multi-collinearity and autocorrelation. Breusch Pagan LM test and Hausman test were also carried out in order to determine whether to use pooled OLS, fixed or random-effects model. The results of the diagnostic tests are presented in this section.

Table 4.20: Diagnostic Test Results

Test	Test adopted	Results	Conclusion
Normality	Histogram normality	Jarque-Bera statistic was 1.636 with a probability of 0.441	The P value of Jarque-Bera statistic was more than 5% suggesting that the error term was normally distributed.
Heteroskedasticity	Breusch-Pagan-Godfrey (BPG) test	The p-value for Breusch-Pagan statistic was 0.0784	The P value is more than 0.05 implying no presence of Heteroskedasticity
Autocorrelation Test	Durbin –Watson statistic	The Durbin Watson statistic was 2.09.	There is no first order linear auto-correlation in the multiple linear regression data because the value of Durbin Watson statistic is within the threshold $1.5<d<2.5$
Serial Correlation	Breusch-Godfrey Serial Correlation LM Test:	The P value was 0.092	The P value was more than 0.05, thus there was no serial correlation.

Histogram normality test was carried out to determine normality. The results in Table 4.20 indicated that the Jarque-Bera statistic was 1.636 with a probability of 0.441 which was insignificant at a 5% level of significance, suggesting that the data was normally distributed. The alternative hypothesis was thus rejected and the study concluded that the data was normally distributed.

Breusch-Pagan-Godfrey (BPG) test was carried out to test for heteroscedasticity. The null hypothesis for this test was that there was no heteroscedasticity while the alternative hypothesis was that heteroscedasticity exists. The results in Table 4.20 indicated that the p-value for Breusch-Pagan statistic was 0.0784 which was more than 0.05. The null hypothesis that there was no heteroscedasticity was thus accepted. Autocorrelation was tested using Durbin-Watson statistic. The Durbin-Watson statistic should range between 1.5 and 2.5. The results in Table 4.20 indicated that the Durbin Watson statistic was 2.09 implying that there was no autocorrelation problem. The study used the Breusch-Godfrey Serial Correlation LM test to examine the presence of serial correlation. In this test the null hypothesis that there is no serial correlation. The results in Table 4.20 indicated that the p-value was 0.092 which was more than 0.05 indicating that there exists no serial correlation.

Multi-collinearity was tested using variance inflation factor. A VIF of 1 indicates no correlation between predictors; a value of between 1 and 10 indicates a moderate correlation and a value above 10 indicates that predictor variables are highly correlated (Gujarati, 1995). The results in Table 4.21 indicate that the VIF values for all the variables were below 10 and the tolerance value (1/VIF) was below 1. The findings suggest that there was no multi-collinearity problem.

Table 4.21: Variance Inflation Factors

INDICATOR	VIF	1/VIF
Board Size	1.158664	0.863063
Board Independence	1.095682	0.912674
Board Diversity	1.033495	0.967591
Board Composition	1.160339	0.861817
Leverage	1.1036	0.906125
Firm Size	1.058182	0.945017
Firm Age	1.02448	0.976105
Mean VIF	**1.0906**	

Notes: This table reports the multi-colinearity test results where the corporate governance measures (Board Size, board independence, board diversity and board composition) and firm characteristics variables (Leverage, firm size and firm age) were assessed using variance inflation factor test. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

Correlation analysis was also done to further confirm multi-collinearity and the relationship of the variables. The correlation results in Table 4.22 indicate that the correlation between return on assets and board size was negative and significant ($r = -0.137$, p-value < 0.05). The results suggest that an increase in the board size of a firm is associated with a decrease in ROA. The correlation between ROA and board independence was positive but not significant ($r = 0.061$, p-value > 0.01. The correlation between return on assets and board diversity was positive and significant ($r = 0.176$, p-value < 0.01). The results implied that an increase in the proportion of professionals to the board of a firm is associated with an increase in ROA. The correlation between board composition and return on assets was negative and significant ($r = -0.213$, p-value < 0.01). The results suggest that an increase in the proportion of executives to the board is associate with a decrease in ROA. The correlation results also indicated that the correlation between ROA and leverage was positive and significant ($r = 0.525$, p-value < 0.01). The results suggest that an increase in the level of leverage is associated to an increase in ROA. The correlation between return on assets and size of the firm was positive and significant ($r = 0.408$, p-value < 0.01). The results implied that an increase in the size of a firm is associated to an increase in ROA.

The correlation between the age of the firm and return on assets was negative but not significant (r = -0.0727, p-value > 0.01). The results of the correlation matrix presented in Table 4.22 also indicated that the correlation between the variables was below 0.80. The results imply that there was no multi-collinearity problem. Gujarati (1995) suggested that when the correlation between variables exceeds 0.80, then there may be a problem of multi-collinearity.

Table 4.22: Pearson Correlation Matrix

INDICATOR	ROA	BS	BI	BD	BC	LEV	SIZE	AGE
Return on Assets (ROA)	1.0000							

Board Size (BS)	-0.1371*	1.0000						
	0.0164	-----						
Board Independence (BI)	0.0613	0.2052**	1.0000					
	0.2845	0.0003	-----					
Board Diversity (BD)	0.1756**	0.0605	0.1316*	1.0000				
	0.0020	0.2913	0.0210	-----				
Board Composition (BC)	-0.2136**	-0.2704**	0.0430	-0.0660	1.0000			
	0.0002	0.0000	0.4528	0.2496	-----			
Leverage (LEV)	0.5251**	-0.0357	0.0276	-0.0591	-0.2011**	1.0000		
	0.0000	0.5331	0.6295	0.3022	0.0004	-----		
Firm Size (SIZE)	0.4088**	-0.0972***	-0.044300	-0.0612	-0.0394	0.2079**	1.0000	
	0.0000	0.0895	0.4400	0.2853	0.4913	0.0002	-----	
Firm Age (AGE)	-0.0727	-0.0028	0.1325*	0.0572	0.0659	-0.0155	-0.0312	1.0000
	0.2045	0.9605	0.0204	0.3185	0.2500	0.7858	0.5857	-----

Note: This table reports the correlation matrix for firm performance (ROA), corporate governance variables (Board Size, board independence, board diversity and board composition) and firm characteristics variables (Leverage, firm size and firm age). The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018. The ***, **, * represents Correlation is significant at the 0.1, 0.01 & 0.05 level (2-tailed) respectively.

To determine whether pooled OLS, random-effects, or fixed-effects model was appropriate, Breusch and Pagan Lagrangian multiplier test was carried out. The results indicated that the P value was 0.000 which was less than 0.05 suggesting that pooled OLS was not appropriate. Hausman test was further carried out to determine whether the random or fixed-effects model was appropriate. The results in Table 4.23 indicated that the p-value was 0.0092 which was less than 0.05 suggesting that the fixed effects model was appropriate. The results in Table 4.24 also indicated that there was a difference between the values of fixed effect and random effect models.

Table 4.23: Hausman Test Cross-Section Random Effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	18.687041	7	0.0092

Table 4.24: Cross-Section Random Effects Test Comparisons

Indicator	Fixed	Random	Var. (Diff.)	Prob.
Board Size	-0.242744	-0.226193	0.000511	0.4639
Board Independence	9.293515	6.163432	1.541205	0.0117
Board Diversity	2.019414	2.326233	0.052244	0.1795
Board Composition	-5.384235	-7.657388	1.244139	0.0416
Leverage	7.027218	7.424190	0.155371	0.3139
Firm Size	0.324856	0.322348	0.000355	0.8941
Firm Age	-0.478090	-0.203383	0.106608	0.4002

Note: Table 4.20 and 4.21 reports the Hausman test Cross-Section Random Effects and Test Comparisons for firm performance (ROA), corporate governance variables (Board Size, board independence, board diversity and board composition) and firm characteristics variables (Leverage, firm size and firm age). The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

4.4.3.2 Regression Results

The null hypothesis that firm characteristics have no significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya was tested by undertaking a three step process as proposed by Barron and Kenny (1986).

The first step was to determine the relationship between firm characteristics and the financial performance of insurance firms using the following model:

$$ROA_{it} = \beta_0 + \beta_1 AGE_{it} + \beta_2 LEV_{it} + \beta_3 SIZE_{it} + \varepsilon$$
………………………………….4.6

Where:

ROA was the return on assets, *β₀* was the regression constant, *i* was 1 …. 51 firms, t was 1, …., 6 years, *β₁… B₃* were coefficients estimated, *AGE* was the age of the firm, *LEV* was the leverage of the firm, *SIZE* was the size of the firm and ε was the error term.

The results are presented in Table 4.25

Table 4.25: Firm Characteristics and Performance Regression Results

Indicator	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.989241	0.589019	-8.470432	0.0000
Leverage	7.614014	0.791468	9.620112	0.0000
Firm Size	0.317409	0.047428	6.692381	0.0000
Firm Age	-0.011690	0.004967	-2.353289	0.0192
R^2	0.373627			
Adjusted R^2	0.267404			
Prob (F statistic)	0.000			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial performance measure (ROA) and firm characteristics variables (Leverage, firm size and firm age) were regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

The results presented in Table 4.25 indicate that the F statistic was 0.000 and the p values for all the moderating variables were less than 0.05 which implied that the moderating variable (firm characteristics) significantly affected the dependent variable (financial performance). The findings confirm prior studies by Nandi and Goshi (2013), Manini and Abdilahi (2015), Demeke (2016), Wakaisuka (2017), and Munangi and Bongani (2020).

The second step was to assess the relationship between the independent variable, moderating variable and the dependent variable using the multiple regression model 4.7:

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \beta_5 AGE_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \varepsilon \dots\dots\dots\dots 4.7$$

Where:

ROA was the return on assets, β_0 was the regression constant, *i* was 1, …., 51 firms, t was 1, …., 6 years, β_1, …., B_7 were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity, *AGE* was the age of the firm, *LEV* was the leverage of the firm, *SIZE* was the size of the firm and ε was the error term.

The results presented in Table 4.26 indicate that the F statistic was 0.000 which was less 0.05) and the p values for all the independent variables were less than 0.05 which implied that the independent variable (corporate governance) and the moderating variable (firm characteristics) significantly affected the dependent variable (financial performance). This confirms the work of Ekinci (2016), Isanzu (2017), Chen et al. (2018), Gadzo et al. (2019), Saleh et al (2020), and Munangi and Bongani (2020).

Table 4.26: Corporate Governance, Firm Characteristics and Performance Regression Results

Indicator	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.840477	2.799202	-1.014745	0.3112
Board Size	-0.242744	0.067157	-3.614590	0.0004
Board Independence	9.293515	3.379351	2.750089	0.0064
Board Diversity	2.019414	0.519865	3.884494	0.0001
Board Composition	-5.384235	2.717219	-1.981524	0.0486
Leverage	7.027218	0.850606	8.261424	0.0000
Firm Size	0.324856	0.048296	6.726381	0.0000
Firm Age	-0.478090	0.348838	-1.370522	0.0171
R2	0.570			
Adjusted R2	0.471			
Prob (F statistic)	0.000			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial performance measure (ROA), corporate governance measures (Board Size, board independence, board diversity and board composition) and firm characteristics variables (Leverage, firm size and firm age) are regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

The third step was to evaluate the relationship between the independent variable (board composition), moderating variable (firm characteristics), interaction of the independent variable with the moderating variable and the dependent variable (financial performance) using the multiple regression model 4.8:

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \beta_5 AGE_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \beta_8 (BC*FC)_{it} + \beta_9 (BI*FC)_{it} + \beta_{10}(BS*FC)_{it} + \beta_{11}(BD*FC)_{it} + \varepsilon \dots\dots\dots 4.8$$

Where:

ROA was the return on assets, β_0 was the regression constant, *i* was 1 …. 51 firms, t was 1 …. 6 years, β_1... B_{11} were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity, *AGE* was the age of the firm, *LEV* was the leverage of the firm, *SIZE* was the size of the firm, BC*FC was the multiplication of board composition and composite ratio of firm characteristics, BI*FC was the multiplication of board independence and composite ratio of firm characteristics, BS*FC was the multiplication of board size and composite ratio of firm characteristics, BD*FC was the multiplication of board diversity and composite ratio of firm characteristics, characteristics and ε was the error term.

The results presented in Table 4.27 indicate that the F statistic was 0.000 and the p values for all the independent, moderating and the interaction of the independent and moderating variables were less than 0.05 which implied that the independent variable (corporate governance) predicted the independent variable (financial performance) even when there was interaction with the moderating variables. The results were consistent with the work of Nandi and Goshi (2013), Ekinci (2016), Isanzu (2017), Wakaisuka (2017), Chen et al. (2018), Gadzo et al. (2019), Saleh et al (2020) and, Munangi and Bongani (2020).

Table 4.27: Interaction of Corporate Governance with Firm Characteristics and Performance Regression Results

Indicator	Coefficient	Std. Error	t-Statistic	Prob.
C	3.938067	17.96871	0.219162	0.8267
Board Size	-0.507249	0.364639	-1.391099	0.0165
Board Independence	3.633304	1.886979	1.925461	0.0055
Board Diversity	0.954897	3.786017	0.252217	0.0080
Board Composition	-2.635808	1.939138	-1.359268	0.0175
Firm Age	-0.246481	3.300623	-0.074677	0.0094
Firm Size	1.854083	1.087428	1.705017	0.0895
Leverage	1.579361	1.857236	0.850382	0.0396
Board Size* Firm Age	-0.034457	0.079438	-0.433759	0.0066
Board Independence* Firm Age	3.875472	3.950983	0.980888	0.0032
Board Diversity* Firm Age	0.246980	0.654640	0.377275	0.0070
Board Composition* Firm Age	-1.035290	3.574275	-0.289650	0.0077
Board Size* Firm Size	-0.006822	0.030942	-0.220489	0.0082
Board Independence* Firm Size	0.748531	1.286546	0.581815	0.0056
Board Diversity* Firm Size	0.297997	0.234853	1.268866	0.0205
Board Composition* Firm Size	-2.921804	1.178715	-2.478805	0.0139
Board Size* Leverage	-0.221809	0.123903	-1.790190	0.0074
Board Independence* Leverage	1.724216	3.146703	0.547944	0.0058
Board Diversity* Leverage	0.139580	3.954688	0.035295	0.0097
Board Composition* Leverage	-2.485172	16.81442	-0.147800	0.0088
R^2	0.596550			
Adjusted R^2	0.478593			
Prob (F statistic)	0.00000			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial performance measure (ROA), corporate governance measures (Board Size, board independence, board diversity and board composition), firm characteristics variables (Leverage, firm size and firm age) and the interaction of corporate governance and firm characteristics variables were regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

The results of the first step presented in Table 4.25 indicated that firm characteristics significantly affected performance of insurance firms. Similarly, the findings of the second step presented in Table 4.26 indicated that corporate governance and firm characteristics significantly affected the performance of insurance firms when both were analyzed in the same model. The results of the third step presented in Table 4.27 also indicated that corporate governance, firm characteristics and the interaction of the corporate governance and firm characteristics variables significantly affected the performance of insurance firms when analyzed in the same model. Therefore, the findings implied that firm characteristics moderate the relationship between corporate governance and financial performance. The findings confirm the work of Nandi and Goshi (2013), Manini and Abdilahi (2015), Demeke (2016), Wakaisuka (2017), Munangi and Bongani (2020). The hypothesis that firm characteristics have no significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya was thus rejected.

4.4.4 Corporate Governance, Financial Risk Management, Firm Characteristics and Performance of Insurance Firms

The fourth objective was to assess the joint effect of corporate governance, financial risk management and firm characteristics on performance of insurance firms in Kenya. The null hypothesis that corporate governance, financial risk management and firm characteristics have no significant effect on the performance of insurance firms in Kenya was tested using the following multiple linear regression model:

$$ROA_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 BI_{it} + \beta_3 BS_{it} + \beta_4 BD_{it} + \beta_5 CR_{it} + \beta_6 MR_{it} + \beta_7 OR_{it} + \beta_8 LR_{it} + \beta_9 AGE_{it} + \beta_{10} LEV_{it} + \beta_{11} SIZE_{it} + \varepsilon \,\text{.....…...……}\,4.9$$

Where:

β_0 was the regression constant, *i* was 1, …., 51 firms, t was 1, …., 6 years, $\beta_{1…}$ B_8 were coefficients estimated, *BC* was board composition, *BI* was board independence, *BS* was board size, *BD* was board diversity, *CR* was credit risk, *MR* was market risk, *OR* was operation risk, *LR* was liquidity risk and *AGE* was the age of the firm, *LEV* was the leverage of the firm, *SIZE* was the size of the firm and ε was the error term.

4.4.4.1 Diagnostic Tests

Diagnostic tests were done in order to determine the appropriate analytic model. The tests were normality, heteroscedasticity, multi-collinearity and autocorrelation. Breusch Pagan LM test and Hausman test was also carried out in order to determine whether to use pooled OLS, fixed or random-effects model.

Normality test was carried out by using the Jarque-Bera statistic. The null hypothesis for this test was that the data was normally distributed while the alternative hypothesis was that the data was not normally distributed. The results in Table 4.28 indicated that the Jarque-Bera statistic was 1.985 with a probability of 0.370 which was insignificant at a 5% level of significance, suggesting that the data was normally distributed. The alternative hypothesis was thus rejected and the study concluded that the data was normally distributed.

Breusch-Pagan-Godfrey (BPG) test was carried out to test for heteroscedasticity. The null hypothesis for this test was that there was no heteroscedasticity while the alternative hypothesis was that heteroscedasticity exists. The results in Table 4.28 indicated that the p-value for Breusch-Pagan statistic was 0.0762 which was more than 0.05. The null hypothesis that there was no heteroscedasticity was thus accepted. Autocorrelation was tested using Durbin-Watson statistic. The Durbin-Watson statistic should range between 1.5 and 2.5. The results in Table 4.28 indicated that the Durbin-Watson statistic was 2.304 implying that there is no autocorrelation problem. The study used the Breusch-Godfrey Serial Correlation LM Test to examine the presence of serial correlation. In this test the null hypothesis that there is no serial correlation. The results in Table 4.28 indicated that the p-value was 0.071 which was more than 0.05 indicating that there exists no serial correlation.

Table 4.28: Diagnostic Test Results

Test	Test adopted	Results	Conclusion
Normality	Histogram normality	Jarque-Bera statistic was 1.985 with a probability of 0.370	The P value of Jarque-Bera statistic was more than 5% suggesting that the error term was normally distributed.
Heteroskedasticity	Breusch-Pagan-Godfrey (BPG) test	The p-value for Breusch-Pagan statistic was 0.0762	The P value is more than 0.05 implying no presence of Heteroskedasticity
Autocorrelation Test	Durbin –Watson statistic	The Durbin Watson statistic was 2.304.	There is no first order linear auto-correlation in the multiple linear regression data because the value of Durbin Watson statistic is within the threshold $1.5<d<2.5$
Serial Correlation	Breusch-Godfrey Serial Correlation LM Test:	The P value was 0.071	The P value was more than 0.05, thus there was no serial correlation.

Multi-collinearity was tested using variance inflation factor. A VIF of 1 indicates no correlation between predictors; a value of between 1 and 10 indicates a moderate correlation and a value above 10 indicates that predictor variables are highly correlated (Gujarati, 1995). The results in Table 4.29 indicate that the VIF values for all the variables were below 10 and the tolerance value (1/VIF) was below 1. The findings suggest that there was no multi-collinearity problem.

Table 4.29: Variance Inflation Factors

INDICATOR	VIF	1/VIF
Board Size	1.179967	0.847481328
Board Independence	1.119277	0.893433886
Board Diversity	1.130716	0.884395374
Board Composition	1.272175	0.786055378
Credit Risk	1.928049	0.518659017
Market Risk	1.825971	0.547653824
Operation Risk	1.238978	0.807116833
Liquidity Risk	1.311755	0.762337479
Leverage	1.546052	0.646808775
Firm Size	1.080299	0.925669653
Firm Age	1.050202	0.952197768
Mean VIF	1.3348	

Notes: This table reports the multi-colinearity test results where the corporate governance measures (Board Size, board independence, board diversity and board composition), financial risk management measures (Credit risk, market risk, operation risk and liquidity risk) and firm characteristics variables (Leverage, firm size and firm age) were assessed using variance inflation factor test. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

To determine whether pooled OLS, random-effects or fixed-effects model was appropriate, Breusch and Pagan Lagrangian multiplier test was carried out. The results indicated that the P value was 0.000 which was less than 0.05 suggesting that pooled OLS was not appropriate. Hausman test was carried out to determine whether the random or fixed-effects model was appropriate. The results in Table 4.30 indicated that the p-value was 0.0062 which was less than 0.05 suggesting that the fixed effects model was appropriate.

The results in Table 4.31 also indicated that there was a difference between the values of fixed effect and random effect models.

Table 4.30: Hausman Test Cross-Section Random Effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	26.147691	11	0.0062

Table 4.31: Cross-Section Random Effects Test Comparisons

Variable	Fixed	Random	Var. (Diff.)	Prob.
Board Size	-0.206872	-0.220363	0.000498	0.5454
Board Independence	8.633485	7.743263	1.400111	0.4518
Board Diversity	0.949087	1.341174	0.048529	0.0751
Board Composition	-4.130883	-6.413486	1.332693	0.0480
Credit Risk	4.860414	7.080048	0.363742	0.0002
Market Risk	2.133345	2.693906	0.144242	0.1400
Operation Risk	1.885129	2.765552	0.452180	0.1904
Liquidity Risk	-1.434512	-0.932253	0.172412	0.2264
Leverage	3.355846	3.119101	0.025746	0.1401
Firm Size	0.445456	0.429444	0.000425	0.4375
Firm Age	-0.016595	-0.013145	0.000159	0.7845

Note: Table 4.30 and 4.31 reports the Hausman test Cross-Section Random Effects and Test Comparisons for firm performance (ROA), corporate governance variables (Board Size, board independence, board diversity and board composition), financial risk management measures (Credit risk, market risk, operation risk and liquidity risk) and firm characteristics variables (Leverage, firm size and firm age). The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

4.4.4.2 Regression Results

The regression results of the relationship between corporate governance, financial risk management, firm characteristics and performance of insurance firms in Kenya is presented in Table 4.32.

Table 4. 32: Corporate Governance, Financial Risk Management, Firm Characteristics and Performance Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-3.782303	2.980213	-1.269139	0.2056
Board Size	-0.206872	0.069104	-2.993619	0.0030
Board Independence	8.633485	3.467101	2.490116	0.0134
Board Diversity	0.949087	0.547633	1.733070	0.00843
Board Composition	-4.130883	2.904565	-1.422204	0.0156
Credit Risk	-4.860414	1.439808	-3.375737	0.0009
Market Risk	2.133345	1.072606	1.988937	0.0478
Operation Risk	1.885129	1.500168	1.256612	0.0210
Liquidity Risk	1.434512	0.855770	1.676282	0.0095
Leverage	3.355846	0.499672	6.716092	0.0000
Firm Size	0.445456	0.050615	8.800892	0.0000
Firm Age	-0.016595	0.013409	-1.237564	0.0217
R^2	0.658566			
Adjusted R^2	0.548208			
Prob (F statistic)	0.000000			
Total panel (balanced) observations	306			

Notes: This table reports the estimation results where the financial performance measure (ROA), corporate governance measures (Board Size, board independence, board diversity and board composition), financial risk management measures (Credit risk, market risk, operation risk and liquidity risk) and firm characteristics variables (Leverage, firm size and firm age) are regressed. The observations were obtained from 51 insurance firms registered by IRA over the period 2013 to 2018.

The results in Table 4.32 indicate that board size negatively and significantly affected the financial performance of insurance firms (β = 0.2068, p < 0.05). The results suggested that firms with smaller board sizes perform better than firms with larger board sizes. The results confirm the work of Conyon and Peck (1998), Mak and Kusnadi (2015), Guest (2019), O'Conell and Crammer (2010), Afrifa and Tauringana (2015), Malik and Makhdoom (2016), and Arora and Sharma (2016). The findings contradict the results by Kyereboah-Coleman and Biekpe (2016), Yasser et al. (2015) Jackling and Johl (2019). The findings support the views of agency theory by Jensen (1993) that a firm with a large board size may experience problems in coordinating the group and ineffectiveness in arriving at decisions.

Board independence positively and significantly affected the financial performance of insurance firms ($\beta = 8.6334$, $p < 0.5$). The results imply that increasing the number of independent directors improves performance. The results were consistent with the work of Anderson et al. (2004), Bhagat and Bolton (2013), and Malik and Makhdoom (2016). The findings contradict the prior studies by Arora and Sharma, (2016), Assenga and Hussainey (2018) which found negative relationship between the independent directors and performance. The findings support the agency theory that the agency problem can be mitigated if the board is composed of independent directors.

Board diversity positively and significantly affected financial performance ($\beta = 0.9490$, $p < 0.5$). The findings suggested that increasing the proportion of professionals on the board would positively impact the performance of a firm. The results confirm the findings of Cheng et al. (2010), Ujunwa (2012), Darmadi (2013), and Francis et al. (2015). However, the findings contradicted some studies that found a negative relationship between board diversity and performance (Assenga et al., 2018; Jhunjhunwala & Mishra, 2012; Van Ness et al., 2010), and other studies that did not find any relationship between board diversity and performance (Engelen et al., 2012; Kim & Rasheed, 2014). However, the results support the resource dependency theory that a larger board consisting of more professionally qualified directors may provide guidance and acquire resources better than a smaller board.

Board composition negatively and significantly affected financial performance ($\beta = -4.1308$, $p < 0.5$). The results implied that increasing the number of executive directors would negatively impact the performance of a firm. The findings were consistent with the results by Nandi and Goshi (2013), Manini and Abdilahi (2015), Demeke (2016), Wakaisuka (2017) and Munangi and Bongani (2020). The study contradicted the findings by studies which indicated that board composition does not affect performance (Haniffa & Hudaib, 2006; Kajola, 2008; Ehikioya, 2009; Borlea, Achim & Mare, 2017). However, the study supported the agency view that a bigger ratio of non-executive directors in a board positively affects the performance of a firm. Credit risk negatively and significantly affected the financial performance of insurance firms ($\beta = -4.860$, $p < 0.5$). The results suggest that firms with a higher proportion of non-performing receivable to total receivables perform poorly. The results were in agreement with the findings by Ekinci, (2016), Isanzu, (2017), Gadzo et al. (2019) Saleh et al. (2020), Munangi and Bongani (2020).

Market risk management positively and significantly affected the financial performance of insurance firms (β = 2.133, p < 0.5). The findings implied that monitoring investments result to an increase in the proportion of investment income to average investments which in turn increase financial performance. The finding confirms the work of other studies (Pervan & Pavic´, 2010; Ćurak et al., 2011; Charumathi, 2012; Akotey et al., 2013; Ekinci, 2016). The findings also support the modern portfolio theory that it is possible to construct an efficient frontier of optimal portfolios, offering the maximum possible expected return for a given level of risk.

Operation risk management positively and significantly affected financial performance (β = 1.885, p < 0.5). The findings suggest that monitoring of firms' operations would result to reduced operation costs which in turn lead to an increase in the proportion of net premiums to total assets and impact positively the performance of a firm. The findings confirm the work of other authors (Hrechaniuk et al., 2007; Pervan & Pavic´, 2010; Ahmed et al., 2011; Kozak, 2011; Charumathi, 2012; Akotey et al., 2013; Camino-Mogro *et* al., 2019). Liquidity risk management positively and significantly affected financial performance (β = 1.434, p < 0.5).

The results implied that monitoring liquidity ensures an increase in the proportion of current assets to current liabilities and in turn enhances the performance of a firm. The findings were consistent with the work of Bourke (1989), Lee and Urrutia, (1996), Chen and Wong (2014), Charumathi, (2012), Wani and Ahmad (2015), and Camino-Mogro *et* al. (2019). The findings also indicated that the relationship between return on assets and leverage was positive and significant (β = 1.434, p < 0.05). The results suggest that increasing the level of leverage would result to an increase in ROA. The results were in agreement with prior findings by Nandi and Goshi (2013), Manini and Abdilahi (2015), Demeke (2016), Wakaisuka (2017) and Munangi and Bongani (2020). The relationship between return on assets and size of the firm was positive and significant (β = 0.4454, p < 0.05). The results implied that increasing the size of the firm would lead to increase in ROA. The findings confirm the work of Zou and Li (2014), Ekinci (2016) Isanzu (2017), Wakaisuka (2017), Chen et al. (2018) and Gadzo et al. (2019). The relationship between the age of the firm and return on assets was negative and significant (β = -0.0165, p < 0.5). The results suggest that the older the firm gets the lower the return on assets. The finding confirms the work of Ekinci (2016), Wakaisuka (2017), Saleh et al (2020) and Munangi and Bongani (2020).

The results presented in Table 4.32 indicate that the F statistic was 0.000 which was less than 0.05 and the p values for all the variables were less than 0.05 which implied that corporate governance, financial risk management, firm characteristics significantly affected financial performance of insurance firms in Kenya. The null hypothesis that corporate governance, financial risk management and firm characteristics had no significant effect on the performance of insurance firms in Kenya was thus rejected.

4.5 Summary of the of Hypotheses Tested

The summary of the four hypotheses tested, the results and decisions are presented in Table 4.33.

Table 4.33: Summary of Tests of Hypotheses

Research Objective	Research Hypothesis	Results	Decision
To establish the effect of corporate governance on performance of insurance firms in Kenya.	Corporate governance has no significant effect on the performance of insurance firms in Kenya.	Corporate governance had a statistically significant effect on the performance of insurance firms in Kenya.	The null hypothesis was rejected
To evaluate the intervening effect of financial risk management on the relationship between corporate governance and performance of insurance firms in Kenya.	Financial risk management has no significant intervening effect on the relationship between corporate governance and performance of insurance firms in Kenya.	Financial risk management had a statistically significant intervening effect on the relationship between corporate governance and performance of insurance firms in Kenya	The null hypothesis was rejected
To determine the moderating effect of firm characteristics on the relationship between corporate governance and performance of insurance firms in Kenya.	Firm characteristics have no significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya.	Firm characteristics had a statistically significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya.	The null hypothesis was rejected
To assess the joint effect of corporate governance, financial risk management and firm characteristics on performance of insurance firms in Kenya	Corporate governance, financial risk management and firm characteristics have no significant joint effect on the performance of insurance firms in Kenya	Corporate governance, financial risk management and firm characteristics had statistically significant joint effect on the performance of insurance firms in Kenya	The null hypothesis was rejected

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presented the summary of the findings, conclusions, recommendations, and suggestions for further research.

5.2 Summary of the Findings

This study evaluated the relationship between corporate governance, financial risk management, firm characteristics and financial performance of insurance firms in Kenya over the period 2013 - 2018. The data was collected from 55 insurance firms licensed to operate in Kenya as at 31st December, 2018. The study was guided by four specific objectives. The first objective was to establish the effect of corporate governance on performance of insurance firms in Kenya. The second objective was to evaluate the intervening effect of financial risk management on the relationship between corporate governance and performance of insurance firms in Kenya. The third objective was to determine the moderating effect of firm characteristics on the relationship between corporate governance and performance of insurance firms in Kenya. The fourth objective was to assess the joint effect of corporate governance, financial risk management and firm characteristics on performance of insurance firms in Kenya. The summary of the findings was presented in this section.

5.2.1   Corporate Governance and Financial Performance

The study investigated the relationship between corporate governance and financial performance. The corporate governance variables were board composition, board diversity, board independence and board size while financial performance was measured by ROA. Multiple regression analysis was done to determine the relationship between the variables. The findings indicated that board composition negatively and significantly affects financial performance. The results indicate that insurance firms with a bigger ratio of executive directors to the board do not perform better. The results indicated that board diversity positively and significantly affected financial performance. The findings implied that insurance firms with many professional directors perform better than the firms with less professional directors to the board.

Board independence positively and significantly affected financial performance suggesting that firms with a more independent directors perform better than those with a few independent. The results also indicated that board size negatively and significantly affected financial performance implying that firms with bigger board sizes do not perform better than firms with smaller board sizes. The finding was that all the corporate governance variables significantly affected financial performance of insurance firms. The hypothesis that corporate governance had no significant effect on the performance of insurance firms in Kenya was thus rejected.

5.2.2 Corporate Governance, Financial Risk Management and Financial Performance

The study investigated the intervening effect of financial risk management on the relationship between corporate governance and financial performance. The financial risk management variables were credit risk, market risk, operation risk, and liquidity risk. Four step multiple regression analysis was done to determine the relationship between the variables. The results of the first step indicated that corporate governance significantly affected performance of insurance firms. The second step results indicated that corporate governance significantly affected the financial risk management of insurance firms. The third step results also indicated that financial risk management significantly affected the performance of insurance firms. Lastly, the fourth step results indicated that corporate governance and financial risk management significantly affected performance of insurance firms when analyzed in the same model. The findings implied that financial risk management intervened in the relationship between corporate governance and financial performance.

5.2.3 Corporate Governance, Firm Characteristics and Financial Performance

The study examined the moderating effect of firm characteristics on the relationship between corporate governance and financial performance. The firm characteristics variables were leverage, size and age of the firm. A three step multiple regression analysis was done to determine the relationship between the variables. The results of the first step indicated that firm characteristics significantly affected performance of insurance firms. The findings of the second step indicated that corporate governance and firm characteristics significantly affected the performance of insurance firms when both are analyzed in the same model.

The results of the third step also indicated that corporate governance, firm characteristics and the interaction of the corporate governance and firm characteristics variables significantly affected the performance of insurance firms when analyzed in the same model. The findings implied that firm characteristics moderated the relationship between corporate governance and financial performance. The hypothesis that firm characteristics had no significant moderating effect on the relationship between corporate governance and performance of insurance firms in Kenya was thus rejected.

5.2.4 Corporate Governance, Financial Risk, Firm Characteristics and Financial Performance

The study evaluated the relationship between corporate governance, financial risk, firm characteristics and financial performance of insurance firms in Kenya. The findings indicated that board composition negatively and significantly affected financial performance. This implied that increasing the number of executive directors hinders the performance of insurance firms. The results indicated that board diversity positively and significantly affected financial performance. The findings implied that increasing the number of professional directors enhance firm performance. The findings indicated that board independence positively and significantly affected financial performance. This suggested that increasing the number of independent directors in a board improves the performance. The results also indicated that board size negatively and significantly affected financial performance. This implied that increasing the number of board members hampers the performance of the firm.

The findings indicated that credit risk negatively and significantly affected financial performance. This suggests that increasing the non-performing receivables hinders the performance of insurance firms. Market risk management positively and significantly affected financial performance. The finding implied that monitoring investment assets results in an increase in investment income which in turn increases financial performance. Operation risk management positively and significantly affected financial performance. The finding suggests that monitoring of firm's operations results in reduced operation costs which in turn leads to an increase in the proportion of net premiums to total assets and impacts positively the performance of a firm.

The results also indicated that liquidity risk positively and significantly affected financial performance. The results implied that increase in the level of current assets enhances the performance of a firm. The relationship between return on assets and leverage was positive and significant. The results suggest that increasing the leverage would lead to an increase in ROA. Similarly, the findings indicated that relationship between return on assets and size of the firm was positive and significant implying that increasing the size of the firm would lead to an increase in ROA. The results also indicated that the relationship between the age of the firm and return on assets was negative and significant suggesting that the older the firm gets the lower the return on assets. The regression results indicated that all the variables significantly affected the performance of insurance firms. This implied that corporate governance, financial risk management and firm characteristics significantly affected financial performance of insurance firms in Kenya. The null hypothesis that corporate governance, financial risk and firm characteristics had no significant effect on the performance of insurance firms in Kenya was thus rejected.

5.3 Conclusions

The study concludes that corporate governance significantly affect the performance of insurance firms in Kenya. Specifically, board composition negatively and significantly affects financial performance. Increasing the number of executive directors in the board hinder performance of insurance firms. Board diversity positively and significantly affects financial performance. Boards consisting of more professionally qualified directors enhance firm performance. Board independence positively and significantly affects financial performance. Allowing company directors to be independent promotes better firm performance. Board size negatively and significantly affects financial performance. Bigger board sizes are detrimental to insurance firm performance. Credit risk negatively and significantly affects financial performance. Firms that do not monitor its receivables end up having non-performing receivables thus hindering the performance. Market risk management positively and significantly affects financial performance. Monitoring investments enhances investment income which improves financial performance. Operational risk management positively and significantly affects financial performance. Firms operations should be monitored to ensure efficiency and improve performance.

Liquidity risk management positively and significantly affects financial performance. Liquidity management ensures an increase in current assets thus the firm can be able to honor its obligations and avoid financial distress. Leverage positively and significantly affect performance. Firms that utilize long term debt to finance their operation enhance their performance. Similarly, firm size positively and significantly affect performance. Firms that have more asset potential to facilitate their operations and improve performance.

Firm age negatively and significantly affect performance. Firms therefore experience declining performance as years of being in operation increase. Financial risk management intervenes the relationship between corporate governance and performance of insurance firms. Proper corporate governance ensures financial risks are mitigated which in turn ensures better financial performance. Similarly, firm characteristics moderate the relationship between corporate governance and performance. Firm characteristics thus enhance corporate governance which in turn boost financial performance.

The study also concluded that corporate governance, financial risk management and firm characteristics significantly affect financial performance of insurance firms in Kenya. Proper corporate governance structures like board size, board composition, board diversity and board independence ensure better performance of a firm. Financial risk management on the other hand contribute to better performance by mitigating risks like operation, credit, market and liquidity risks. Firm characteristics which include the size of the firm, age and leverage significantly affect performance of a firm and thus a firm can utilize to create a competitive edge.

5.4 Recommendations

This section presented recommendations on policy and practice based on the findings of the study.

5.4.1 Recommendations on Policy

This study demonstrates that corporate governance significantly affects the performance of insurance firms. Therefore, IRA should come up with policies and regulations that will ensure firms adopt appropriate governance structures to enhance performance.

The policies should guide on the appropriate size and characteristics of the board members which include diversity, independence, among others. The study also affirmed that financial risk management significantly affects the performance of insurance firms. Insurance regulatory authority should come up with policies and regulations that will ensure firms adopt appropriate financial risk management strategies to enhance performance. The policies should guide on level of credit, operation, market and liquidity that should be maintained and provide a conducive environment for firms to access credit to finance their operations and even facilitate acquisition of more assets to enhance capacity and in turn translates to better performance.

5.4.3 Recommendations on Practice

The study recommends that insurance firms should consider the composition of the board of directors and ensure the ratio of non-executive directors is not too high in order to achieve better performance. The firms should also ensure board diversity by engaging professional directors who will bring wealth of knowledge and experience. Similarly, insurance firms should ensure that the boards have independent directors to ensure independent decisions. Insurance firms should put in place credit management strategies to ensure receivables are collected within the stipulated time to avoid cases of non-performing receivables. Similarly, the firms should monitor their investments portfolios and implement operations in order to increase investment income and reduce operation costs. The firms should also ensure there is sufficient liquidity to discharge obligations when due, utilize long term debt to finance their operation, expand their assets in order to facilitate their operations and review their strategies time after time in order to remain competitive because as the firm gets older, performance may decline.

5.5 Suggestions for Further Study

This study analyzed the relationship between corporate governance, financial risk management, firm characteristics and performance of 55 insurance firms licensed to operate in Kenya by the Insurance Regulatory Authority. Therefore, the results of this study can be applied to insurance firms in the Kenyan context. This study suggests that future research may focus on data from different countries to compare and contrast the effect of corporate governance variables in the various sectors or countries.

Future studies can also establish appropriate number of board members and examine the effect of other governance variables like gender diversity, director's remuneration, age, and shareholding on performance of the respective institutions.

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APPENDICES

Appendix I : Record Survey Sheet

ITEM/YEAR	2013	2014	2015	2016	2017
Net profit after tax					
Equity Shares					
Total Assets					
Long term debt					
Current Assets					
Current Liabilities					
Net Earned Premiums					
Investment Income					
Total Investments					
Receivables					
Non- performing receivables					
The number of members on a board					
Number of independent non-executive directors					
Number of executive directors on the board.					
Number of local Board Members					
Total Premium earned					
Reinsurance ceded					
Gross Premium					

Appendix II: Insurance Firms Licensed by Insurance Regulatory Authority as at December 2018

1. AAR Insurance Kenya Limited   PO Box 41766 - 00100, Nairobi

2. AIG Kenya Insurance Co Ltd   PO Box 49460 - 00100, Nairobi

3. Africa Merchant Assurance Co. Ltd   PO Box 61599 - 00100, Nairobi

4. Allianz Insurance Co of Kenya Ltd   PO Box 66257- 00800, Nairobi

5. APA Insurance Limited   PO Box 30065 - 00100, Nairobi

6. APA Life Assurance Limited   PO Box 30389 - 00100, Nairobi

7. Barclays Life Assurance K Ltd   PO Box 1140 - 00100, Nairobi

8. Britam General Ins. Co. (K) Ltd.   PO Box 40001 – 00100, Nairobi

9. British-American Insurance Co. Ltd.   PO Box 30375 – 00100, Nairobi

10. Cannon Assurance Ltd   PO Box 30216 - 00100, Nairobi

11. Capex Life Assurance Limited   PO Box 12043 - 00400, Nairobi

12. CIC General Insurance Limited   PO Box 59485 - 00100, Nairobi

13. CIC Life Assurance Ltd   PO Box 59485 - 00100, Nairobi

14. Continental Reinsurance Ltd   PO Box 76326 - 00508, Nairobi

15. Corporate Insurance Co. Ltd   PO Box 34172 – 00100, Nairobi

16. Directline Assurance Co Ltd   PO Box 40863 - 00100, Nairobi

17. EA Reinsurance Company Ltd   PO Box 20196 - 00200, Nairobi

18. Fidelity Shield Insurance Co Ltd   PO Box 47435 - 00100, Nairobi

19. First Assurance Company Ltd   PO Box 30064 - 00100, Nairobi

20. GA Insurance Limited   PO Box 42166 - 00100, Nairobi

21. GA Life Assurance Ltd   PO Box 42166 - 00100, Nairobi

22. Geminia Insurance Company Ltd   PO Box 61316 - 00200, Nairobi

23. ICEA LION General Insurance Co Ltd   PO Box 30190 - 00100, Nairobi

24. ICEA LION Life Assurance Co Ltd   PO Box 46143 - 00100, Nairobi

25. Intra Africa Assurance Co Ltd   PO Box 43241 - 00100, Nairobi

26. Invesco Assurance Company Ltd   PO Box 52964 - 00200, Nairobi

27. Kenindia Assurance Co Ltd   PO Box 44372 - 00100, Nairobi

28. Kenya Orient Insurance Ltd   PO Box 34530 - 00100, Nairobi

29. Kenya Orient Life Assurance Ltd   PO Box 34540 - 00100, Nairobi

30. Kenya Reinsurance Corp Ltd   PO Box 30271 - 00100, Nairobi

31. Liberty Life Assurance Kenya Ltd   PO Box 30364 - 00100, Nairobi

32. Madison Insurance Company Ltd   PO Box 47382—00100, Nairobi

33. Mayfair Insurance Company Ltd   PO Box 45161 - 00100, Nairobi

34. Metropolitan Cannon Life Ass Ltd   PO Box 46783 - 00100, Nairobi

35. Occidental Insurance Co Ltd   PO Box 39459 - 00623, Nairobi

36. Old Mutual Life Assurance Co Ltd   PO Box 30059 - 00100, Nairobi

37. Pacis Insurance Company Ltd   PO Box 1870 - 00200, Nairobi

38. Pioneer Life Assurance Company Ltd   PO Box 20333 - 00200, Nairobi

39 Pioneer General Insurance Ltd   PO Box 20333 - 00200, Nairobi

40. Phoenix of EA Assurance Co Ltd   PO Box 30129 - 00100, Nairobi

41. Prudential Life Assurance K Ltd   PO Box 25093 - 00100, Nairobi

42. Saham Assurance Company K Ltd   PO Box 20680 - 00200, Nairobi

43. Sanlam General Insurance Ltd   PO Box 60656 -00200, Nairobi

44. Sanlam Life Assurance Ltd   PO Box 44041 – 00100, Nairobi

45. Tausi Assurance Company Ltd   PO Box 28889 - 00200, Nairobi

46. The Heritage Insurance Company Ltd   PO Box 30390 - 00100, Nairobi

47. Trident Insurance Company Ltd   PO Box 55651 - 00200, Nairobi

48 Resolution Insurance Company Ltd   PO Box 4469 - 00100, Nairobi

49. UAP Life Assurance Limited   PO Box 23842 - 00100, Nairobi

50. UAP Insurance Company Limited   PO Box 43013 - 00100, Nairobi

51. Takaful Insurance of Africa Limited   PO Box 1811- 00100, Nairobi

52. The Jubilee Insurance Co. Ltd   PO Box 30376 – 00100, Nairobi

53. The Monarch Insurance Co. Ltd.   PO Box 44003 - 00100, Nairobi

54. The Kenyan Alliance Insurance Co Ltd   PO Box 30170 - 00100, Nairobi

55. Xplico Insurance Limited   PO Box 38106 - 00623, Nairobi

Source: Insurance Regulatory Authority

Appendix III: Research Gaps

Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
Aebi, V., Sabato, G., and Schmid, M. (2012).	Risk management, corporate governance, and bank performance in the financial crisis. Journal of Banking & Finance	Regression analysis	Banks, in which the CRO directly reports to the board of directors and not to the CEO (or other corporate entities), exhibit-it significantly higher (i.e., less negative) stock returns and ROE during the crisis. In contrast, standard corporate governance variables are mostly insignificantly or even negatively related to the bank's performance	The study investigated the effect of risks management committee.	The study investigated the intervening effect of management of specific risks which are operation risk, market risk and liquidity risk. The study will also investigate the moderating effect of firm characteristics.
Badriyah, Sari, and Basri (2015).	The effect of corporate governance and firm characteristics on the existence of Risk Management Committee and the effect of the existence of the Risk Management Committee on firm performance	multiple regression model	The results indicate that corporate governance and firm characteristics affect the existence of Risk Management Committee, and the existence of Risk Management Committee affects firm performance.	The study focused on risk management committee and did not investigate the moderating effect of firm characteristics	The study focused on specific financial risk which are liquidity risk, market risk and operation risk. Moderating effect of firm characteristics will also be investigated.

Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
Demeke, (2016)	Corporate Governance Mechanisms and Firm Performance in Ethiopian Insurance Industry,	panel data and Pooled OLS regression	Proportion of outside directors, board size, debt ratio, and ownership have a significant negative effect on performance of insurance companies. However, boards meeting frequency, firm size and firm age, are identified to have a significant positive impact on firm performance.	The study did not investigate the effect of financial risk	The study investigated the intervening effect of financial risk
Halim, Mustika, Sari, Anugerah and Mohd-Sanusi, (2017).	Corporate governance practices and financial performance: The mediating effect of risk management committee at manufacturing firms.	multiple regression model	The study found that risk management committee affects firm performance and its existence would facilitate the company to control better the quality of financial reporting risks.	The study focused on risk management committee and did not investigate the moderating effect of firm characteristics.	The study focused on specific risk management which are liquidity risk, market risk and operation risk. Moderating effect of firm characteristics will also be investigated.

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Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
Hsu and Petchsakulwong (2010)	The Impact of Corporate Governance on the Efficiency Performance of the Thai Non-Life Insurance Industry	Data envelopment analysis	Board independence, and firm size have a positive impact on the efficiency performance. However, audit committee size, board tenure, board age, as well as board ownership have a negative impact on the efficiency performance.	The study did not investigate the intervening effect of risk management and moderating effect of firm age, and leverage	The study investigated the intervening effect of risk management and moderating effect of firm age, size and leverage
Manini, M. M., & Abdillahi, U. A. (2015).	Corporate governance mechanisms and financial performance of commercial banks in Kenya.	multiple regression	The results revealed that audit committee size, board gender diversity and bank capital have no significant effect on bank profitability. The regression results indicated that board size negatively influences financial performance; whereas bank size is positively associated with financial performance.	The study did not investigate the effect of risk management	The study investigated the intervening effect of risk management

Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
Mohan, A., & Chandramohan, S. (2018).	Impact of Corporate Governance on Firm Performance: Empirical Evidence from India.	Panel data OLS regression model	CEO duality and board size have a significant negative impact on firm performance whereas board composition has no significant impact on firm performance.	Contradicts other studies which indicated board size has a positive effect. The study did not also investigate the effect of moderating and intervening variables	The study investigated the effect of corporate governance and the intervening effect of risks management and the moderating effect of firm characteristics.
Najjar, N. J. (2012).	The impact of corporate governance on the insurance firm's performance in Bahrain.	Descriptive statistics and regression analysis	There is no statistically significant impact of corporate governance expressed by CEO status, ownership concentration, on firm's performance in the insurance industry. On the other hand, board size, firm size, number of block-holders found to have statistically significant impact on firm's performance.	The study did not investigate the intervening effect of risks management and the moderating effect of firm characteristics	The study investigated the intervening effect of risks management and the moderating effect of firm characteristics

Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
Nandi, S., & Ghosh, S. (2013).	Corporate governance attributes, firm characteristics and the level of corporate disclosure: Evidence from the Indian listed firms.	Multiple regression model	A positive relationship exists between board size, ratio of audit committee members, family control, CEO duality, firm size, profitability, liquidity and the extent of corporate disclosure. However, the degree of corporate disclosure is negatively related to board composition, leverage and age of the firm	The study used corporate disclosures as the dependent variable. The study also contradicts other studies which found that CEO duality has a negative effect and those which found that firm age and board composition had a positive effect.	The study used ROA as the dependent variable and also attempt to resolve the contradicting findings.
Ochieng, H. O (2016)	Corporate Governance, Risk Management, Firm Characteristics and Financial Performance of Commercial Banks in Kenya	Correlation and multiple regression analysis	The findings of the study were that a statistically significant relationship exist between Corporate Governance and bank Financial Performance, the intervening effect of Risk Management on relationship between Corporate Governance and attributes of Bank Financial Performance	The study found inconclusive results on the intervening effect of risk management which contradicts other studies which found positive	The study investigated market risk management, liquidity risk management and operation risks affecting insurance firms and attempt to resolve the conflicting findings on the intervening effect of

Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
			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.	effect. The study also focused Credit Risk Management, Liquidity Risk Management and Business Risk Management affecting commercial banks in Kenya.	risk management on the relationship between corporate governance and financial performance.
Olalekan, L. I., Mustapha, L. O., Irom, I. M., & Emily, B. N. (2018)	Corporate Board Size, Risk Management and Financial Performance of Listed Deposit Money Banks in Nigeria.	Multiple regression model	Board size, credit risk and operating risk have a significant negative effect on ROE and EPS respectively. The study also indicateds that liquidity risk has a negative and insignificant effect on ROE and EPS.	The study did not investigate the effect of firm characteristics.	The study investigated the intervening effect of firm characteristics

Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
Salaudeen, Atoyebi, and Oyegbile (2018).	Enterprise Risk Management and Performance of Selected Listed Consumer Goods Companies in Nigeria.	multiple regression model	The study revealed that risk management committee, financial expertise and board size have significant positive effect on performance.	The study focused on risk management committee and did not investigate the moderating effect of firm characteristics	The study focused on specific risk management which are liquidity risk, market risk and operation risk. Moderating effect of firm characteristics will also be investigated.
Tao and Hutchinson (2013).	Corporate governance and risk management: The role of risk management and compensation committees.	multiple regression model	The study indicateds that the composition of the risk and compensation committees is positively associated with risk management, which, in turn, is associated with firm performance.	The study focused on risk management committee and did not investigate the moderating effect of firm characteristics	The study focused on specific risk management which are liquidity risk, market risk and operation risk. Moderating effect of firm characteristics will also be investigated.
Wakaisuka (2017)	Corporate governance, firm characteristics, external environment and performance of financial institutions in Uganda	multiple regression model	The findings indicate that there is a partial intervening effect of firm characteristics on the relationship between corporate governance and financial performance	The study did not also investigate the effect of risk management.	The study investigated the intervening effect of risk management

Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
Wepukhulu, J. M. (2016).	Relationship between Corporate Governance and Performance of Commercial Banks in Kenya	descriptive and inferential statistics- hierarchical multiple regression model	Board independence was not significant in the relationship between corporate governance and performance of commercial banks in Kenya. Board size has a negative and significant relationship with ROE, a positive and significant relationship with TBQ ratio and no significant relationship with ROA. ownership monitoring mechanisms, institutional and block ownership were found to have a negative and significant relationship with ROE.	The study did not investigate the intervening effect of risk management and moderating effect of firm characteristics.	The study investigated the intervening effect of risk management and moderating effect of firm characteristics.
Yasser, Q., Entebang, H., and Mansor, S. (2015).	Corporate governance and firm performance in Pakistan: The case of Karachi Stock Exchange	Regression analysis	A positive significant relationship between ROE and three corporate governance mechanisms (board size, board composition and audit Committee).	The study contradicts other studies which found negative relationship between Board size and board composition	This study investigated the intervening effect of risk management and moderating effect of firm characteristics in addition to the effect of corporate governance.

Appendix IV: Research Permit

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NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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