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Corporate Governance and Performance of Commercial Banks Listed at the Nairobi Securities Exchange, Kenya

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Abstract

This study examined the relationships among corporate governance, financial characteristics, macroeconomic variables and financial performance of banking firms listed at the Nairobi Securities Exchange. The specific objectives were to establish the effect of corporate governance on performance of listed commercial banks; to determine the intervening effect of financial characteristics on the relationship between corporate governance and financial performance of banking firms; to establish the moderating effect macroeconomic variables on the relationship between corporate governance and financial performance of listed commercial banks; and to determine the joint effect of corporate governance, financial characteristics and macroeconomic variables on financial performance of listed commercial banks. This study was anchored on, agency, stewardship, resource and wealth maximization theories and positivism philosophy. The study used census approach and targeted population of 11 listed banking firms between 2006 and 2020 was incorporated. The study used panel data extracted from annual reports of the individuals firms, while macroeconomic variables data were extracted from Central Bank of Kenya and Kenya National Bureau of Statistics economic reports. This study used longitudinal descriptive research design to determine relationships amongst independent, intervening, moderating and dependent variables. The study findings indicated that

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corporate governance, financial characteristics and macroeconomic variables were good predictors of listed commercial banks financial performance. Financial Leverage, Interest Rates and Inflation Rates had a significant effect on Return on Assets while Corporate Governance, Investments, Liquidity and Gross Domestic Product Growth Rate were found to have insignificant effect on Return on Assets. The findings also revealed that Financial Leverage, Inflation Rates and Gross Domestic Product Growth rate had a significant effect on Tobin's Q of listed commercial banks in Kenya. The relationship between Corporate Governance, Investments, Liquidity and Interest Rates and Tobin's Q was found to be insignificant. The study concluded that corporate governance, financial characteristics and macroeconomic variables affect financial performance commercial banks. Listed commercial banks therefore should adhere to corporate governance guidelines both from the Central Bank of Kenya and Capital Markets Authority of Kenya for continuous sound financial performance.

Keywords: Corporate Governance, Financial Characteristics, Macroeconomic Variables, Financial Performance, Listed Commercial Banks

1.0 Introduction

1.1 Background Information

Corporate governance can be defined as the way power is exercised over corporate entities. It consists of the board activities of the enterprise and its relationships with shareholders, with the managers as well as with other legitimate stakeholders (Tricker, 2019). Corporate governance is a mixture of policies and best practices used by firms to achieve their goals in relation to their shareholders (Millin, 2007). Corporate governance promotes efficient and transparent management of organizations to meet definite objectives through best practices and structures (Abu-Tapanje, 2005). Corporate governance policies and practices used in this study include board structures and board activities.

The board structures include board composition which comprises both executive and non-executive directors, gender and ethnicity (Carter, Simkins, & Simpson, 2003); board skills and experience, are occupational expertise of board members (Kesner,1998); board age, is the average age of board members (Rose, 2007); and board size, is the number of directors instituting the board (Jensen, 1993; Khanchel, 2007). The board activities are responsibilities performed by the board and committees set up by board for specific duties. The board activities include board tenure which is the duration the directors take in a firm (Mathew, Paul, Kamel & Cherif, 2010); board ownership which is the holdings in a firm's stock by board members (Brickley, Lease & Smith, 1988); board tools which are necessary tools and aids in place

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to enable discharging of responsibilities of the board (CMA, 2015); board meetings including statutory and non-statutory meetings (Lipton & Lorch, 1992) and board committees for deliberations of board activities (Klein, 2002). Board compensation is the remuneration to board members (Murphy, 1984).

Corporate governance board structures internal mechanisms include: board composition, board diversity, board occupational expertise and education, board age and board size. Board composition includes both inside directors and outside directors. Inside directors are executive directors while outside directors are non-executive directors (Ombayo, 2011). Board composition should reflect the company's shareholding structure and provides a mechanism for representation of minority shareholders. Inside directors for personal reasons may engage risks that are absent for genuine growth opportunities. They may take decisions which benefit self-interest (Wright, Ferris, Sarin, & Awasthi, 1996: Fama & Jensen, 1983).

Board diversity brings bundles of knowledge, experience, ideas and professional contacts which are used to solve business problems and achieve higher firm performance (Ruigrok, Peck & Tacheya, 2007; Carpenter, Geletkanycz & Sanders, 2004). Board occupational expertise deals with the background, education and experience of board members. Occupational expertise influences the board members in understanding complicated business transactions and gives better decision making. Differences among firms' directors are viewed in terms of their education, background, experience and expertise (Baysinger & Butler, 1985). Board age is the average age of the board members. Average older corporate boards have accumulative experience which might be associated with stronger steadier corporate performance. Younger boards normally have superior technical knowledge because of their recent education (Rose, 2007; Bantel & Jackson, 1989). Younger decision-makers appear less bound by the status quo and more amenable to change. They also have a greater receptivity to risk-taking as a condition for more innovative growth strategies. There is positive significant relationship between board age and firm performance (Grimm & Smith, 1991; Bantel & Jackson, 1989). In Kenya and Denmark directors are supposed to retire from the board in the year they turn the age of 70 at latest (CMA, 2015). Board size is the number of directors instituting the board (Jensen, 1993; Khanchel, 2007). Board size may reflect the complexity of a firm's environment which is inherently challenging; influences board's cohesiveness and ability to oversee corporate governance (Sanders & Carpenter, 1998). A smaller board size is more effective in carrying out governance oversight activities (Lipton & Lorsch, 1992). Large board size often display dysfunctional characteristics, it hinders the ability to reach a consensus; less

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involved in strategic decision-making and making it difficult to make strategic changes (Khanchel, 2007).

Corporate governance board activities internal mechanisms include: board tenure, board ownership, board tools, board meetings, board committees and board compensation. Board tenure is the duration the executives take in an organization. Board tenure has material effect in decision making process and increases director independence. Most empirical studies have suggested that the time required for a new director to acquire a sufficient understanding of the firm will range between three and five years. This is because every new task or responsibility has a learning curve (Kesner, 1988). Board tenure has shown material effect on decision making process (Kosnik, 1987). Shorter tenure leads to a brief reprieve in poor performance (Mathew, Paul Kamel & Cherif, 2010). Longer tenure increases directors' independence and firm performance (Westphal & Khanna, 2003).

The financial characteristics to be used in this study are: investment, leverage and liquidity because of their direct influence to firm performance. Investment refers to the sacrifice of current cash flows for future cash flows. It involves time, risk and returns since the sacrifice takes place in the present, and is certain, while returns come later, and are uncertain (Sharp *et al*., 2005). Investment in tangible and intangible assets such as property, plant, equipment and securities ensures a good firm's performance in profitability and value (Mudida &Ngene, 2010). Investment measures the increase in capital spending such as buying new machines, building bigger factories. Investment in long term assets makes firms to remain competitive and to survive given constant flow of ideas for new products, making existing products better and reducing the operating cost (Hillie, Jaffe, Jordan, Ross & Westerfield, 2010). The overall investment of a nation is a component of aggregate demand and therefore boosts economic growth. Effective investment should also increase the productive capacity of the economy and the firms. Investment in new technology and capital goods can increase the productivity capacity of the economy leading to an increase in the long run trend rate of economic growth. Investment also increases the competiveness of an economy (Koori, 2015).
Liquidity plays a significant role in determining success or failure of a firm in business performance due to its effect on the firm's profitability and value (Vahid, Mohsen & Mohammadreza, 2012). Liquidity is one of the pillars of performance of firms. Firms must have an optimal level of liquidity in order to maximize their performance. Large inventories and generous trade credit policy may lead to higher sales. Firms with larger stock tend to reduce the risk of stock-out, and also a good trade credit policy may stimulate sales because it allows customers to assess quality before paying (Deloof, 2003).

Growth Domestic Product (GDP) is a measure for all finished goods and services produced in a country for a specific fiscal year. GDP is equal to

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total investment, consumption, government spending, and exports less value of imports (Maclennan & Pryce, 1996). The real GDP portrays economic performance in a country. Interest rate is a price that relates to present claims on resources relative to future claims on resources. It is the price that a borrower pays in order to be able to consume resources now. It represents the cost of borrowing capital for a given period of time. It also represents the price the firms pay for use of debt capital. It is the fee paid for the use of borrowed assets. Inflation is general rise in price levels for a basket of products (Gallagher, 2011). Inflation refers to the change in the general level of prices in the economy over given period of time (Santoni, 1986). Inflation rates have effects on the value of money and it is measured by the changes in the consumer price index (Liow, Ibrahim & Huang, 2005).

Performance of a firm is a measure of overall well-being of a firm in terms of wealth creation over a given period of time. It measures how a firm can use investment in long and short term assets to create revenues (Iraya, 2014). Measures of firm performance can be achieved using either accounting or market metrics with different theoretical foundation (Hillman & Keim, 2001). NSE in the principal bourse in Kenya offering automated platform for the listing and trading in multiple securities. The market has an obligation to guarantee effective trading in securities and derivatives and enhances economic development. NSE is publicly traded and the second self-listed exchange in Africa (NSE, 2020). As at December 2020, there were eleven (11) commercial banks listed at the NSE.

Contentious proposals by many researchers on the relationship between corporate governance and banks financial performance remained unsettled for a long time as some banks have been put under statutory regulations due to poor performance. Listed commercial banks in Kenya are privileged of double corporate governance regulations both from Central Bank of Kenya and Capital Markets Authority of Kenya. Most studies have been carried to examine the relationship between corporate governance and bank performance and the outcomes have remained conflicting. Some studies established positive significant relationship between corporate governance and bank performance.

2.0 Literature review

2.1 Theoretical Review

Agency theory was developed by Jensen and Meckling (1976). The theory is grounded on the separation of ownership and relationship between principals and agents. It is based on short term gains where principals delegate decision making authority to their agents; who are to use resources given by the principals to enhance principals' benefits. Agents however, may commit moral hazard by substituting principals' interest with their own. Principals

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normally monitor the activities of agents to ensure that they act on the interest of the firms. Monitoring costs are normally expensive and adversely affect the principals' income (Fama & Jensen, 1983).

Stewardship theory was developed by Donaldson and Davis (1997). The theory was an innovative view in understanding relationship between ownership and management of a firm from the Agency Theory. Directors are stewards making decisions for long term survival of firms as well as maximize shareholders' wealth. Directors normally perceive firms as an extension of them, rather than use their resources for own interest; the executives main interest is ensuring the sustained life and success of the firm. The theory is based on the duties of executives acting as stewards, integrating their goals as part of the firm and recognizes the importance of structures that empower the steward and offers maximum autonomy built on trust (Donaldson & Davis, 1991).

Resource dependency theory was developed by Pfeiffer and Salancik (1978). The theory deals with the study of how external resources affect the behavior of the organization. The procurement of external resources is an important tenet for both the strategic and tactical management of any company. The theory concentrates on the role of board directors in providing access to resources needed by the firm. The theory emphasizes on the activities that directors play in finding resources required by the firm through connections to its external environment (Hillman, Canella & Paetzold, 2000). The theory further gives direction on recruitment of directors who assist in gaining access to vital resources of the company for survival (Johnson, Daily & Ellstrand, 1996). The critics of this theory have based their arguments concerning the boundary of space; Casciaro and Piskorski (2005) for instance argue that the RDT can be bounded to the boundaries of the organization concerning internal issues. Hillman *et al.,* (2000) on the other hand, posit that the RDT is bounded to the environment of the organization and assumes that the organizational actions are constrained to the events in the organizational environment, leaving the environment as a space boundary.

Wealth maximization theory was developed by Ponser (1983). According to the proponents of this theory, the immediate operating goal and the ultimate purpose of a public corporation is and should be to maximize return on equity capital. Windsor and Boatright (2010) as proponents of shareholder wealth maximization argue that the theory focuses on the motives and behaviors of financial stakeholders. Wealth maximization theory has received criticism from various authors. Majority of the critic argues that if the wealth of a firm is maximized, it would be of benefit to both debenture holders and preference shareholders. Directors' act as agents of shareholders, however there is always conflict of interest between directors and shareholders. Jones and Felps (2013) also posit that no extant scholarship has

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systematically analyzed the utilitarian foundations of shareholder wealth maximization.

2.2 Empirical Review

Oluwole and Ondo (2021) examined the effect of corporate governance on commercial banks profitability in Nigeria. The study covered the period of 2009 to 2018 and secondary data were obtained from the audited financial statement of the selected banks. Fixed effect regression technique was used to examine the effect of Audit Committee Size, Board Size, Audit Committee Number of Meeting and Board Number of Meeting on earnings per share of the selected banks. The study found positive and significant relationship between corporate governance variables: audit committee size, board size, board number of meeting and Earnings per share of the banks. However, negative and significant relationship was established between audit committee number of meeting and earnings per share. All the null hypotheses were rejected and the alternative hypotheses accepted, indicating that all the corporate governance variables significantly affect Earnings per share of selected banks... The study concluded that corporate governance enhances commercial banks performance in Nigeria and recommended that attention should be paid to the audit committee size, board size and board number of meetings since an increase in them leads to increase in the earnings per share while the audit committee number of meetings should be reduced as it affects the earnings per share negatively. The regulatory authority should formulate strong policy frameworks that would ensure that commercial banks constantly comply with corporate governance standard set by the authority. This study however considered a longer period from 2006 to 2020 and including intervening and moderation variables to determine performance of commercial banks in Kenya.

Belachew and Hunde (2020) investigated effects of corporate governance on financial performance of banks evidence from selected private commercial banks in Ethiopia using corporate governance variables such as board size, meeting frequency of board, audit committee Size, existence of outside directors, board educational qualification, board gender diversity, chief executive compensation and controlling variables of bank age and bank growth on financial performance. The used purposive sampling and Random Effect Model GLS regressions analysis for a period from 2010 to 2018 and found that the presence female director, chief compensation, audit committee size, educational qualification, meeting frequency of board, liquidity ratio was found to be a positive and significant relationship with return on asset while the board size has a negative and insignificant association with return on asset. The study recommended that the work audit committee of private commercial banks should be enhanced and banks to increase the number of female

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members in the board. The study used selected private banks to determine the relationship between corporate governance and financial performance; this study however used listed banks to determine the relationship corporate governance and financial performance.

Ojeka and Kofo (2020) studied effect of corporate governance structure and bank externalities on non-performing loans in Nigeria covering the period 2009–2017. The study developed corporate governance index for Nigerian Banks using Principal Component Analysis to establish the influence of corporate governance structure on non-performing loans. This study used a panel data analysis using static and dynamic estimators to examine the sensitivity of non-performing loans and corporate governance structure. The study found that corporate governance structure of banks in Nigeria has a negative and significant influence on non-performing loans in Nigerian banks. This result reveals that sound corporate governance structure enhances the loan quality and bank stability. The study further affirms that stringent policy imposed by the bank regulators has a negative impact on non-performing loans. Thus, effective corporate governance mechanism and bank regulations could help to curb excessive risk appetite that could mutilate probable performance and loan quality. This study recommends that banks should continue to implement high quality of corporate governance mechanism with positive effects at eliminating excessive risk-taking. This study however used Tobin's and ROA as measures of financial performance.

Owiredu and Kwakye (2020) examined the effect of corporate governance on financial performance of commercial banks in Ghana using data gathered from the annual reports and the financial statements of the sampled banks from the period 2007-2016. The study used random effect model to analyse data and found that board size and foreign ownership had significant positive relationship financial performance measured by ROA and ROE of banks in Ghana, while board independence and institutional ownerships had no statistically relationship with ROA and ROE. The study supports the view that an improved corporate governance practices positively influence financial performance. The study used a few variables of corporate governance to analyse the relationship between corporate governance and financial performance, this study used many corporate governance variables including intervening and moderating variables from the year 2006 to the year 2020.

Ochego, Omwagwa and Muathe (2019) examined the mediating effect of financial performance on the relationship between corporate governance and firm value; empirical evidence from of commercial banks in Kenya for the period 2009 to 2018 using explanatory research designed. The study established that there is statistical significant effect between corporate governance and firm value of commercial banks in Kenya and also statistical

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moderating effect of financial performance on the relationship between corporate governance and firm value of commercial banks. The study was based on all commercial banks. However this study is based on listed commercial banks having two corporate governance regulations from Kenya Capital Markets Authority of Kenya (CMA) and Central Bank of Kenya.

Hamud and Opuodho (2019) examined effect of corporate governance on financial performance of the commercial banks Kenya. The study used of board diversity, board independence, board size and ownership corporate governance variables for a period of 2014 to 2018 using secondary data analysis research design on all commercial banks in Kenya. The study found that corporate governance characteristics have statistical effect of financial performance of commercial banks in Kenya. The used only variables of corporate governance, this nevertheless study used many corporate governance variables classified under board structure and board activities.

Dey and Bhattacharjee (2019) studied the impact of corporate governance on the performance of commercial banking corporations in Bangladesh employing CAMELS score as a performance measurement tool. The study used data from annual reports of a sample of 15 companies between 2010 and 2015. The study found that none of the corporate governance indicator variables to be significant. It is also revealed that member of the audit committee, board size, marginal shareholding, shareholding by board are negatively related with bank performance. While gender diversity in board, participation of independent director, audit committee, marginal shareholding, number of board meeting, number of board subcommittee are positively related to CAMELS score. This study allows heuristic support for the banking corporations to underrate the corporate governance issues as determinants of financial performance. This study however used Tobin's Q and ROA and measures of performance.

Lungatso and Otuya (2019) did a critical literature review on the relationship between corporate governance and financial performance of commercial banks in Kenya. The studies used board composition, board independence, board gender and audit committee as corporate governance characteristics and Return on Assets (ROA), Return on Equity (ROE), Profitability Margin (PM) and Tobin's Q as measures of financial performance. The studies reviewed Agency theory, Stewardship theory and Resource Dependency theory and found that board size, board independence and audit committee independence have a positive and significant relationship with the financial performance of commercial banks in Kenya. The studies however found that board composition and board gender have a negative relationship with financial performance. The studies concluded that corporate governance structures improve the financial performance of commercial banks in Kenya. The studies recommend that the management of the commercial

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bank in Kenya should implement strong corporate governance structures in order to achieve good financial performance. This study reviews empirical studies on the relationship the relationship between corporate governance and the financial performance of commercial banks in Kenya using four corporate governance characteristics, this study uses several corporate governance variables including financial characteristics as intervening variable and macroeconomic factors as moderating variables of financial performance of listed commercial banks in Kenya.

Ondigo (2016) found statistical significance relationship between corporate governance and bank financial performance; intervening effect of risk management on the relationship between corporate governance and bank financial performance is inconclusive; and corporate governance, risk management and firm characteristics significantly jointly predict all banks financial performance. The study concentrated only in one sector of the economy. This study was conducted on the same context of the economy, but with more corporate governance variables, intervening, moderating varaiables and performance variables.

Wakaisuka, Aduda, Wainaina, Iraya and Ntim (2016) found good corporate governance practices are important in reducing risks for investors, attracting investors' capital and improving the performance of companies and financial institutions inclusive. Firm characteristics play pivotal role in determining the performance of firms. External environment influences financial institutions, and institutions must keep up with tendencies in their external environment. Corporate governance, firm characteristics and external environment affect performance of financial institutions. The study was carried in Uganda Securities Exchange, taking into all firms, while this stock is looking listed commercial bank in Kenya.

Ribeiro, Cerqueira and Brandão (2015) found that larger and more profitable firms have higher Effective Tax Rates (ETRs). On the contrary, capital intensity, leverage and Research and Development expenses have a negative impact on ETRs. Regarding ownership structure and board composition, the findings revealed that managerial ownership contributes to lower ETRs. On the other hand, more independent firms from controlling shareholders exhibit higher ETRs. Moreover, a larger number of board members and non-executive directors results in higher ETRs. Aghouei and Moradi (2015) found positive and significant relationship between earnings before tax to total assets ratio, interest expense coverage, earnings before tax to revenue ratio. The study further confirmed that there is no significant relationship between differences in declared and final taxes and corporate governance variables and firm characteristics. The study used only taxation as a measure of macroeconomic variables however this study used GDP, Interest rate and Inflation rate macroeconomic variables.

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3.0 Research methodology

3.1 Introduction

This study used a census approach and a target population of the study comprised of banking firms listed at the NSE between years 2006 and 2020. A total of 11 banking companies were listed at the NSE as at 31st December 2020. Companies listed at NSE were targeted because the NSE acts as a country's financial barometer and the market had received empirical studies and financial data that were used to support this study (Ongore & K'obonyo, 2011). The 11 banks were screened against various factors which included availability of data for the period under review and the integrity of data. Data was extracted from annual reports of listed firms from CMA; published financial statements from NSE; and economic reports from Central Bank of Kenya (CBK) and Kenya National Bureau of Statistics (KNBS).

This study used descriptive analyses and panel data regression in analyzing the relationship between corporate governance and performance of banking firms listed companies at the NSE. Descriptive analyses were carried out to measure dispersion of variables such as standard deviations and coefficient of variation which was used to disclose the volatility in relationships of the variables under study. A panel data regression analysis was conducted using random effects model which allowed the companies to have a common mean value of the intercept to determine whether corporate governance influence performance of firms. Coefficient of Determination (R^2) and p-values was used to interpret the regression functions at a level of significance of 0.05 (Bryman & Cramer, 1997). The respective individual regression coefficients were also tested for their statistical significance using the t-test.

3.2 Models Specification

The study adapted Baron and Kerry (1986) model specifications for direct relationship, four steps intervening relationship, two steps moderating relationship and finally the joint relationship. These have been defined in the hypotheses H_{01}-H_{04}.

H_{01}: Governance (CG) and Bank Performance (FP).

A simple regression model was used to test hypothesis one (Ho_1): the direct relationship between Corporate Governance (CG) and Bank Performance (FP).

$FP_{it=}\beta_0+\beta_1 CG_{it}+\acute{\epsilon}_{it}$…..Equation 1.

H_{02}: Relationship among Corporate Governance, Financial Characteristics and bank Performance:

The intervening effect of Financial Characteristics on the relationship between Corporate Governance and Bank Performance: Stepwise regression

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model was used to determine the relationships. The model consists of four steps to test hypothesis two (Ho_2).

Step one: Relationship between Corporate Governance (CG) and Bank Performance (FP) holding Firm Characteristics (FC) constant.

$FP_{it} = \beta_0 + \beta_1 CG_{it} + \acute{\varepsilon}_{it}$ …….....Equation 2(a).

Step two: Relationship between Corporate Governance (CG) and Financial Characteristics (FC), holding Bank Performance (FP) constant.

$FC_{it} = \beta_0 + \beta_2 CG_{it} + \acute{\varepsilon}_{it}$ …….....…Equation 2(b).

Step three: Relationship between and Financial Characteristics (FC) and Bank Performance (FP), holding Corporate Governance (CG) constant.

$FP_{it} = \beta_0 + \beta_3 FC_{it} + \acute{\varepsilon}_{it\,t}$ …….....…Equation 2(c).

Step four: Intermediation among Corporate Governance (CG), Financial Characteristics (FC) and Bank Performance (FP).

$FP_{it} = \beta_0 + \beta_4 CG_{it} + \beta_5 FC_{it} + \acute{\varepsilon}_{it}$ …….....Equation 2(d).

H_{03}: Relationship among Corporate governance, Macroeconomic Factors and Bank Performance.

Moderating effect of Macroeconomic Variables on the relationship between Corporate Governance and Bank Performance: Multiple regression models were used to determine this relationship. To test hypothesis three (Ho_3), the below moderation model was used.

$FP_{it} = \beta_0 + \beta_1 CG_{it} + \beta_2 GDP_{it} + \beta_3 INF_{it} + \beta_4 INR_{it} + \beta_5 GDP_{it} * CG + \beta_6 INF_{it} * CG + \beta_7 INR_{it} * CG + \acute{\varepsilon}_{it}$ …….....…Equation 3.

H_{04}: Relationship among Corporate governance, Financial Characteristics, Macroeconomic Variables and Bank Performance.

Panel data regression model of random effects was used to determine the relationship among Corporate Governance (CG), Financial Characteristics (FC), Macroeconomic Varables (MF) and Firm Performance (FP). These models were used to test hypothesis four (Ho_4), the joint effect:

$FP_{it} = \beta_0 + \beta_1 CG_{it} + \beta_2 FC_{it-1} + \beta_3 MF_{it-1} + c_i + \acute{\varepsilon}_{it}$……Equation 4.

Where for all the relationships: FP_{ij} is P Bank Performance; CG is Corporate Governance; FC is Financial Characteristics; MF is Macroeconomic Variables; c_i unobserved variable; β_0 is the intercept; β_1, β_2, and β_3 are regression coefficients for Corporate Governance, Financial Characteristics and Macroeconomic Factors for firm i in time t; and is error term. The study's null hypotheses were rejected when calculated p-values exceeded 0.05 significance level adopted by the study Aluoch ,Iraya, Kaijage & Ogutu, 2019).

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4.0 Results and discussions

4.1 Descriptive Statistics of Study Variables

Table 1 shows the descriptive statistics of the variables under study. The results shows the mean standard deviation, minimum, maximum of corporate governance variables, financial characteristics variables, macroeconomic factors and financial performance variables of listed firms in banking sector in Kenya.

Table 1. Descriptive Statistics of Study Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Board Independence	143	0.78	0.12	0.11	0.94
gender diversity	143	0.17	0.11	0.00	0.50
occupation expertise	143	7.14	1.75	2.00	12.00
board age	143	54.75	4.31	45.30	65.50
board size	143	10.19	4.07	7.00	54.25
board tenure	143	2.79	0.61	1.00	3.00
board ownership	143	0.09	0.21	0.00	0.71
board tools	143	3.21	0.41	3.00	4.00
board meeting	143	7.20	3.93	4.00	22.00
no board committees	143	4.78	1.61	1.00	8.00
Committees Meeting	143	21.19	11.83	1.00	61.00
board remuneration	143	0.05	0.09	-0.19	0.78
investments	141	0.79	0.12	0.39	1.00
leverage	143	2.36	1.35	0.22	8.81
liquidity	143	0.35	0.12	0.11	0.88
GDP growth Rate	165	4.85	2.19	0.20	8.40
Interest Rate	165	15.07	2.25	12.25	19.85
Inflation Rate	165	7.43	3.50	0.90	15.20
ROA	143	0.09	0.06	-0.14	0.27
Tobin's q	143	1.21	0.47	0.91	4.80

4.2 Board Structures and Financial Characteristics in Banking Firms

Table 2 presents the correlation between indicators of board structures and financial characteristics of banking firms listed on NSE. The findings show that board structure indicators had a negative association with investments except board age. The correlation between board independence and gender diversity and leverage was positive while occupational expertise, board age and board size had a negative correlation with leverage. The findings similarly showed that board independence and age had a negative correlation with liquidity while other board structure indicators had a positive correlation with liquidity in banking firms listed on NSE.

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Table 2. *Board Structures and Financial Characteristics in Banking Firms*

		Board independence	Gender Diversity	Occupational Expertise	Board Age	Board Size	Investments	Leverage	Liquidity
Board independence	r	1							
Gender Diversity	r	-0.125	1						
Occupational Expertise	r	.238**	-0.057	1					
Board Age	r	.250**	-.268**	.335**	1				
Board Size	r	.290**	-0.15	.367**	-0.01	1			
Investments	r	-0.109	-0.031	-0.026	.184*	-0.008	1		
Leverage	r	.174*	0.07	-0.14	-0.04	-.179*	-0.091	1	
Liquidity	r	-.273**	0.126	0.157	0.06	-0.023	0.137	0.067	1
	N	143	143	143	143	143	141	143	143

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

4.3 Board Activities and Financial Characteristics in Banking Firms

Table 3 presents the findings on correlation analysis between board activities indicators and financial characteristics (investments, leverage and liquidity) in listed Banking firms. The findings showed that board tenure had a positive correlation with investments and leverage while it had a negative correlation with liquidity. Board ownership had positive correlation with investments, liquidity and leverage of banking sector firms listed on NSE. The findings also showed that board tools was positively correlated with liquidity and investment and negatively correlated with leverage. Board meetings had positive correlation leverage and liquidity and a negative correlation with investments. The findings further showed that number of board committees was positively correlated with investment leverage and liquidity. Board committee meetings on the other hand were positively correlated with liquidity and leverage and negatively correlated with investments. Board remuneration had a positive correlation with leverage and negatively correlated with liquidity and investments of listed Banking firms in Kenya.

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Table 3. *Board Activities and Financial Characteristics in Banking Firms*

		Board Tenure	Board Ownership	Board Tools	Board Meetings	No Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity
Board Tenure	r	1									
Board Ownership	r	0.139	1								
Board Tools	r	-0.104	-0.019	1							
Board Meetings	r	.256**	.646**	-0.096	1						
No Board Committees	r	.537**	0.065	-0.005	.196*	1					
Committees Meetings	r	.511**	.164*	-0.08	.543**	.711**	1				
Board Remuneration	r	0.023	0.135	-0.026	-0.08	0.083	0.024	1			
Investments	r	0.037	0.117	.444**	-0.01	0.137	-0.044	-0.002	1		
Leverage	r	0.025	.535**	-0.02	.266**	0.062	0.111	.255**	-0.091	1	
Liquidity	r	-0.031	.190*	.192*	0.150	0.102	0.057	-.232**	0.137	0.067	1
	N	143	143	143	143	143	143	143	141	143	143

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

4.4 Board Structures and Macroeconomic Variables in Banking Firms

Table 4 presents the results for board structure indicators and macroeconomic variables for listed firms in banking sectors in Kenya. The findings presented showed that GDP growth rate had a positive correlation with board independence, gender diversity, occupational expertise and board age while it had a negative correlation with board size. The findings further showed that interest was positively correlated with all the board structure indicators. Inflation on the other hand, had a positive correlation with board independence, occupational expertise, and board size and board age while it was negatively correlated gender diversity for listed banking firms in Kenya.

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***Table 4**. Board Structures and Macroeconomic Variables in Banking Firms*

		Board independence	Gender Diversity	Occupational Expertise	Board Age	Board Size	GDP	Interest Rate	Inflation Rate
Board independence	r	1							
Gender Diversity	r	-0.125	1						
Occupational Expertise	r	.238**	-0.057	1					
Board Age	r	.250**	-.268**	.335**	1				
Board Size	r	.290**	-0.15	.367**	-0.011	1			
GDP	r	0.002	0.1	0.062	0.103	-0.02	1		
Interest Rate	r	0.031	0.049	0.023	0.046	0.01	-0.151	1	
Inflation Rate	r	0.079	-0.023	0.114	0.146	0.16	-.262**	-0.126	1
	N	143	143	143	143	143	143	143	143

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

4.5 Board Activities and Macroeconomic Variables in Banking Firms

Table 5 presents the findings of correlation analysis between board activities indicators and macroeconomic variables among banking firms listed on NSE. The findings similarly showed that GDP growth rates, interest rates and inflation rates had weak association with board activities indicators for listed banking firms in Kenya.

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Table 5. *Board Activities and Macroeconomic Variables in Banking Firms*

		Board Tenure	Board Ownership	Board Tools	Board Meetings	No Board Committees	Committees Meetings	Board Remuneration	GDP	Interest	Inflation
Board Tenure	r	1									
Board Ownership	r	0.139	1								
Board Tools	r	-0.104	-0.019	1							
Board Meetings	r	.256**	.646**	-0.096	1						
No Board Committees	r	.537**	0.065	-0.005	.196*	1					
Committees Meetings	r	.511**	.164*	-0.08	.543**	.711**	1				
Board Remuneration	r	0.023	0.135	-0.026	-0.081	0.083	0.02	1			
GDP Growth Rate	r	0.005	0.002	0.154	0.022	0.04	0.1	-0.081	1		
Interest Rate	r	0.015	0.003	.312**	-0.022	-0.022	-0.07	-.209*	-0.151	1	
Inflation Rate	r	0.01	0.006	-0.04	0.051	-0.007	0	0.031	-.262**	-0.126	1
	N	143	143	143	143	143	143	143	143	143	143

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

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4.6 Board Structure and Performance of Firms Variables in Banking Firms

Table 6: shows the correlation between board structure indicators and performance of listed banking firms in Kenya. The results showed that board structure indicators had a weak correlation with performance of listed banking firms in Kenya.

Table 6. *Board Structure and Performance of Firms Variables in Banking Firms*

		Board independence	Gender Diversity	Occupational Expertise	Board Age	Board Size	ROA	Tobin's Q
Board independence	r	1						
Gender Diversity	r	-0.125	1					
Occupational Expertise	r	.238**	-0.057	1				
Board Age	r	.250**	-.268**	.335**	1			
Board Size	r	.290**	-0.15	.367**	-0.011	1		
ROA	r	-0.141	-0.105	.187*	0.144	.330**	1	
Tobin's Q	r	-0.139	-0.082	-0.07	-.191*	0.057	0.15	1
	N	143	143	143	143	143	143	143

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

4.7 Board Activities and Performance of Firms in Banking Firms

Table 7 presents the findings of correlation analysis of board activities indicators and performance of banking firms listed on NSE. The findings showed that board activities indicators had a weak correlation with both ROA and Tobin's Q of banking firms listed on NSE.

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Table 7. *Board Activities and Performance of Firms in Banking Firms*

		Board Tenure	Board Ownership	Board Tools	Board Meetings	No Board Committees	Committees Meetings	Board Remuneration	ROA	Tobin's Q
Board Tenure	r	1								
Board Ownership	r	0.139	1							
Board Tools	r	-0.104	-0.019	1						
Board Meetings	r	.256**	.646**	-0.096	1					
No Board Committees	r	.537**	0.065	-0.005	.196*	1				
Committees Meetings	r	.511**	.164*	-0.08	.543**	.711**	1			
Board Remuneration	r	0.023	0.135	-0.026	-0.081	0.083	0.024	1		
ROA	r	.212*	-.281**	0.098	-.194*	0.006	-0.119	-.246**	1	
Tobin's Q	r	0.116	-0.157	0.08	-0.109	0.043	-0.042	-0.11	0.151	1
	N	143	143	143	143	143	143	143	143	143

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

4.8 Financial Characteristics Variables and Performance of Banking Firms

Table 8 presents the findings of correlation analysis between financial characteristics and performance of banking firms listed on NSE. The findings showed that investments, leverage and liquidity had a weak positive correlation with both ROA and Tobin's Q of listed banking firms in NSE.

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Table 8. *FC Variables and Performance of Firms in Banking Firms*

		Investments	Leverage	Liquidity	ROA	Tobin's Q
Investments	r	1				
Leverage	r	-0.091	1			
Liquidity	r	0.137	0.067	1		
ROA	r	0.110	.489**	0.099	1	
Tobin's Q	r	0.036	.445**	0.062	0.151	1
	N	141	143	143	143	143

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

4.9 Macroeconomic Variables and Performance in Banking Sector

Table 9 presents the correlation analysis of macroeconomic variables and performance indicators of banking firms listed on NSE. The results presented showed that GDP growth rates, interest rates and inflation rates had a weak correlation with both ROA and Tobin's Q of listed banking firms in Kenya.

Table 9. *Macroeconomic Variables and Performance in Banking Firms*

		GDP	Interest Rate	Inflation Rate	ROA	Tobin's Q
GDP Growth Rate	r	1				
Interest Rate	r	-0.151	1			
Inflation Rate	r	-.262**	-0.126	1		
ROA	r	0.112	0.112	.171*	1	
Tobin's Q	r	-0.004	-0.067	-0.109	0.151	1
	N	143	143	143	143	143

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

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4.10 Corporate Governance and Performance of Banking Firms

Table 10 presents the findings on effect on corporate governance variables on performance of listed firms in banking sector. The results revealed models used to link corporate governance variables to ROA (Prob>Chi2 =0.000) and Tobin's Q (Prob>Chi2 =0.0298) were statistically significant which implied that corporate governance variables were significant predictor of performance of listed firms in banking sector. The results showed that occupational expertise, board age, board tenure, board tools and board meetings had a positive relationship with ROA of listed banking sector firms. However, only board tenure had positive and significant relationship. Board independence, gender diversity, board size, board ownership, number of board committees, committees meetings, board remuneration were found to be negatively related to ROA of listed firms in the banking sector. Gender diversity, board ownership and committees meetings had a negative and significant relationship with ROA of listed firms in banking sector.

In the second model, only board tenure, board tools and number of board committees revealed a positive and significant relationship with Tobin's Q of listed firms in banking sector. Board independence, gender diversity, occupational expertise, board age, board size, board ownership, board meetings, committees meetings and board remuneration were found to be negatively related to Tobin's Q of listed firms in the banking sector.

Table 10. *Corporate Governance Variables and Performance of Firms in Banking Sector*

	Model 1	**Model 2**
	ROA	**Tobin's Q**
Board Independence	-0.0791173 (P=0.072)	-0.3583471 (p=0.350)
Gender Diversity	-0.106992 (**P=0.026**)	-0.8022753 (p=0.055)
Occupational Expertise	0.0041622 (P=0.191)	-0.0034962 (p=0.900)
Board Age	0.0019421 (P=0.133)	-0.0258971 (**p=0.022**)
Board Size	-0.0005444 (p=0.656)	-0.0038881 (p=0.715)
Board Tenure	0.041364 (**p=0.000**)	0.1577382 (**p=0.044**)
Board Ownership	-0.1125558 (**p=0.001**)	-0.3227396 (p=0.276)
Board Tools	0.0213518 (p=0.063)	0.1091453 (p=0.276)
Board Meetings	0.0026026 (p=0.222)	-0.0022282 (p=0.905)
Number of Board Committees	-0.0016443 (p=0.721)	0.0334806 (p=0.404)
Committees Meetings	-0.0014859 (**p=0.042**)	-0.0067005 (p=0.293)
Board Remuneration	-0.0817864 (p=0.113)	-0.3806522 (p=0.399)
_cons	0.1074653 (p=0.212	2.368864 (**p=0.002**)
	Wald chi2(12)=63.38	Wald chi2(12)= 22.77
	Prob > chi2= 0.0000	Prob > chi2 = 0.0298
	R-sq:= 0.3277	R-sq:= 0.149

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4.11 Corporate Governance Composite and Performance of Firms in Banking Firms

Table 11 presents the regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed banking firms in Kenya. The results revealed that the models fitted were statistically insignificant which implied that CG composite was insignificant predictors of performance of firms (ROA and Tobin's Q) of listed banking firms in Kenya.

Table 11. *Model CG Composite and Performance of Firms in Banking Sector*

	Model 1	Model 2
	ROA	Tobin's Q
CG	0.0000000125 (p=0.077)	0.0000000165 (p=0.776)
Cons	0.0964871 (p=0.000)	1.327775 (p=0.000)
	Wald chi2(1)= 3.13	Wald chi2(1)=0.08
	Prob > chi2 = 0.0768	Prob > chi2 = 0.7757
	R-sq:= 0.0346	R-sq:=0.0422

4.12 H_{02}: Intervening Effect of Financial Characteristics on the Relationship Between Corporate Governance and Performance of Firms in Banking Firms.

Based on the summary of the findings in table 12 the study concluded that firm leverage partially intervened the relationship between corporate governance and performance of firms of listed automobile sector in Kenya, however, the four steps suggested by Baron and Kenny (1986) were not fully achieved to have a significant intervening effect. Investment and leverage both had an insignificant intervening effect on the relationship between corporate governance and performance of firms of listed banking firms in Kenya.

Table 12. *Summary of the Intervening Effect of Financial Characteristics on the Relationship between Corporate Governance and Performance of Firms in Banking Firms*

Steps	**IV**	**DV**	**Result**	**Intervention**
1	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
2	CG	Investment	insignificant	Not Achieved
		Leverage	significant	Achieved
		Liquidity	insignificant	Not Achieved
3	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	insignificant	Not Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved

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	Liquidity	ROA	significant	Achieved
		Tobin's Q	insignificant	Not Achieved
4	CG	ROA	Insignificant	Not Achieved
		Tobin's Q	Insignificant	Not Achieved
	Investment	ROA	insignificant	Not Achieved
		Tobin's Q	significant	Achieved
	Leverage	ROA	significant	Achieved
		Tobin's Q	significant	Achieved
	Liquidity	ROA	significant	Achieved
		Tobin's Q	insignificant	Achieved

4.13 H_{03} : Moderating effect of Macroeconomic Variables on the Relationship between Corporate Governance and performance of Firms in Banking Sector

This section presents the findings of banking firms, a model fitting for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of banking firms listed on NSE in Kenya.

Table 13. Step One: Model Fitting for Moderating effect of Macroeconomic Variables on the Relationship between Corporate Governance and Performance of Firms in Banking Firms

	ROA	Tobins Q
CG	-0.0000000121 (P=0.045)	-0.0000000365 (P=0.580)
GDP growth rate	0.0054563 (P=0.002)	-0.0112199 (P=0.522)
interest rate	0.003555 (P=0.033)	-0.0237191 (P=0.145)
inflation rate	0.0036934 (P=0.001)	-0.0173256 (P=0.111)
_cons	0.011917 (P=0.724)	1.802547 (P=0.000)
	Wald chi2(4)=20.33	Wald chi2(4)= 4.18
	Prob > chi2 =0.0004	Prob > chi2 = 0.3817
	R-sq: = 0.1192	R-sq:= 0.025

Table 14. Step Two: Model Fitting for Moderating effect of Macroeconomic Variables on the Relationship between Corporate Governance and performance of Firms in Banking Sector

	Model 1		**Model 2**	
	ROA		**Tobins Q**	
CG	0.000000921	(P=0.068)	0.00000229	(P=0.632)
GDP growth rate	0.0065579	(P=0.001)	0.0128476	(P=0.477)
interest rate	0.0038196	(P=0.026)	0.0252775	(P=0.121)
inflation rate	0.0040228	(P=0.001)	0.0174138	(P=0.116)

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IT1	0.000000102 (P=0.071)	0.000000281 (P=0.597)
IT2	0.00000000717 (P=0.705)	0.0000000151 (P=0933)
IT3	0.0000000387 (P=0.221)	0.000000132 (P=0.661)
_cons	0.0242715 (P=0.483)	1.857269 (P=0.000)
	Wald chi2(7) =24.16	Wald chi2(7)= 4.75
	Prob > chi2 =0.0011	Prob > chi2 =0.6905
	R-sq: = 0.1870	R-sq: = 0.0292

Table 13 and Table 14 show that macroeconomic variables increased the explanatory power of corporate governance on Performance of firms of listed banking firms. The results revealed that R-squared increased from 0.1192 and 0.1870 in the first model while increased from 0.025 to 0.0292 in the second model with the inclusion of the interaction variables. The finding therefore implied that macroeconomic variables positively and insignificantly moderated the relationship between corporate governance and ROA of listed banking firms in Kenya. The findings implied that macroeconomic variables positively and insignificantly moderated the relationship between corporate governance and performance of firms of listed banking firms in Kenya since the interaction variables IT1, IT2 and IT3 were insignificant.

4.14 H_{04}:Joint Effect of Corporate Governance, Financial Characteristics, Macroeconomic Variables on Performance of Banking Firms

This section presents the findings on effect of corporate governance, financial characteristics, and macroeconomic variables on performance of firms of listed banking sectors firms in Kenya. During the period of the study NSE had listed 11 firms in banking sector hence the data for these firms was adequate in conducting analysis.

Table 15. Joint Effect of Corporate Governance, Financial Characteristics, Macroeconomic Variables on Performance of Banking Firms

	Model 1	Model 2
	ROA	Tobin's Q
CG	0.00000020 (p=0.804)	0.00000012 (p=0.101)
Investments	-0.016 (p=0.677)	0.158 (p=0.617)
Leverage	-0.023 (p=0.000)	-0.195 (p=0.000)
Liquidity	0.066 (p=0.091)	-0.110 (p=0.725)
GDP Growth rate	0.003 (p=0.240)	-0.037 (p=0.042)
Interest Rate	0.007 (p=0.002)	-0.001 (p=0.954)
Inflation Rate	0.003 (p=0.042)	-0.032 (p=0.004)

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_Cons	0.00008 (p=0.999)	3.157 (p=0.01)
	Wald chi2(7)=8.925	Wald chi2(7)=6.928
	Prob > chi2= 0.000	Prob > chi2 = 0.000
	R-sq:within = 0.284	R-sq: within = 0.229

The results in Table 15 reveals that both model 1 linking CG, FC, macroeconomic variables and ROA (Prob >chi2=0.000), and Model 2 linking CG, FC, macroeconomic variables and Tobin's Q (Prob >chi2=0.000) were statistically significant. These findings implied that CG, FC, macroeconomic variables were good predictors of listed banking firms performance. The research findings indicates that Leverage (β=-0.023, p=0.000), Interest Rate (β=0.007, p=0.002) and Inflation Rate (β=-0.032, p=0.004) had a significant effect on ROA while CG (β=0.00000020, p=0.804), Investments (β=-0.016, p=0.677), Liquidity (β=0.066, p=0.091) and GDP Growth rate (β=0.003, p=0.240) were found to have insignificant effect on ROA. The findings also revealed that Leverage (β=-0.195, p=0.000), Inflation Rate (β=-0.032, p=0.004) and GDP Growth rate (β=-0.037, p=0.042) had a significant effect on Tobin's Q of listed Banking firms in Kenya. The relationship between CG (β=0.00000012, p=0.101), Investments (β=0.158, p=0.617), Liquidity (β=-0.110, p=0.725) and Interest Rate (β=-0.001, p=0.954) and Tobin's Q for banking firms was found to be insignificant.

Model 1

FP_{it} (ROA) = 0.00008 + 0.00000020 CG_{it} + -0.016IN_{it-1}+ -0.023LE_{it-1} + 0.066LI_{it-1}+ 0.003GDP_{it-1}+ 0.007INR_{it-1}+ -0.003IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Model 2

FP_{it} (Tobin's Q) = 3.157 + 0.00000012 CG_{it} + 0.158 IN_{it-1}+ -0.195LE_{it-1} + -0.110LI_{it-1} + -037GDP_{it-1}+ -0.001INR_{it-1}+ -0.032IFR_{it-1}+c_i +$\acute{\varepsilon}_{it}$

Where;

CG =Corporate Governance, IN = Firm Investments, LE= Firm Leverage, LI= Firm Liquidity,

GDP = GDP growth Rate ,INR = Interest Rate, and IFR= Inflation Rate

ε =Error Term

Conclusion

First, the study concluded that listed firms in Kenya adopted corporate governance practices as part of the requirements of the regulating authority which had no impact on the specific banks' performance. The study established that most of the corporate governance practices adopted by listed

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banks in Kenya had an insignificant effect on the performance of listed firms. The study concluded that listed firms in Kenya strengthened their corporate governance due to poor performance, further the study concluded that corporate governance practices used by listed banks failed to impact on performance or had negative relationship on performance. The study finally concluded that listed firms that focused on enhancing their corporate governance, financial characteristics and operated in favourable macroeconomic environment are likely to increase their performance since jointly corporate governance, financial characteristics and favourable macroeconomic conditions were found to account for the highest variations in both ROA and Tobin's Q of the listed firms in Kenya.

Recommendations

Based on the findings, the study recommended that listed firms should revisit their corporate governance practices to ensure that they leverage on board structures and board activities that improve performance while obsolete corporate governance practices should be eradicated. The shareholders of listed banks may adopt the findings of this study to restructure their corporate governance by implementing board structures and board activities that will improve performance of listed banks or realign the corporate governance practices to make more effective. The stakeholders may also use the findings of this study to open inquiry on effectiveness of corporate governance in their respective firms for future improvement. Based on these findings, it was recommended that management of listed banks should restructure and optimize their financial characteristics to achieve higher level performance of their firms. Based on the findings, the study recommended that management of listed banks must leverage on period of high economic growth to improve their performance since the macroeconomic environment moderated the relationship between corporate governance and performance of listed and non-listed commercial banks.

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