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Corporate Governance, Financial Management Practices, Macroeconomic Variables and Performance of Agricultural Firms Listed at the Nairobi Securities Exchange, Kenya

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Abstract
Performance of listed agricultural firms at the Nairobi Securities Exchange contrasted since introduction of corporate governance framework in Kenya in the year 2002. This study examined the relationships among corporate governance, financial management practices, macroeconomic variables and performance of listed agricultural firms.The specific objectives were to determine the effect of corporate governance on performance of listed agricultural firms; to establish the intervening effect of financial management practices on the association between corporate governance and performance of listed agricultural firms; to find effect of moderation of macroeconomic variables on the relationship between corporate governance and performance of listed agricultural firms and to establish effect of joint relationship among corporate governance, financial management practices and macroeconomic variables on performance of listed agricultural firms. The study used agency theory, stakeholder theory, resource dependency theory and cash conversion theory. The study used a census approach and a target population of seven listed agricultural firms for a period of 2002-2016. Longitudinal descriptive research design was employed and data was collected from published annual firms' reports and economic reports. Descriptive, inferential and panel regression analyses were performed. The study established that the relationship between corporate governance and Tobin's Q is significant while the relationship between corporate and Returns on Assets to be insignificant. Occupational expertise, board age, and board tools had significant relationship with Returns on Assets, while board tenure and board meetings had significant relationship with Tobin's Q. The intervening effect of financial management practices on the relationship between corporate governance and performance of listed agricultural firms was insignificant. The moderating of macroeconomic variables on the relationship between corporate governance and performance of listed agricultural firms was significant. The joint effect of corporate governance, financial management practices, and macroeconomic variables on performance of listed agricultural firms was significant. The study recommended that directors of listed agricultural firms to enhance corporate governance and financial management practices to achieve higher performance of listed agricultural firms.
Keywords: Corporate Governance, Financial Management Practices, Macroeconomic Variables, Firm Performance, Listed Agricultural Firms in Kenya.
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1.0 INTRODUCTION

Kenya is within middle income economy with 31.4% of its households solely engage in agriculture. It is the main source of income for both rural and urban households as it employs about 57% of total Kenyan labour force and contributes more than 65% of total exports and a generates more than 40% of total public revenues. From 2013-2017 the agricultural sector created on average of 21.9% of Gross Domestic Product (GDP) and according to the central government development plan, agriculture aims to attain 100% food and nutritional security for all Kenyans. Increased productivity in agricultural sector in Kenya not only benefits the households in their livelihoods, but it also has a potential to lift them out of poverty (World Bank, 2019; PWC, 2019).

Contribution of agricultural sector to Kenyan economy is enormous over the years; however the number of listed agricultural firms at Nairobi Securities Exchange is relatively low. Performance of listed agricultural firms in Kenya is not consistent under the period of study. These firms are the major export earners and contribute more to the overall agricultural sector as they are involved in multiple agricultural activities. Performance of these firms nevertheless are influenced by a number of factors some are agricultural inherent, while others are managerial, financial, technological, political, weather patterns, economic, oil prices, local and global regulations, global pandemics among others. There is high expectation that listed agricultural firms in Kenya should always generate positive financial performance but, this is not the case leading to inconsistent results.

This study therefore is to determine the relationship between corporate governance and performance of listed agricultural firms listed at the Nairobi Securities Exchange. This study is further to determine the intervening effect of financial management practices as well as effect of selected macroeconomic variables on the relationship between corporate governance and performance of listed agricultural firms in Kenya.

1.1 Corporate Governance

The concept and definition of corporate governance is evolving and changing given the dynamics in management and changes in commercial laws. The original concept and definitions focused on this investors return after major corporate failures all over the world such as Enron and WorldCom among others. Different models of corporate governance from different parts of the world are contributing to this evolution. The American rule-based model (Anglo-Saxon model), UK and Commonwealth principles based model, Japanese stakeholders-oriented network model and Asian family based model (overseas Chinese model) among others are all leading to a broader focus on corporate governance bringing in the concept of stakeholders' satisfaction rather than shareholders' benefits. This is as results from lessons learned from corporate failures which were having far reaching adverse effects to various stakeholders (Tricker & Tricker, 2019).

Corporate governance therefore refers to the way a corporation is governed. However different legislations in different countries have different definitions of a corporation. It means managing the business as per stakeholders' expectations. Corporate governance is an arrangement where the investors (debt-holders and equity-holders) assure themselves of getting a better return on their investment. Corporate governance gives Board of Directors full responsibility to make effective and efficient operational and strategic decisions in a transparent manner to achieve business objectives. Agarwal (2021) defines corporate governance as the process of governing the corporation: creating corporate policies in line with the vision and missions, while taking into consideration the interest of all stakeholders. Hopt (2021) defines corporate governance as a system by which companies are managed. Corporate governance characteristics used for this study are: board independence, board diversity, board occupational expertise, board tenure, board age, board size, board ownership structure, board tools, board remuneration and board meetings.

1.2 Financial Management Practices

Efficient financial management practices are essential to financial health of corporations, they determine whether firms create wealth or not, which is fundamental to a firm survival and growth. Putting enormous sums of money to corporations without adequate training of managers on conventional financial management practices is deplorable. Companies that access funds normally collapse due to unconventional financial management practices. Financial management practises include: investment practices, financing practices, dividend practices and liquidity practices which have direct effect on firm performance (Mwosi, Mutesigensi & Ebong, 2018).

Investment practices encompass efficient allocation of funds on viable projects that will generate wealth for a firm. In accounting it is the attainment of long term capital assets to generate future profits to a firm and taking short term contingent opportunities in the financial market to generate more profits. Evaluation of these projects is essential for future success of a firm. The discounting and non-discounting techniques normally used, but the estimation of cash flows given various future economic, technological and social scenarios is critical. Financing practices deal with sourcing of funds and determination of optimum capital structure to achieve the highest value of a firm at a relatively lower weighted average cost of capital. Sourcing decisions are influenced by a number of internal and external factors of a firm. Among these factors are cost of capital, need for capital, leverage, repayment patterns and need for flexibility. Funds are in form of debt and equity with different merits and demerits to a firm (Brigham & Davis, 2018).

Dividend practices are concerned with compensation to equity holders. They deal with the deferred current consumption by investors for future higher utility. These practices have greater effect on corporate governance policies and practices. Dividend practices define dividend policy, which is the pattern of dividend payments by a firm for a given period of time and at rate that retain equity investors of a firm. These practices are influenced by the firm's profitability, liquidity, financing, investments, control, tax implications and growth rate. Liquidity practices focus on management of cash cycle that is the determination of optimum cash level of a firm. The practices involve management of working capital variables which include; inventories management, receivables management, cash management and payables management. The practices are more concerned with operational activities of a firm (Brigham & Davis, 2018).

1.3 Macroeconomic Variables

Economic variables have major effect on performance of firms. They affect costs of inputs and prices of goods and services. These variables can be classified under microeconomic and macroeconomic variables. Microeconomic variables normally exist within a firm and in most cases are influenced by management activities. Macroeconomic variables on the other hand exist outside the firms and are not under the control of management. They affect all firms within an industry or an economy. They offer opportunities and at the same time threats to firms. Managers of firms need to use firms' strengths to exploit these opportunities, and also protect the firms against the threats so as to achieve a higher performance of firms. Key macroeconomic factors include the gross domestic product (GDP), consumer price index (CPI), employment, stock market index, exchange rates, corporate taxes and interest rates (Dioha, Mohammed & Okpanach, 2018).

Macroeconomic variables influence macroeconomic environment and affect the level of firms' performance. Favourable cost of capital arising from prevailing interest rates in an economy and a growing GDP provide more business opportunities for the firms. Moderate level of inflation increases purchasing power of firms' and thereby increasing performance of firms. Unfavourable macroeconomic environment negatively affect factors of production as they become scarce and expensive reducing business prospects leading to poor performance (Njagi, Aduda, Sifunjo & Iraya, 2017).

Three macroeconomic variables for this study are gross domestic product (GDP), interest rates and inflation rates. GDP is equal to total investment, consumption, government spending, and exports less value of imports. GDP is a measure for all finished goods and services produced in a country for a specific fiscal year. Interest rate represents the cost of borrowing capital for a given period of time. It is the price that relates to present claims on resources relative to future claims on resources. Inflation rate is general rise in price levels for a basket of products. Inflation rate has effect on the value of money and it is measured by the changes in the consumer price index (Egbunike & Okerekeoti, 2018).

1.4 Firm Performance

Firm performance is multi-faceted, and the appropriate measure selected to assess firm performance depends on the type of organization to be evaluated and the objectives to be achieved through that evaluation. Firm performance 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 its investments in long and short terms to create wealth. Measures of firm performance can further be achieved using either accounting or market metrics with diverse theoretical underpinning. Each of the two metrics has specific predispositions. Firm performance measures can be established on book value or market value (Egbunike & Okerekeoti, 2018).

This study uses accounting and market based measurements of performance. Accounting based measurements are effective indicators of firms' profitability compared to a benchmark rate of return to risk adjusted weighted average cost of capital (WACC). However market based measurements are normally categorized by their forward looking aspect and their reflection on the expectations of the shareholders concerning future performance. ROA is used as accounting based measurement and Tobin's Q as a market based measurement. ROA measures the operating and finance performance of the firm. A higher level of ROA indicates an effective use of the firm's assets to create wealth to shareholders. Tobin's Q refers to a traditional measure of expected long-run firm performance. A high Tobin's Q shows success in the a way the firm has leveraged its investment to develop the company that is valued more in terms of its market value compared to its book-value (Saseela, 2018).

1.5 Nairobi Securities Exchange

Nairobi Securities Exchange (NSE) is the only stock and derivatives market in Kenya. The market list securities and derivatives in different platforms for shares for listed companies, special shares for some none listed companies, the alternative markets for bonds and derivatives. NSE has a duty to assure effective and efficient trading in securities and derivatives and to improve economic development for all stakeholders and general economy. The market has different forms of investors from foreign investors, institutional, government to local citizens.

Firms listed at the NSE are clustered into twelve different sectors including agricultural, automobiles and accessories, banking, commercial and services, construction and allied, energy and petroleum, insurance, investment, investment services, manufacturing and allied, telecommunication and technology and real estate investment trust. The firms listed under these sectors are required to comply with corporate governance set of 19 principles and recommendations on structure and processes (CMA, 2015).

1.6 Problem Statement

The relationship between corporate governance and firm performance of listed and non-listed agricultural firms is contradicting in most countries (Zheng, 2021; Oleh Pasko, Chen, & Wang, 2021; Tleubaye, Bobojonov, Gagalyuk, García-Meca & Glauben, 2020; Roudaki, 2018). The same trend has been experienced in Kenya where listed agricultural firms have realised varied results since the introduction of corporate governance framework by Capital Markets Authority (CMA, 2002) and the new code sets out 19 principles and specific recommendations on structure and processes which companies should embrace in making good corporate governance part of their business dealings and culture (Shikanga, Mukanzi and Musiega, 2018; Ngwenze & Kariuki, 2017; CMA, 2015).

There are 7 listed agricultural firms at the Nairobi Securities Exchange as at 31st December, 2016. The performance of listed agricultural firms has been different since the commencement of corporate governance policies and practices. Kakuzi Limited had increased operating profit from KES 232,799,000 in the year 2014 to KES 757,779,000 in the year 2016. Kapchorua Tea Company Limited had increased operating profit from KES 182,079,000 in the year 2014 to KES 336,007,000 in the year 2016. Eaagads Limited posted operating loss of KES (58,676,000) in the year 2014 to profit KES 9,691,000 in the year 2016. Limuru Tea Company Limited had a decreased in operating profit from KES 2,078,000 in the year 2014 to operating loss of KES (26,731,000) in the

year 2016. Rea Vipingo Plantations Limited delisted in the year 2016 had operating profits of KES 647,992,000 in the year 2013 to KES 2,117,386,000 in the year 2015. Sasini Limited posted operating profit of KES 61,793,000 in the year 2014 to KES 1,020,758,000 in the year 2016. Williamson Tea Kenya Limited posted operating profit of KES 1,041,033,000 in the year 2014 to KES 940,445,000 in the year 2016 (NSE, 2017).

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Jensen and Meckling (1976) established Agency theory based on separation ownership between owners and managers. Equity holders being owners of firms are to delegate decision making authority to managers to run the firm to their expectations. Equity holders normally want to maximize their wealth through shareholding, and this should the supreme duty of their agents, the managers. According to Fama and Jensen (1983) managers may commit moral hazard. Managers may substitute owners' interest with their own interest and make decisions which contravene the main objective of the relationship. Possibility of moral hazards by managers leads to expensive monitoring costs which have direct effect on profitability of firms. Agency theory is applicable to the relationship between corporate governance and performance of listed agricultural firms in Kenya. The theory assists to determine how effective directors of these listed agricultural firms are in satisfying the owners' objective of achieving a better return from their investments (Anderson, Bustamante, Guibaud, & Zervos, 2018). However the theory has been criticized on a narrow approach and ignores other stakeholders; overlooks employees who are considered to be internal owners and put more emphasis that managers of most firms can be self-interested.

Freeman (1984) developed Stakeholder theory. Unlike the Agency theory which concentrates mainly on the relationships between principals and agents, the stakeholder theory takes into consideration the interests of different stakeholders in a firm. According to the theory, directors of a firm have interests of various stakeholders and should not have preference and favouring the group of stakeholders. The theory therefore focuses on managerial decisions to serve all stakeholders equally to meet their needs from the firm. Stakeholder theory helps in determining the relationship between corporate governance and performance of listed agricultural firms in Kenya, where directors of the firms are required to consider all stakeholders to maximize the wealth of their firms. The theory is criticized on the ground that it leads to corruption by trying to meet all stakeholders' interests at the expense of its environment (Okiro, Aduda & Omoro, 2015).

Pfeffer and Salancik (1970) developed Resource Dependency theory. The theory explains the relationship between external resources and behaviour of organisations. External resources are essential for the achievement of the operational, tactical and strategic goals of a firm, since firms are simply involved in conversion of external resources to their objectives. The theory explains the duty of directors of a firm to provide access to external resources to a firm and also gives direction on recruitment of directors. This theory is important in looking at the relationship between corporate governance and performance of listed agricultural firms in Kenya. These firms require different types of external inputs for their survival and profitability. The theory has been under scrutiny that most directors normally form interlocking alliances, joint ventures, mergers and acquisitions for continuous external supplies locking out others.

Richards and Laughlin (1980) were the proponents of Cash Conversion Cycle (CCC) theory. It is a wider framework of analysis known as the working capital cycle or the cash cycle. It deals with management of working capital, which includes management of inventories, management of receivables, management of cash and cash equivalents and management of payables. It is concerned with how long to convert inventories and receivables into cash to pay creditors. It is determined by adding stock conversion period in trade debtor's collection period and subtracting trade creditor's deferral period (Padachi, 2006). The number of days trade debtors; stock and trade creditors are used in the operationalization of the management of trade creditors and stock (Sharma & Kumar, 2011). The CCC theory is of importance to this study on how directors make listed agricultural firms liquid enough, to meet their current obligations and to enhance firm performance. The CCC theory has been criticized on the basis that it only takes into consideration the operational activities and ignores strategic aspects of the firm.

2.2 Empirical Review

Zheng (2021) examined empirical analysis of listed agricultural corporate governance structure and corporate performance in China, using a sample of listed agricultural companies in Shanghai and Shenzhen stock markets for a period 2013-2018. The study used multiple regression models to verify the three aspects of corporate governance structure and found that the relationship between equity concentration, equity balance, executive compensation and corporate performance of listed agricultural companies in China is in a "U" shape, and the size of the board of directors is significantly and positively correlated with corporate performance, while the correlation between other corporate governance structural factors and firm performance is not significant. The study used three variables of corporate governance and for a period 2013-2018, this study incorporated many variables of corporate governance for a period 2002-2016.

Oleh Pasko*et al.*, (2021) examined board characteristics and financial performance of listed agricultural firms

in China for a period of 2008-2017. The study used multiple regression models and established that board size and CEO duality have significant relationship with financial performance, while the relationship between board independence and financial performance was not established. The study used Return on Assets, Return on Equity and Earnings per Share as financial performance measures. This study however used Return on Assets and Tobin's Q as performance measures.

Tleubaye *et al*., (2020) examined corporate governance and firm performance within the Russian agro-food sector. The study employed unique panel data obtained from 203 companies for the years between 2012 and 2017. A random effects model was used to analyse the impacts of ownership concentration and ownership identity on the firms' financial performance. The results indicated an inverse U-shaped association between ownership concentration and firm performance and with average level of ownership concentration found to be on the descending range of the inverse U-shaped curve. The study also observed a similar quadratic relationship between ownership concentration by government and directors and firm performance. On average, ownership by directors was found to be on the ascending range and below the peak point, suggesting a potential for further performance improvement, while the impact of agro-holding ownership was found to be linear and positive. The study concentrated on ownership concentration, however this study included board structure and board activities of listed agricultural firms in Kenya.

Roudaki (2018) studied corporate governance structure and firm performance in large agricultural corporations in New Zealand. The study included external auditor remuneration and board characteristics such as board independence, board ownership, board compensation and board gender diversity in the context of agricultural companies by applying agency theory. The study employed panel data regression analysis of 80 firms for a period of the year 2012 to year 2015 and found different results. External auditors' remuneration, board compensation, board independence had no association with agricultural companies' performance, while board gender diversity and board ownership were negatively but significantly associated with firm performance. The study used many corporate governance mechanisms and for a period 2012-2017, this study however incorporated intervening and moderating variables to broaden the scope of analysis.

Shikanga *et al.*, (2018) examined corporate governance and financial performance of agricultural firms listed at the NSE, Kenya. The study used descriptive survey design, descriptive statistics and regression analysis. The study found that corporate agricultural firms listed Kenya experienced decline in performance despite corporate governance framework and some were delisted. Financial and governance problems made some firms to be put on statutory management. The study further established significant relationship between corporate governance and financial performance. The study however was not clear on the study period, delisted firms and mechanisms of corporate governance. This study was for a period between the year 2002 to the year 2016 and with specific mechanisms of corporate governance.

Ngwenze *et al*., (2017) studied corporate governance and financial performance of listed agricultural firms listed at NSE. Kenya, using corporate governance characteristics such as board of directors' composition, board size, independence of board and board audit committees. The study used descriptive correlation research design for a period 2012-2014. Data was analyzed using a regression model and the study established that corporate governance had no significance influence on financial performance, but had significance influence on capital structure. The study used a short period time and a few characteristics of corporate governance. This study however used along period 2002-2016 and used many corporate governance characteristics including intervening and moderating variables.

2.3 Conceptual Framework

The conceptual framework provides a brief overview of inter linkages between research variables then presents a diagrammatic presentation of the study variables and how they influence each other. The study had four variables captured in the conceptual model on Figure.1. Performance of listed agricultural firms is the dependent variable and corporate governance was independent variable. Corporate governance was measured using corporate governance variables (Kesner, 1988) while financial management practices were measured using leverage, liquidity and investments (Jensen & Meckling, 1976; Okiro *et al,* 2015). On macroeconomic variables were measured using GDP growth rate, Inflation rate and Interest rate. Returns on Assets and Tobin's Q ratio were adopted as measures of performance of listed agricultural firms. $H_{01:}$ indicated the relationship between corporate governance and performance of listed agricultural firms. The study sought to test the relationship between corporate governance and performance of listed agricultural firms. The study expected the existence of a positive relationship between corporate governance and performance of firms of listed firms which measured using returns of assets and Tobin's Q ratio (Ibe, Ugwuanyi & Okanya, 2017).

$H_{02:}$ indicated the intervening effect of financial management practices in the relationship between corporate governance and performance of listed agricultural firms. This hypothesis sought to test whether financial management practices which included firm leverage, liquidity and investments had a significant intervening effect on the relationship between corporate governance and performance of listed agricultural firms which was measured

using ROA and Tobin's Q ratio (Buvanendra, Sridharan, & Thiyagarajan, 2017). H_{03} presented the moderating effect of macroeconomic variables on the relationship between corporate governance and performance of listed agricultural firms. The hypothesis sought to establish whether macroeconomic variables which included GDP growth rate, interest rate and inflation rate were expected to have a strong moderating effect on the relationship. The study expected a moderating significant effect on the relationship (Marinko & Tea, 2016). Lastly, H_{04} showed the joint relationship among corporate governance, financial management practices, and macroeconomic variables on performance of listed agricultural firms. To test this hypothesis, a multivariate regression was adopted. The study expected a significant joint effect on the relationship among the corporate financial management practices, macroeconomic variables and performance of listed agricultural firms (Tleubaye *et al*., 2020).

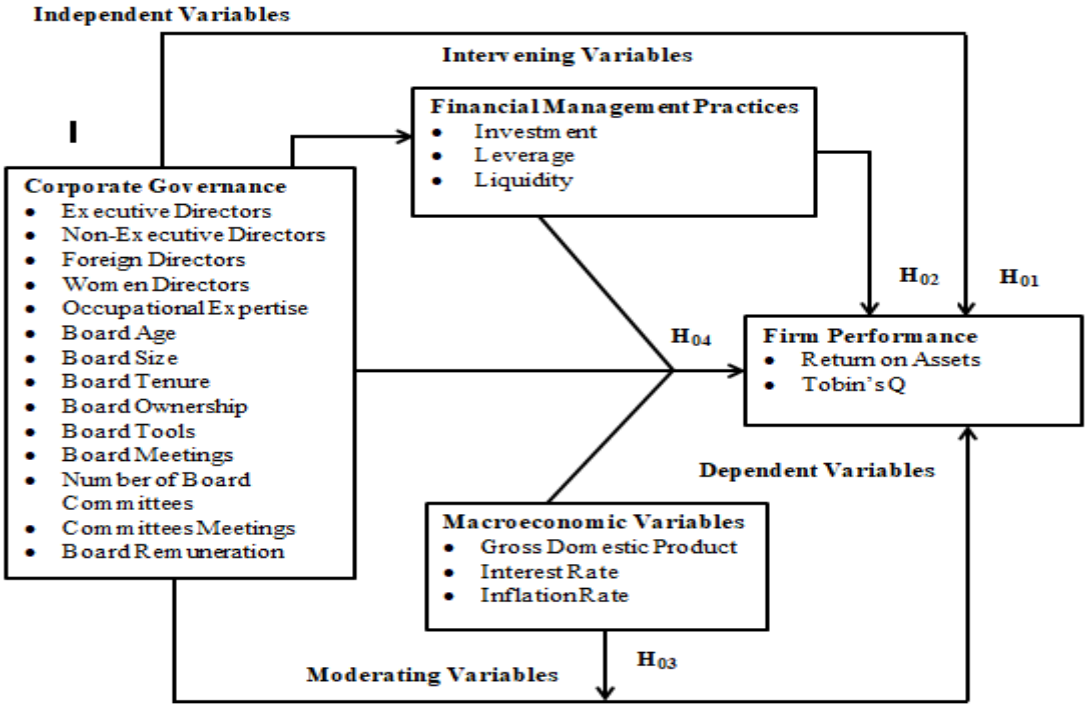

Figure 2.1: Conceptual Model

2.3 Study Hypotheses

The study pursued to test the following null hypotheses:

H_{01}- Corporate governance does not significantly affect performance of listed agricultural firms at the Nairobi Securities Exchange.

H_{02}- Financial management practices do not significantly intervene in the relationship between corporate governance and performance of listed agricultural firms at the Nairobi Securities Exchange.

H_{03}- Macroeconomic variables do not significantly moderate the relationship between corporate governance and performance of listed agricultural firms at the Nairobi Securities Exchange.

H_{04}- Corporate governance, financial management practices and macroeconomic variables do not significantly jointly affect performance of firms listed at Nairobi Securities Exchange.

3.0 RESEARCH METHODOLOG*Y*

This study used a census approach given a few number of agricultural firms listed in Kenya and therefore a target population of 7 listed agricultural firms at the NSE for a period 2002-2016.These listed agricultural firms were targeted because they need to adhere to Kenya Capital Markets Authority (CMA) guidelines to corporate governance for continuous listing at the Nairobi Securities Exchange. Data for corporate governance, financial management practices and financial performance were extracted from published financial reports at CMA, while macroeconomic data extracted from Kenya Economic reports National Bureau of Statistics.

The study employed descriptive analysis and panel data regression model using random effects. Coefficient of determination and p-values were used to interpret the regression results. The regression coefficients were tested using t-test for their statistical significance. The following regression models were developed based on the hypotheses:

1. The direct relationship for $Ho_{1:}$

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

2. The intervening relationship for Ho_2: using (Baron & Kenny, 1986) four steps model:
   $FP_{it} = \beta_0 + \beta_1 CG_{it} + \varepsilon_{it}$……Equation2 (a).
   $FC_{it} = \beta_0 + \beta_2 CG_{it} + \varepsilon_{it}$……..Equation2 (b).
   $FP_{it} = \beta_0 + \beta_3 FC_{it} + \varepsilon_{it\,t}$ ……Equation2 (c).
   $FP_{it} = \beta_0 + \beta_4 CG_{it} + \beta_5 FC_{it} + \varepsilon_{it}$……Equation2 (d).
3. The moderating relationship for Ho_3: using (Baron & Kenny, 1986) two steps model:
   $FPit = \beta_0 + \beta_1 CGit + \beta_2 GDPit + \beta_3 INFit + \beta_4 INRit + \beta_5 GDPit *CG + \beta_6 INFit *CG + \beta_7 INRit *CG + \varepsilon it$ ……Equation 3.
4. The joint effect for Ho_4:
   $FP_{it} = \beta_0 + \beta_1 CG_{it} + \beta_2 FC_{it-1} + \beta_3 MF_{it-1} + c_i + \varepsilon_{it}$……Equation 4.

Where for all the relationships: FP_{ij} is Performance of listed agricultural firms; CG is Corporate Governance; FC is Financial Management Practices; MF is Macroeconomic Variables; c_i unobserved variable; β_0 is the intercept; β_1, $\beta 2$, β_3, β_4, β_5, β_6 and β_7 are regression coefficients for Corporate Governance, Financial Management Practices and Macroeconomic Variables 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).

4.0 RESULTS AND DISCUSSIONS

4.1 Descriptive Statistics of Study Variables

Table 1 shows the descriptive statistics of study variables. The results show the mean, standard deviation, minimum, maximum of corporate governance variables, financial management practices variables, macroeconomic variables and performance variables of listed agricultural firms in Kenya. Listed agricultural firms in Kenya had varying corporate governance. Board independence had a mean of 0.6691, minimum of 0.25, maximum of 1 and a standard deviation of 0.213475, implied that variation in board independence was low. Gender diversity had an average of 0.0112 with a minimum of 0 and a maximum of 0.125, implied very low gender diversity or less women in the boards of most listed agricultural firms in Kenya. Occupational expertise had a high of 6 and a low of 1, with a mean of 3.9038, implied that most listed agricultural firms have experienced directors for better performance. The minimum age of the board members was 47 while the maximum was 70 with an average of 57, resulting into experience shown above; the lean board size was 2 while the largest board size was 9 with the mean being 6.

Board tenure among listed agricultural firms had a mean, minimum and maximum of 3, implied that most listed agricultural firms had board tenure of 3 years. Board ownership was very low with a mean of 0.0056, minimum of 0; maximum of 0.0391 with standard deviation 0.010501 implied that directors' ownership was very low. The average board tool was 2 with a maximum of 4 and a minimum of 0, indicating that some listed agricultural firms did not have board tools. Board meetings had an average of 3 meetings with a maximum of 6 meetings with a standard deviation of 1.46, implied that the variance of board meetings was relatively large. The study revealed that the maximum number of board committees was 3, with an average number of 2. Likewise average committees' meetings was 4, with a maximum 12 meetings and minimum of 0, implied some listed agricultural firms did not hold committee meetings while others had an average of 4 meetings.

Financial management practices had different descriptive statistics. Investment had a maximum of 0.9925 on the ratio of non-current assets to total assets, with a minimum of 0.2246 and an average of 0.7067, implied a high level of investment in listed agricultural firms. Leverage had a mean of 0.2809, with a minimum of 0.0361 and a maximum of 1.042, implied that on average ratio of debt to equity was low, but some firms were highly levered leading to bankruptcy risks. The average liquidity was 0.188, with a high of 0.5733 and low of -0.1441, implied that most listed agricultural firms were not liquidity enough except some few firms.

Macroeconomic variables descriptive statistics showed varying economic conditions for the period under study. The GDP growth rate had a highest and lowest of 8.4% and 0.2% respectively. The mean GDP growth rate was 4.8%. Inflation rate varied during the study period with a highest of 15.2% and a lowest 0.9%; the average inflation rate was 7.2%. The interest rate had a maximum of 19.85% and a minimum of 12.25%. The results indicated that there was a high unpredictability in the economy during the study period.

Performance indicators of ROA and Tobin's Q. ROA for listed agricultural firms were different from one firm to another. The mean for ROA was 0.1922, with higher performing firms had a ROA of 1.798 and lower performing firms had a ROA of 0.3049. These statistics were related to Tobin Q with some firms had a maximum of firm value of 6.7098 and with a minimum of 0.05566, with industrial average of 1.2122. This implied that listed agricultural firms performed differently during the period of the study with some registering higher performance while others registering very low performance.

Table 1: Descriptive Statistics of Study Variables

Variable	N	Mean	Standard Deviation.	Minimum	Maximum
Board Independence	104	0.66909	0.213475	0.25	1
Gender diversity	104	0.011218	0.034625	0	0.125
Occupational Expertise	104	3.903846	1.438171	1	6
Board Age	104	56.69423	4.966346	46.5	69.7
Board Size	104	5.586538	1.978577	2	9
Board Tenure	104	3	0	3	3
Board Ownership	104	0.005624	0.010501	0	0.0391
Board Tools	104	2.605769	1.185825	0	4
Board Meeting	104	3.346154	1.459946	0	6
Number of Board Committees	104	1.692308	1.231283	0	3
Committees Meeting	104	4.317308	3.388342	0	12
Board Remuneration	102	0.031887	-0.25781	1.272344	2.025853
Investments	104	0.706689	0.163429	0.22458	0.992514
Leverage	103	0.28088	0.199937	0.036099	1.041919
Liquidity	103	0.187993	0.152948	-0.1441	0.573307
GDP Growth Rate	105	4.846667	2.190015	0.2	8.4
Interest Rate	105	15.06825	2.258282	12.25	19.85333
Inflation Rate	105	7.428	3.503312	0.9	15.2
ROA	103	0.192208	-0.2984	0.304929	1.797788
Tobin's Q	103	1.21217	-1.14111	0.05566	6.709788

4.2 Correlation Analysis

Corporate Governance, Financial Management Practices, Macroeconomic Variables and Performance of Listed Agricultural Firms

Table 2 presents the correlation analysis for firms in agricultural sector. The results for correlation in agricultural sector show that Executive Director r= -0.049, Non-Executive Director r= -0.085, Foreign Director r=-0.077, Women Director r=-0.075, Occupational Expertise r=-0.067, Board Age r= 0.143, Board Size r= -0.121, Board Ownership r=.310, Board Tools r= -0.186, Board Meetings r= -.237, Number of Board Committees r= 0.062, Committees Meetings r=-0.074, Board Remuneration r= 0.037, Leverage r= -0.143, Liquidity r= .447, GDP Growth Rate r= 0.136, Interest Rate r= 0.012 and Inflation Rate r= 0.167 all had a weak correlation with ROA in Agricultural sector. Only Investments r=-.504 was found to have strongly correlation with ROA listed agricultural firms.

The results also revealed that Executive Director r=.249, Foreign Director r=-.362, Women Director r=-0.16, Board Age r=-.215, Board Ownership r=-0.188, Board Remuneration r=-0.022, Leverage r=-.260, GDP Growth Rate r=-0.027, Interest Rate r=-0.086, and Inflation Rate 0.059 had a weak correlation with Tobin's Q listed agricultural firms in Kenya. On the other hand, Non-Executive Director r=-.581 Occupational Expertise r=-.598, Board Size r =-.595, Board Tools r=-.795, Board Meetings r= -0.778, Number of Board Committees r=-0.579, Committees Meetings r=-0.587, Investments r=-0.567 and Liquidity r=0.615 were found to have a strong correlation with Tobin's Q in listed agricultural firms. The findings revealed that Non-Executive Director, Occupational Expertise, Board Size, Board Tools, Board Meetings, Number of Board Committees and Committees Meetings were strongly associated with Performance of listed agricultural firms.

Table 2:Correlation Analysis Results

		Executive Director	Non-Executive Director	Foreign Director	Women Director	Occupational Expertise	Board Age	Board Size	Board Ownership	Board Tools
Executive Director	r	1								
Non-Executive Director	r	-.514**	1							
Foreign Director	r	-0.048	.335**	1						
Women Director	r	-.262**	.515**	-.400**	1					
Occupational Expertise	r	-.266**	.909**	.341**	.478**	1				
Board Age	r	.249*	0.028	0.144	0.027	0.137	1			
Board Size	r	-.305**	.967**	.377**	.499**	.938**	0.086	1		
Board Ownership	r	-.413**	0.047	0.007	-0.13	0.005	.209*	-0.061	1	
Board Tools	r	-.370**	.702**	.408**	.275**	.740**	.358**	.695**	.197*	1
Board Meetings	r	-.225*	.564**	.316**	.214*	.612**	.215*	.571**	0.059	.865**
Number of Board Committees	r	-.480**	.618**	.490**	0.135	.548**	.359**	.585**	.524**	.714**
Committees Meetings	r	-.600**	.812**	.290**	.453**	.648**	.202*	.766**	.228*	.727**
Board Remuneration	r	-0.015	0.04	0.072	-0.022	0.005	-0.001	0.041	0.133	0.014
Investments	r	0.046	.254**	0.019	.250*	.331**	-0.073	.315**	-.261**	.482**
Leverage	r	0.047	.232*	.429**	0.039	.250*	0.178	.273**	-0.001	.214*
Liquidity	r	0.103	-.357**	-.255**	-0.154	-.425**	0.067	-.388**	0.013	-.589**
GDP Growth Rate	r	0.076	-0.007	-0.05	0.056	0.053	.341**	0.023	0.014	0.063
Interest Rate	r	0.133	0.035	0.062	0.061	0.061	.331**	0.068	0.036	0.095
Inflation Rate	r	0.032	0.007	-0.031	0.099	0.022	.227*	-0.008	0.023	0.002
ROA	r	-0.049	-0.085	-0.077	-0.075	-0.067	0.143	-0.121	.310**	-0.186
Tobin's Q	r	.249*	-.581**	-.362**	-0.16	-.598**	-.215*	-.595**	-0.188	-.795**
	Sig.	0.011	0	0	0.107	0	0.029	0	0.057	0
	N	103	103	103	103	103	103	103	103	103

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
a sector = Agriculture

		Board Meetings	No. of Board Committees	Committees Meetings	Board Remuneration	Investments	Leverage	Liquidity	GDP Growth Rate	Interest Rate	Inflation Rate	ROA	Tobin's Q
Board Meetings	r	1											
No. of Board Committees	r	.443**	1										
Committees Meetings	r	.488**	.833**	1									
Board Remuneration	r	-0.022	0.071	-0.008	1								
Investments	r	.643**	0.014	0.19	-0.12	1							
Leverage	r	0.082	.342**	.268**	-0.103	0.086	1						
Liquidity	r	-.661**	-.292**	-.309**	-0.013	-.861**	-.259**	1					
GDP Growth Rate	r	0.013	0.043	0.064	-0.067	0.027	0.026	0.045	1				
Interest Rate	r	0.032	0.071	0.04	0.077	-0.077	-0.083	0.111	-0.151	1			
Inflation Rate	r	0.005	0.015	0.018	-0.108	0.015	0.045	0.027	-.262**	-0.126	1		
ROA	r	-.237*	0.062	-0.074	0.037	-.504**	-0.143	.447**	0.136	0.012	0.167	1	
Tobin's Q	r	-.778**	-.579**	-.587**	-0.022	-.567**	-.260**	.615**	-0.027	-0.086	0.059	0.141	1
	Sig.	0	0	0	0.824	0	0.008	0	0.788	0.388	0.554	0.156	
	N	103	103	103	101	103	103	103	103	103	103	103	103

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
a sector = Agriculture

4.3 Regression Analysis

4.3.1 Hypothesis One (Ho_1): Corporate Governance and Performance of Listed Agricultural Firms

Table 3 shows both models used to link corporate governance variables to ROA (Prob>Chi2 = 0.0010) and Tobin's Q (Prob>Chi2 = 0.0000) were statistically significant which implied that corporate governance variables were significant predictor of performance of listed agricultural firms in Kenya. The findings further revealed that only occupational expertise (β=.1759128, p=0.043), board age (β=.013589, p=0.035) and board tools (β= -.2199084, P=0.014) significantly affected ROA of listed firms in agricultural sector. However board tools had a significant and negative effect on ROA, the rest of the corporate governance variables had an insignificant effect on ROA on listed agricultural firms in Kenya. On the other hand, only board tenure (β=1.101152, p=0.000) and board meetings (β=-0.31549, p=0.000) significantly affected the Tobin's Q, the rest of the corporate governance variables had an insignificant effect on Tobin's Q on listed agricultural firms in Kenya.

Table 3: Corporate Governance Variables and Performance of Listed Agricultural Firms

	ROA		**Tobin's Q**	
	Coef.	P>|z|	Coef.	P>|z|
Foreign Director	-.0014214	0.972	0.044167	0.658
Women Director	-.0764923	0.650	0.445122	0.284
Occupational Expertise	.1759128	0.043	0.190736	0.373
Board Age	.013589	0.035	0.007012	0.659
Board Size	-.0897128	0.213	-0.23348	0.188
Board Tenure	-.1507205	0.225	1.101152	0.000
Board Ownership	8.17801	0.057	-8.74278	0.409
Board Tools	-.2199084	0.014	-0.34776	0.115
Board Meetings	.0272355	0.566	-0.31549	0.007
Number of Board Committees	.0100104	0.892	-0.06929	0.704
Committees Meetings	.0254509	0.406	0.012576	0.868
Board Remuneration	.0365292	0.748	0.019105	0.946
Cons	0.0000		0.0000	
	Wald Chi2(11)= 31.38		Wald Chi2(11) = 205.06	
	Prob>Chi2 = 0.0010		Prob>Chi2 = 0.0000	
	R-Sq:= 0.2607		R-Sq:= 0.6973	

Table 4 presents the RE regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q) of listed agricultural firms in Kenya. The results revealed that the model fitted predicting the effect of Corporate Governance (CG) on ROA was statistically insignificant (Prob> chi2 = 0.1577) which implied that CG did not significantly predict ROA. The model for Tobin's Q was found to be statistically significant (Prob> chi2 = 0.001) which implied that CG significantly predicted Tobin's Q of listed Agricultural firms in Kenya. The findings show that the effect of CG on ROA was insignificant while on Tobin's Q was significant. These finding mirrors that of the overall model which established that CG significantly affected Tobin's Q while insignificantly predicted ROA. Based on these findings the study rejected ***H_{01}*** *- Corporate governance does not significantly affect Tobin's Q of listed agricultural firms at the Nairobi Securities Exchange,* while failed to reject ***H_{01}*** *- Corporate governance does not significantly affect ROA of listed agricultural firms at the Nairobi Securities Exchange at the level of significance of 0.05.*

The Model $FP_{it} = \beta_0 + \beta_1 CG_{it} + \varepsilon_{it}$ therefore became;

$FP_1 = -0.1062 + 0.0421CG + \varepsilon_{it}$

$FP_2 = 3.656805 + -0.34408CG + \varepsilon_{it}$

FP_1= ROA

FP_2= Tobin's Q

CG = CG Composite

Table 4: Model Corporate Governance Composite and Performance of Listed Agricultural Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0421	0.296	-0.34408	0.001
_cons	-0.1062	0.715	3.656805	0.000
	Wald chi2(1)= 2.00		Wald chi2(1) = 12.052	
	Prob> chi2 = 0.1577		Prob> chi2 =0.001	
	R-sq: = 0.0545		R-sq: = 0.0126	

4.3.2 Hypothesis Two (H_{O2}): Intervening Effect of Financial Management Practices on the Relationship between Corporate Governance and Performance of Listed Agricultural Firms

Intervention is normally established when corporate governance envisages performance of listed agricultural firms, corporate governance envisages financial management practices and financial management practices envisage performance of listed agricultural firms; additional corporate governance should envisage performance of agricultural firms in presence of financial management practices.

Step one of testing the intervening involves fitting a model for independent variables and dependent variables while ignoring the intervening variables. The study fitted a Random Effect (RE) effect model to test the relationship between CG composite and performance of listed agricultural firms' measure using ROA and Tobin's Q. Table 5 presents the RE regression results of the models fitted to test the relationship between CG composite and performance of firms (ROA and Tobin's Q). The regression coefficient further revealed an insignificant relationship between CG Composite and performance of firms (ROA) (β=0.000, p=0.1577) and Tobin's Q (β=0.000, p=0.9001).

Table 5: Step One RE Regression Results: Corporate Governance and Performance of Listed Agricultural Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000787	0.158	-0.0000202	0.002
_cons	0.1724257	0.000	1.2159	0.003
	Wald chi2(1)= 2.00		Wald chi2(1) = 0.02	
	Prob> chi2 = 0.1577		Prob> chi2 =0.9001	
	R-sq: = 0.0545		R-sq: = 0.0126	

Step two involved testing the relationship between independent variable (corporate governance) and intervening variables (financial management practices) as dependent variables. The results are presented in Table 6. The results revealed that first model that tested the relationship between CG and investments was statistically insignificant (Prob>chi2= 0.6456). The second model fitted to test the relationship between CG and leverage was statistically significant (Prob> chi2 = 0.7449). The third model fitted to test the relationship between CG and liquidity was also statistically insignificant (Prob> chi2 = 0.5267).

Table 6: Step Two RE Regression Results: Corporate Governance and Financial Management Practices Variables

	Investments		**Leverage**		**Liquidity**	
	Coef.	P>|z|	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000118	0.646	-0.0000122	0.745	-0.0000166	0.527
Cons	0.7041394	0.00	0.2753321	0.00	0.1897765	0.00
	Wald chi2(1)= 0.21		Wald chi2(1) = 0.11		Wald chi2(1)= 0.40	
	Prob> chi2 = 0.6456		Prob> chi2=0.7449		Prob> chi2 =0.5267	
	R-sq: = 0.0295		R-sq:= 0.0002		R-sq:= 0.0046	

Step three in testing for the intervening involved regression effect of the intervening variables with dependent variables without the independent variables. The study also conducted diagnostics tests before fitting the models. The results presented in table 7 revealed that financial management practices variables (investment, leverage and liquidity) had a significant effect on ROA and Tobin's Q. The two models fitted to link financial management practices variables to both ROA and Tobin's Q was statistically significant.

Table 7: Step Three RE Regression Results: Financial Management Practices Variables and Performance of Listed Agricultural Firms

	ROA		**Tobin's Q**	
	Coef.	P>|z|	Coef.	P>|z|
Investments	-0.939179	0.004	-3.326821	0.002
Leverage	-0.1568998	0.258	-0.6173152	0.096
Liquidity	-0.0452337	0.899	-1.378709	0.0215
_cons	0.9070948	0.003	3.989556	0.00
	Wald chi2(3) = 35.51		Wald chi2(3) = 19.77	
	Prob> chi2 = 0.0000		Prob> chi2 = 0.0002	
	R-sq:= 0.264		R-sq:= 0.2844	

Step four in testing for intervening effects of financial management practices involved fitting model to link independent variables and dependent variables in presence of intervening variables in table 8. The two models fitted to link Corporate Governance, Financial Management Practices and PerformanceVariables to both ROA and Tobin's Q was statistically significant

Table 8: Step Four RE Regression Results: Corporate Governance, Financial Management Practices Variables and Firm Performance

	ROA		**Tobin's Q**	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000781	0.097	0.0000898	0.558
investments	0.6815775	0.065	3.428609	0.002
leverage	0.1553226	0.326	0.7722257	0.072
liquidity	0.2227522	0.584	1.464623	0.211
_cons	0.6550839	0.064	4.139829	0.00
	Wald chi2(4) = 35.47		Wald chi2(4)= 21.06	
	Prob> chi2 = 0.0000		Prob> chi2= 0.0003	
	R-sq: = 0.2901		R-sq: = 0.3213	

In summary the study revealed that all the four steps for testing the intervening effects of financial management practices on the relationship between corporate governance and performance of listed agricultural firms in Kenya were not established. The study further revealed that financial management practices did not significantly intervene on the relationship between corporate governance and performance of firms of listed agricultural firms in Kenya since steps two and three were not achieved. The study therefore failed to reject the null hypothesis ***H_{02}-*** *Financial management practices do not significantly intervene in the relationship between corporate governance and performance of listed agricultural firms at the Nairobi Securities Exchange at the level of significance of 0.05.*

4.3.3 Hypothesis Three (H_{O3}): Moderating effect of Macroeconomic Variables on the Relationship between Corporate Governance and Performance of Listed Agricultural Firms

This section presents for moderating effect of macroeconomic variables on the relationship between corporate governance variables and performance of listed agricultural firms on NSE in Kenya. Table 9 and Table 10 show that macroeconomic variables increased the explanatory power of corporate governance on performance listed agricultural firms in Kenya since the R-squared increased from 0.1165 to 0.1641 in the first model, while increased

from 0.0264 to 0.0345 in the second model. These results implied that macroeconomic variables positively enhanced the relationship between corporate governance and performance of listed agricultural firms in Kenya. The findings further implied that good macroeconomic variables enhance the effect of corporate governance on performance of listed agricultural firms in Kenya. Therefore the study rejected the null hypothesis that H_{03}- *Macroeconomic variables do not significantly moderate the relationship between corporate governance and performance of agricultural firms listed at the Nairobi Securities Exchange*. The first step of testing the moderating effect involved fitting a model for independent variables and dependent variables while ignoring the intervening variables, while the second step included all intervening variables. The study fitted a Random Effect (RE) effect model to test the relationship between CG composite and performance of listed agricultural firms as measured using ROA and Tobin's Q.

Table 9: Step One, Models Fitting for Moderating Effect of Macroeconomic Variables in Performance of Listed Agricultural Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	0.0000736	0.184	0.00000139	0.993
GDP growth rate	0.026699	0.044	-0.0156382	0.615
Interest rate	0.0091354	0.462	-0.0434667	0.136
Inflation rate	0.0201881	0.014	0.012657	0.51
Cons	0.243523	0.303	1.844694	0.015
	Wald chi2(4)= 9.93		Wald chi2(4) = 3.30	
	Prob> chi2 = 0.0416		Prob> chi2 = 0.5085	
	R-sq: = 0.1165		R-sq: = 0.0264	

Table 10: Step Two, Models Fitting for Moderating Effect of Macroeconomic Variables in Performance of Listed Agricultural Firms

	ROA		Tobin's Q	
	Coef.	P>|z|	Coef.	P>|z|
CG	-0.00079	0.134	0.0003276	0.88
GDP Growth Rate	0.0260577	0.079	-0.0191769	0.754
Interest Rate	0.0009856	0.943	-0.0296874	0.598
Inflation Rate	0.0164138	0.074	0.0147889	0.696
IT1	0.0000139	0.624	0.000028	0.810
IT2	0.0000467	0.072	-0.0000418	0.696
IT3	0.0000185	0.275	-0.00000948	0.892
Cons	0.1001064	0.697	1.705919	0.107
	Wald chi2(7)=18.26		Wald chi2(7)= 2.52	
	Prob> chi2 = 0.0109		Prob> chi2 = 0.9254	
	R-sq:= 0.1641		R-sq:= 0.0345	

4.3.4 Hypothesis Four (H_{O4}): Joint Effect of Corporate Governance, Financial Management Practices, and Macroeconomic Variables on Performance of Listed Agricultural Firms

The study analysed the effect of corporate governance, financial management practices, and macroeconomic variables on performance of listed agricultural firms in Kenya. The results presented in Table 11 revealed that both model 1 linking corporate governance, financial management practices, macroeconomic variables and ROA (Prob>chi2=0.0000), and Model 2 linking corporate governance, financial management practices, macroeconomic variables and Tobin's Q (Prob>chi2=0.0000) were statistically significant. These findings implied that corporate governance, financial management practices, macroeconomic variables were good predictors of listed agricultural firms' performance. The study hence rejected the null hypothesis that H_{04}- *Corporate governance, financial management practices and macroeconomic variables do not significantly jointly affect performance of listed agricultural firms at Nairobi Securities Exchange at the level of significance of 0.05.*

The results further revealed that corporate governance had insignificant effect on both ROA and Tobin's Q of agricultural firms listed on NSE. The results additionally revealed that the relationship between corporate governance and ROA for listed agricultural firms was negative which implied indirect relationship between corporate governance and ROA. Investments (β=-1.155, p=0.000), GDP growth rate (β=0.008, p=0.014) and inflation rate (β=0.022, p=0.005) were found to have a significant effect on ROA, while firm liquidity rate (β=3.177, p=0.013) and interest rate (β=-0.082, p=0.045) significantly affected Tobin's Q of listed agricultural firms in Kenya

Table 11: Joint Effect of Corporate Governance, Financial Management Practices, and Macroeconomic Variables on Performance of Listed Agricultural Firms

	ROA		Tobin's Q	
	Coef.	**P>|z|**	**Coef.**	**P>|z|**
CG	-0.00003923	0.965	1.08E-08	0.881
Investments	-1.155	0	-1.386	0.225
Leverage	-0.214	0.115	-0.836	0.085
Liquidity	-0.305	0.389	3.177	0.013
GDP Growth rate	0.00802	0.014	-0.03	0.491
Interest Rate	0.005	0.663	-0.082	0.045
Inflation Rate	0.022	0.005	0.008	0.776
_Cons	0.339	0.032	3.157	0.01
	Wald chi2(7)= 7.096		Wald chi2(7)= 10.263	
	Prob> chi2= 0.0000		Prob> chi2 = 0.0000	
	R-sq: within = 0.343		R-sq: within = 0.431	

Model 1

$FP_{it}(ROA) = 0.339 + -0.00003923\ CG_{it} + -1.155\ IN_{it-1} + -0.214 LE_{it-1} + -0.305\ LI_{it-1} + 0.0080215 GDP_{it-1} + 0.005\ INR_{it-1} + 0.022 IFR_{it-1} + c_i + \acute{\varepsilon}_{it}$

Model 2

$FP_{it}(Tobin's\ Q) = 3.157 + 0.0000000108\ CG_{it} + -1.386\ IN_{it-1} + -0.836 LE_{it-1} + 3.177 LI_{it-1} + -0.030 GDP_{it-1} + -0.082 INR_{it-1} + 0.008\ IFR_{it-1} + c_i + \acute{\varepsilon}_{it}$

Where;
CG =Corporate Governance; IN = Firm Investments; LE= Firm Leverage; LI= Firm Liquidity;
GDP = GDP growth Rates; INR = Interest Rates; IFR= Inflation Rates; ε =Error Term

5.0 SUMMARY AND CONCLUSION

5.1 Summary

Based on regression analyses results, the overall relationship between corporate governance variables and performance of listed agricultural firms in Kenya was different. The relationship between corporate governance and Tobin's Q was significant, while the relationship between corporate governance and ROA was insignificant. However the relationship of individual variables of corporate governance and performances variables gave different results. Occupational expertise, board age, and board tools had significant relationship with ROA while foreign director, women director, board size, board tenure, board ownership, board meetings, number of board committees, committees meetings and board remuneration had various positive and negative insignificant effects to ROA. Likewise board tenure and board meetings had significant relationship with Tobin's Q as other corporate governance variables had insignificant relationship with Tobin's Q.

The intervening effect of financial management practices based on investments, leverage and liquidity was not established on the relationship between corporate governance and performance of listed agricultural firms.The study further established that macroeconomic factors (GDP growth rate, interest rate and inflation rate) had a moderating effect on the relationship between corporate governance and performance of listed agricultural firms in Kenya. This means favorable macroeconomic environment enhance performance of listed agricultural firms in Kenya. Finically study confirmed significant joint relationship among corporate governance, financial management practices, macroeconomic variables and performance of listed agricultural firms in Kenya.

5.2 Conclusions

The study revealed various results leading to the following conclusions. First the relationship between corporate governance and performance of listed agricultural firms in Kenya was varied; and the relationship of various corporate governance variables and performance was different. This was in line with various empirical studies (Zheng, 2021; Oleh Pasko *et al*, 2021; Tleubaye *et al*., 2020; Roudaki, 2018; Shikanga *et al*., 2018; Ngwenze & Kariuki, 2017). Financial management practices are important in any entity to enhance performance and create wealth. However the intervening effect of financial management practices on the relationship between corporate governance and performance of listed agricultural firms was insignificant. Favourable macroeconomic environment positively affect performance of all firms in an economy. Macroeconomic variables had significant effect on the relationship between corporate governance and performance of listed agricultural firms. Lastly the general objective of the study was achieved. The joint relationship among corporate governance, financial management practices, macroeconomic variables and performance of listed agricultural firms in Kenya was

significant.

6.0 RECOMMENDATIONS

Grounded on the outcomes of the study, the study recommended that listed agricultural firms in Kenya should enhance and comply with corporate governance sets of principles and recommendations on structure and processes from Capital Markets Authority of Kenya (CMA) to improve their performance. CMA should review corporate governance principles and policies regularly to assist listed agricultural firms improve their performance. Directors of listed agricultural firms should diligently improve financial management practices to enhance performance of firms and wealth creation. Macroeconomic variables positively and significantly affect performance of listed agricultural firms; directors therefore should take advantage of favorable economic environment to increase activities of listed agricultural firms with the sole aim to improve performance. However there are several other factors affecting performance of agricultural firms in Kenya such as costs of agricultural inputs, general political environment, changes in weather patterns, marketing of agricultural produce, global oil prices given the agricultural production is diesel intensive, global pandemics e.g. Covid-19 among others. There is a need for further research including these variables in determining the relationship between corporate governance and performance of agricultural firms in Kenya.

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