

**THE RELATIONSHIP BETWEEN SELECTED COMPANY  
CHARACTERISTICS AND DIVIDEND PAYOUT RATIO OF  
AGRICULTURAL FIRMS LISTED AT THE NAIROBI  
SECURITIES EXCHANGE**

**BY**

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## DECLARATION

This work presented in this paper is my original work and has not been presented before in the university or any other institution outside the university.

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## **DEDICATION**

To my dear parents, Samwel Koskei and Sally Koskei with great love for their enormous contribution towards my education.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>ANOVA</b>	Analysis of Variance
<b>CBK</b>	Central Bank of Kenya
<b>CMA</b>	Capital Markets Authority
<b>DPS</b>	Dividend per Share
<b>EPS</b>	Earnings per Share
<b>ETF</b>	Exchange Traded Fund
<b>KSE</b>	Karachi Stock Exchange
<b>GDP</b>	Gross Domestic Product
<b>NPV</b>	Net Present Value
<b>NSE</b>	Nairobi Securities Exchange
<b>REIT</b>	Real Estate Investment Trust
<b>ROA</b>	Return on Assets
<b>SPSS</b>	Statistical Package for the Social Sciences
<b>WACC</b>	Weighted Average Cost of Capital

## ABSTRACT

Dividend policy decisions are a very key part of financial management decisions. This is because dividend payments give a signal to the markets thus affecting the value of the firm. It is the percentage of earnings distributed to shareholders. Payment of dividends is the one of the most important elements in the decision making of a firm because the management have to make a decision which will be of benefit to both the firm and the shareholders. Because of this, the topic has been studied by a number of scholars but the results are still inconsistent. The objective of the research is to establish association of specific factors on dividend pay-out of agricultural firms quoted at NSE. Descriptive research design and a total of seven firms which make up the Agricultural segment at NSE formed the population of the study. Secondary data was entirely adopted to carry out the study and the data covered a period of six year for the period between 2012 and 2017. Descriptive statistics was the preferred method to carry out the analysis of the data. The results established a strong and positive correlation linking firm profitability and ratio of dividend payout. Further, the study found an insignificant positive correlation linking the leverage and the agricultural dividend payout ratio. Additionally, weak inverse correlation linking firm size, growth prospects and the ratio of dividend payout of the listed agricultural firms was revealed. Finally, a strong direct association was established ( $R=66.5\%$ ) linking firms' characteristic factors and ratio of dividend payout the quoted agricultural firms at the NSE. It concluded that firms' profitability significantly affects agricultural firms' dividend payout ratio. It further concluded that the ratio of dividend payout of agricultural firms is significantly influenced by their leverage. The study recommended that the agricultural firms' managements should come up with an optimal dividend policy and invest in adequate assets to enhance profitability among these institutions.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Return for shareholders comprises of dividends and capital gains; this study will focus majorly on dividends. Dividend is the percentage of earnings distributed to shareholders; it is the reward that shareholders get from their investment in the company. The company boards of directors are involved in dividend decisions where they are faced with a decision of maximizing the shareholders wealth as well decision of ensuring future growth of the company by ensuring that there is adequate finance. Therefore, policy on dividends has an effect on both the overall shareholder wealth and also the long-term financing of the company. The management should make a decision that ensures equitable distribution of earnings to shareholders as well as having enough retained earnings to finance new projects. Dividend policies are not relevant in relation to the shareholders wealth (Arunprakash and Nandhini, 2013). Lintner and Gordon are of a contrary view that policies on dividends are relevant and significantly affect the shareholders wealth.

The residual theory states that investors have a belief that there is no difference between dividends paid and the retention of earnings by the firm. The company can only distribute its earnings after all investment opportunities have been exhausted. The dividend signaling theory states that management pays dividends so as to give the intended signals to the capital markets. (Mohamed, 2010) rise in dividend payments lead to a significant increase in future company earnings. The agency theory propounds that it is better to distribute dividends so as to reduce the agency conflicts that may arise between management and shareholders. The theory supports that it is better to pay dividends than make investments in negative NPV projects. The bird in

hand theory propounds that investors have more preference towards dividends than capital gains. This is because capital gains are riskier because of the uncertainty of future earnings. In this way, the management is put on pressure to ensure higher growth in future thus the investors are compensated with higher returns because of that uncertainty.

The agricultural sector has been of great importance to most economies by ensuring food security, employment creation and also and generation of income through exports It has also been a source of raw materials to other sectors such as manufacturing firms and service industries (Odaló, Njuguna and Achoki, 2016).In Kenya, it has been of great importance in promoting economic growth. The sector saves the country from funds that would have been used for importing food products thus ensures that there is a positive balance of payments so that there are excess funds which can be invested in other sectors. The sector is faced to a number of challenges majorly unfavorable weather conditions which are uncontrollable.

### **1.1.1 Company Characteristics**

Certain company characteristics have an association with the ratio of dividend payout such as profitability (Mugo, 2016), size of firm (Dogan, 2013), leverage (Al-tally, 2014) and growth (Maladjian &Khoury, 2014) among others. Profitability is measured using the return on assets, firms which make higher profits pay higher dividends since they have more earnings thus sufficient free cash flow .Alzomaia & AlKhadhiri (2013), the as the profitability of a company increases, the amount of earnings distributed to shareholders as dividends or also the retained earnings will be greater. Therefore, this shows that a company's profitability and the amount of dividends paid are positively related .Companies differ in size thus here are small

companies and small ones. Arif & Akbar (2013) company size and ratio of dividend payout are positively related. The reason for this is that larger companies have stable earnings hence have a tendency of paying more dividends.

Leverage is the ratio of debt over equity used for funding business operations. Firms that use financial leverage exploit the benefits associated with debt financing as well as minimizing related costs. Azhagaiah (2010), an increase in debt financing reduces the dividend payout. A high dividend payout reduces the retained earnings. Use of retained earnings is usually seen as the lowest cost of capital. Hence the company would find low dividend payouts as the best option. However, investors prefer high dividends, therefore there will be less retained earnings thus forcing the management to borrow. Debt obligations increase the WACC therefore the firm's liquidity position reduces and also its growth position is affected. Growth rate is typically the rate of increase of a company's revenues, earnings or even dividends. Ravichandaran (2016) growth prospects and dividend policy are negatively related. Firms which have high growth have a tendency of paying low dividends. The reason for this is that they need more capital for reinvestment in order to boost their growth. Internal financing is more preferable than external financing because it is less risky thus the high growth companies would retain more earnings.

### **1.1.2 Dividend Payout ratio**

This is the portion of profits given to shareholders. It usually involves a decision by the company management on the percentage of net profit to be given to shareholders as dividends and the percentage that remains for reinvestment (Droms & Wright, 2010) defined the amount of income to be distributed to shareholders as dividend. These two involve a tradeoff since payment of dividends increases the share price

whereas this reduces the amount reinvested thus reduction in growth rate. Bogna (2015) established that the factors that determine dividend ratio of dividend payout are leverage, liquidity, profitability, company size and risk factor.

The Modigliani and Miller dividend irrelevance theory states that payout of dividends does not have an effect on the share prices. This theory has an assumption that the capital markets are perfect. The bird in hand theory in contrary tries to explain how dividend payout affects the firm value based on what investors prefer in terms of dividends or capital gains. Capital gains are riskier therefore most of the investors prefer be paid dividends now. The residual theory states that the company can only distribute its earnings after all investment opportunities have been exhausted. The dividend signaling theory states that management pays dividends so as to give the intended signals to the capital markets. The agency theory propounds that it is better to distribute dividends so as to reduce the agency conflicts that may arise between management and shareholders. The theory supports that it is better to pay dividends than make investments in negative NPV projects

### **1.1.3 Company characteristics and dividend payout ratio**

Different theories have shown the association between various company characteristics and dividend payout ratio. The Modigliani and Miller theory for instance states that payment of dividends has no effect on the value of company stocks. The residual theory states that the company can only distribute its earnings after all investment opportunities have been exhausted. The dividend signaling theory affirms that payment of dividends gives a positive signal about the future earnings of the company. The agency theory propounds that it is better to distribute dividends so as to reduce the agency conflicts that may arise between management and

shareholders. The theory supports that it is better to pay dividends than make investments in negative NPV projects. The bird in hand theory in contrary states investors have more preference towards dividends than capital gains. In this way, the management is put on pressure to ensure higher growth in future thus the investors are compensated with higher returns because of that uncertainty.

Khan and Ahmad (2017) found that as the profitability of a company increases, the amount of earnings distributed to shareholders as dividends also increases. Leverage is one source of a company's financing. The agency theory states that debts and dividends are perfect substitutes in that they help to solve agency problems. These two compete for the available cash. Increased leverage means that a company has a larger amount of liabilities. The company incurs costs associated with the borrowed amount, which are the interest payment and repayment of the principal amount. Therefore, the firm has to decide about whether it should use the cash available to repay the debt or distribute the earnings as dividends. Use of debt has a great effect on the liquidity of the firm. Payments of principal and interest reduce the amount of residual income available thus a less likelihood to pay dividends. Thus debt has negative effect on amount of dividend paid, Nuhu (2014).

Rafique (2012) large companies have a higher likelihood of paying more dividends since they are more mature and because their cash flows are higher. There are also situations where large companies have higher liabilities. Therefore they will pay less dividends because they put into consideration the liabilities; in this case there is a negative association. Mature banks tend to pay have higher dividend payout ratios than growing ones. This is because a larger percentage of earnings is retained in order to be used for reinvestment which thus promotes growth (Maladjian, and Khoury (2014).

#### **1.1.4 Agricultural Firms Listed at the Nairobi Securities Exchange**

The NSE is one of the leading exchanges in East Africa based in Kenya. It dates back to 1954 when it started its operations as the Nairobi Stock Exchange. It is regulated by the Capital Markets Authority. During this period, it was trading only in stocks. In July 2011, it was renamed Nairobi Securities Exchange to reflect its new plan of trading in equities, debts, derivatives and other associated financial instruments. Currently there 65 companies are trading at the exchange. For a company to be listed, it has to meet certain listing requirements such as requirements of net profit, net assets, dividend policy, solvency and the adequacy of working capital.

The NSE's equity market is composed of 65 companies which are grouped into thirteen different sectors. These include: Agriculture, Automobile, Banking, Commercial and Services, Construction and Allied, Energy and Petroleum, Insurance, Investment, Investment services, Manufacturing and Allied, Telecommunication and Technology, REIT and ETF. It comprises of two segments: main segment and alternative market segment (NSE, 2017). NSE is of great importance to the Kenyan economy by mobilizing savings and investments. It also of great help to local and international companies since it helps in access of an effective cost of capital. There are many benefits of listing company shares at the NSE. These include tax incentives, access to capital, increased liquidity and also diversification. There are many researches which have been done previously in relation to the topic of dividends of companies listed at the NSE.

Agriculture sector is a very important segment of the Kenyan economy. It accounts for about 26% of the GDP and also another 27% of the GDP as a result of its linkage with other sectors. It has also created employment to about 70% of the people living



in the rural areas and 40% of the population as a whole. The sector also contributes to about 65% of earnings from exports and also provides for the livelihood of the people through employment, income and also ensuring food security (FAO, 2018). The sector also drives other sectors such as manufacturing sector by providing inputs and also providing market for non-agricultural operations such as tourism, education, transport and also other social services. Through it, the poverty levels have also gone down.

## **1.2 Research Problem**

Dividend policy decisions are a very key part of financial management decisions. This is because dividend payments give a signal to the market thus affecting the value of the firm. It is the percentage of earnings distributed to shareholders. In other words, if it would have not been a critical decision then all the earnings would be retained in the business. When all the positive NPV projects have been exhausted, then earnings should be distributed to shareholders. Most investors prefer companies which pay dividends, and for this reason, companies which pay dividends have very attractive shares. Payments of dividends make investors happy whereas it reduces the amount on finance available to fund investment projects thus significantly affecting the growth of the company. Retaining a larger amount of earnings has a positive impact in the long term since reduces the amount of leverage, increase in liquidity and also profits increase. Payment of a high amount of dividends leads to an increase in external financing which will increase the company risk.

According to the dividend signaling theory, an increase in payment of dividends gives a good signal to the capital markets on the expected future rise in company earnings. This results to a rise in the market price per share and thus leading to an increase in shareholders wealth. The agency theory propounds that it is better to distribute

dividends so as to reduce the agency conflicts that may arise between management and shareholders. It purports that it is better to distribute earnings to shareholders than retain more which can end up being invested in negative NPV projects. The residual theory makes the assumption that investors have a belief that there is no difference between dividends paid and the retention of earnings by the firm. The company can only distribute its earnings after all investment opportunities have been exhausted. The bird in hand theory states that dividends are important elements that influence the firm value. It further states that investors prefer dividends to capital gains. This is because capital gains are riskier because of the uncertainty of future earnings. In this way, the management is put on pressure to ensure higher growth in future thus the investors are compensated with higher returns because of that uncertainty.

The agriculture has become a very important sector ensuring food security in Kenya and also created employment for a good number of people especially those who live in the rural areas. It has also provided a great market for exports which is a source of income to the country. It has experienced some challenges in the past which include fluctuations in local currency, downturns in markets for exports and also high costs of inputs which thus reducing profits thus affecting dividend payments. The stocks for agriculture have been lagging in the past because it is affected by uncontrollable factors such as weather which make profits to reduce thus forcing these companies to have unstable dividend payouts.

Many studies have been done in relation to the ratio of dividend payout. Lestari (2018) did a study on the factors that determine the corporate policy on dividends in Indonesia. The findings showed that free cash flow, size of a firm and dividends which are lagged have an effect on the dividend policy. Debts (leverage), growth prospects, opportunities dividend policy on investment, large number of shareholders

and risks of the firm have no significant impact on the policy relating to dividends. Mui and Mustapha (2016) conducted a study on the influencers of the amount of dividend paid by firms listed in Malaysia and found out that liquidity; investment opportunity and size of a firm have a positive association with the amount of dividends paid. Ahmed and Murtaza (2015) conducted a research on what determines the amount of dividends paid by firms listed at the KSE sector by sector. It was established that ratio of dividend payout is significantly related to liquidity, earnings per share, leverage and company size in all the four sectors studied. Kazmiersika-Jozwiak (2014) conducted a study on factors that determine policy on dividends of companies not in the financial sector which are listed in Poland. The end results indicated existence of a positive association between profitability, leverage and ratio of dividend payout. Uwuigbe (2013) did a study to establish the key factors determining dividend policy of selected companies listed in Nigeria. He established that that these factors and dividend payouts are positively related. From these researchers, different conflicting results have been shown on the associations of the different factors with the ratio of dividend payout.

In Kenya, Mudeizi (2017) did a research on the impacts of using debt on the policy adapted in relation to dividends by firms listed at the NSE and established that use of debt for financing negatively affects the ratio of dividend payout. He also established that size of firm has a positive association with the ratio of dividend payout. Liquidity and profitability were shown to have no effect on the amount of dividends paid. The study however concentrated on debt financing as a determinant of ratio of dividend payout. Mworira (2016) carried out a study to establish whether financial leverage and ratio of dividend payout have any significant relationship; a case of all firms listed at the NSE. End results showed that leverage and ratio of dividend payout have a

negative relationship. Increase in leverage leads to low dividend payout. The study only concentrated on financial leverage as a determinant of ratio of dividend payout hence need to study other factors.

Kimani (2016) did a research to establish whether capital structure and amount of dividends paid of all firms listed at the NSE have any relationship. The conclusion was that there were both negative and positive relationships. Leverage and ratio of dividend payout are negatively related. Size of the firm and ratio of dividend payout were observed to be positively related. Other factors which affect ratio of dividend payout were not tested in study. Therefore, there is need to test other factors. Chumari (2014) examined whether the ratio of dividend payout and financial performance of companies which are listed at the NSE have any association. It was established that growths in sales and market-to-book value have a negative association with financial performance. Cash flow showed a positive association with financial performance. However, the research excluded banks and firms in the insurance sector hence need to study these companies. Kitur (2014) researched on whether profitability and payout of dividends of banks in the commercial sector in Kenya have any association. End results showed a strong relation between profits realized and the ratio of dividend payout. The liquidity position and rates of inflation which acted as control variables were also positively related with the ratio of dividend payout. The study only concentrated on commercial banks

The agriculture sector has not been given much attention in the recent past by most researchers. Most of them have done studies across all sectors which might not be a representative of each sector. As expected theoretically about the various relationships among variables and dividend payout ratio, different results are shown by the empirical studies. The study will try to find out whether four independent variables

(profitability, leverage, size of a firm and growth) have any association with the ratio of dividend payout. The research will try to fill the gaps on the selected company characteristics with dividend payout ratio with focus on the agricultural sector.

### **1.3. Research Objective**

The objective of the research was to establish the relationship between selected company characteristics and dividend payout ratio of agricultural firms listed at the Nairobi Securities Exchange.

### **1.4 Value of the Study**

The following groups may benefit from this study. It may benefit management of companies within the sector since it aids them in making decisions regarding their dividend policies. They are able to make comparisons with similarly related companies and thus decide how much to pay out as dividends. Investors especially those prefer to be paid dividends can also benefit from this study since they may be able to identify those companies which pay high dividends annually. The government through its relevant bodies can make use of this study to make analyses on the dividend policies of the firms and be able to formulate policies from it. The government also comes in place to protect the shareholder rights.

The study may also benefit scholars and academicians since it adds more knowledge of finance and other research can be done by testing more variables to establish the relationship between those company characteristics with the ratios of dividend payouts of these firms. Investment advisors may also make use of this study to give advice to investors. The clientele theory on policy on dividends states that there are different classes of investors. One group may prefer low dividend payouts whereas another group prefers being given a higher amount of dividends. The investment

advisors may use this data when giving advice to their clients. Based on the characteristics of these companies, they can tell how their dividend payout ratios are like.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

There was a focus on various theories relating to these variables. There are very many theories which relate to dividend policies. This chapter focused only on those theories which relate to this study. It outlined the determinants of dividend payout ratios. It also focused on the studies which had been done previously by other researchers, both local and international in relation to these variables. The chapter also illustrated the conceptual framework and gives the summary of the chapter.

### **2.2 Theoretical Literature Review**

There are many theories which relate to dividend policies. The specific theories which relate to the variables of this study; company characteristics and ratio of dividend payout are: residual theory of dividends, dividend signaling, transaction cost theory of dividends and agency theory of dividends and bird-in-hand theory.

#### **2.2.1 Transaction Cost and Residual Theory of Dividends**

The assumption of this theory is that investors have a belief that there is no difference between dividends paid and the retention of earnings by the firm. The company can only distribute its earnings after all investment opportunities have been exhausted. This policy reduces the floatation costs and equity signaling costs thus reducing the WACC. This theory also states that if there are no positive NPV projects to be invested in, then the company can distribute its earnings as dividends.

Retained earnings are a very important source of companies' financing. The residual theory approach states that the retained earnings are used for financing projects. The management of a firm has a key focus on investment projects and not payment of

dividends. The policy relating to dividends is treated as a passive element and not an active variable. (Smith, 2011) management have a focus on the firm value and that maximization of shareholders wealth is achieved through investment in positive NPV projects, and pay less attention to paying out dividends to the shareholders. Company management will therefore set aside a large percentage of earnings towards investment in the best projects which have a higher likelihood of increasing the firm value, considering risk and return. Dividends can only be paid when the amount of retained earnings available is higher than the amount needed to finance the investment projects. On the other side, when retained earnings are less than the amount needed to finance projects, then dividends will not be paid out.

There are three motives for residual policy, or in other words, high retentions. These include: reduction in the need for raising new capital in form of debt or equity. This therefore saves on costs such as floatation costs. Another motive is that a new issue of equity may lead to dilution of the ownership of the company; to avoid this company opts to pay fewer dividends. The third motive is that it enables a company to promote a higher growth rate of the company. Rafique (2012) found that when the tax charged on dividends is of a greater percentage than tax rate on capital gains, some of the shareholders may prefer low dividend payouts. This theory is relevant to the study since it encourages managers to retain more earnings so that they can invest in positive NPV projects which ensure growth of the company.

### **2.2.2 Dividend Signaling Theory**

This theory states increase in payment of dividends gives a signal that earnings of the company will raise in the future. Decreases in amount of dividends paid give a negative signal about the earnings to be made in future by the company. Managers



usually use dividends to give intended signals to the capital markets. This theory is based on assumptions which include: existence of perfect capital markets, non-existence of risk, no association between investment policy and the dividend policy, investors are rational and also information is freely available. AL-Malkawi, Rafferty and Pillai (2010) announcements relating to dividends have a positive signal about the future company profits. Most of the changes in share prices occur just immediately when these announcements are made. Payment of dividends leads to increase of a company's share price and therefore increase in shareholders wealth. This pattern of changes in share price contradicted Modigliani and Miller's theory propounds that most shareholders have more preference towards dividends to capital gains.

Brigham and Houston (2013) managers who are insiders choose dividend levels to pay based on the information they have about the company. The underlying assumption of the theory is that not all parties are equal in that some have information while others don't. Managers pay higher dividends when they feel that the company's share price is below its intrinsic level so as to give a positive signal to the public thus increase in share price. Ombura (2012) reductions in dividends have positive effect on the overall firm performance Results indicated that reducing amount of dividends paid do not necessarily give a negative signal about the company's future earnings. The company's future performance was more related to the operating activities of the company. In order to improve a company's future performance, the management can decide to reduce dividends and also give a greater focus on the operating activities. Dividend announcements are the cheapest means of passing a company's inside information to the capital markets. The use of this means has an implication that other methods of giving signals are not perfect substitutes. This theory is relevant to the

study because management can use this means to give signals to the market so that the company's share price can increase thus increasing the shareholders wealth.

### **2.2.3 Agency Theory of Dividends**

This theory propounds that it is better to distribute dividends so as to reduce the agency conflicts that might come up between management and shareholders. Dividend payments reduce agency problems. It purports that it is better to distribute earnings to shareholders than retain more which can end up being invested in negative NPV projects. Early scholars had a view about agency problems, most of the studies done use their view to make comparison in relation to agency costs. He used this theory to explain its significance in dividend policies. Agency costs rise if the management have selfish interests and thus fail to serve the interests of the shareholders.

Rise in dividend payments leads to increase in external financing. This leads to increase in scrutiny of the company by outsiders, especially in the capital markets. This will make the managers avoid their personal interests and work towards maximizing shareholders wealth. Thus, payments of dividends are one way of assessing the performance of management. Agency costs and dividend policy have a significant relationship (Chirombo, 2017). In relation to this study, the theory encourages discipline of managers so that they can pay more dividends and avoid retaining earnings which they can invest in negative NPV projects.

### **2.2.4 Bird-in-Hand Theory**

Gordon and Lintner came up with this theory. It is also referred to as Gordon's theory. Lintner firm came up with this theory in 1956 and then it was supported by other researchers, among them Gordon. It is one of the most popular theories of dividend

policies, propounding that dividends are an important element that determine the overall firm value. Another key point of this theory is that investors prefer dividends to capital gains because capital gains are riskier because of the uncertainty of future earnings. In this way, the management is put on pressure to ensure higher growth in future thus the investors are compensated with higher returns because of that uncertainty. Retaining higher amount of earnings increases the company's cost of capital. This makes the firm less competitive than a firm which issues more of its earnings as dividends.

Ozuomba (2016) the real reason behind dividend policy are that the shareholders prefer less risk and that they have more preference towards dividends than the uncertainty associated with capital gains which are expected to be received in future. The company management usually decide to pay dividends in order to help solve the uncertainty faced by investors. Investors prefer a certain amount of income currently than an uncertain amount to be received in future, even if it is higher. This theory is based on some assumptions. These include: the only source of financing is equity, only internal financing is used and that business operations continue for the unforeseeable future.

Modigliani and Miller's view contrasted with this theory. Payments of dividends have an effect on the stock price meaning that payment of dividends do not have any association with the value of the firm. This theory gives the existing association between dividends and the value of the firm. Its basis theory is that shareholders prefer dividends to capital gains which are uncertain. Current dividends are preferred to future ones and capital gains. Therefore dividend policy is relevant. This theory is relevant to this study because management of companies can know that current dividends are more preferred by shareholders to future dividends or capital gains.

## **2.3 Determinants of Dividend Payout Ratios**

### **2.3.1 Profitability**

Profits are a major factor put into consideration when determining the amount of dividends to be paid. Dividends are usually paid out of the earnings made. When earnings increase, this means that there a lot of cash flow which is available for the company for reinvestment purposes which leads to growth of the company. Most of the previous studies have shown that increase in earnings lead to increase in the amount of dividends paid. Ajanthan (2013) dividends to be paid were determined by the net profits realized. The higher the amount of profits the higher the amount of dividend paid.

### **2.3.2 Growth**

Growth is one measure used to determine the ability of the company to maintain its position economically in the industry. The faster the growth of a company, the higher the amount of funds needed. One way of measuring growth is to determine the percentage increase (decrease) in sales. Echchabi and Azouzi (2016) ratio of dividend payout and need for capital to finance growth are negatively related. Firms should retain more earnings in order to fund its growth by investment in positive NPV projects. Maladjian & Khoury (2014) dividends paid are negatively affected by the amount of growth. Companies which have high growth potentials pay low dividends because they want to use the retained earnings for investments.

### **2.3.3 Leverage**

This represents the proportion of debt over equity utilized by a firm to finance its operations. High amount of debt forces companies to reduce the amount of dividends paid in order to finance the debts. The company management determines the amount

of earnings to be retained to be used for the daily operations of the firm. Yusuf (2015). Firms with high amount of debt in their capital structure are faced with high transaction costs thus are in a weak position to pay dividends. Use of leverage makes a firm to reduce payments of dividends because it wants to ensure that it has sufficient internal cash flow. Use of debt has a great effect on the liquidity of the firm. Payments of principal and interest reduce the amount of residual income available thus a less likelihood to pay dividends.

#### **2.3.4 Firm size**

Companies differ in sizes; some are large whereas others are small. Larger companies have been seen to be paying more dividends. The reason for this is because they have more earnings hence sufficient cash flows therefore more dividends to be distributed to the shareholders. Khan and Mustapha (2016) a positive association exists between size of a firm and ratio of dividend payout. Instances occur sometimes where larger firms have a huge amount of liabilities. Therefore these firms pay less dividends in so as to be able to repay the debts. Larger firms have a higher chance of getting debt because lenders have more confidence in them and this may reduce the dividend paid through interest payments.

#### **2.4 Empirical Literature Review**

There are many studies which have been done by different researchers. Lestari (2018) did a study on the factors that determine the corporate policies on dividends in Indonesia. 32 companies in the manufacturing sector were sampled for a five-year period between 2011 and 2015. Secondary data was used which was obtained from the financial reports of these companies and also from the Indonesia Stock Exchange fact books. The research design used was hypothesis testing. Multiple regression

model made into use to analyze the data. The results showed that free cash flow, size of a firm and dividends which are lagged have an effect on the dividend policy. Debts (leverage), growth prospects, opportunities dividend policy on investment, large number of shareholders and risks of the firm do not have any association with the policy on dividends. The study focused only on companies in the manufacturing sector thus there is need to research on companies in other sectors.

Mui and Mustapha (2016) sought to establish what determines amount of dividends paid by firms listed in Malaysia. Secondary data was used which was for a five-year period between 2007 and 2011. The population consisted of 854 companies and 100 were sampled. Companies in the financial services sector were excluded because of their unique characteristics and business operations, and also the regulatory constraints. Normality and multi-collinearity tests were carried out where the multiple regression model and descriptive statistics were made into use in analysis of data. End results indicated that liquidity, investment opportunity and size of a firm have a positive relation with the ratio of dividend payout. They also found out that leverage and performance of an organization have no significant association with the ratio of dividend payout. The study however was done in the Malaysian market which is a different economic environment.

Ahmed and Murtaza (2015) examined on the factors determining amount of dividends paid companies listed at the KSE. 38 companies from oil, cement, energy and sugar sectors were selected. Secondary data was used for a nine-year period between 2003 and 2011. Panel data method was used for processing data and analyzing data according to their particular sectors. The data was analyzed using descriptive statistics and pooled least square method. It was established that ratio of dividend payout is significantly related to liquidity, earnings per share, leverage and size of the company

in all the four sectors studied. It was also established that ratio of dividend payout and growth prospects of the company are significantly related. The study focused on four sectors; oil, cement, energy and sugar sectors which gave results of these industries as a whole which might not be a representative of each individual sector.

Kazmiersika-Jozwiak (2014) surveyed on factors that determine dividend to be paid of non-financial sector public companies in Poland. Data used was obtained from the Thompson Reuters database for the period between 2000 and 2012. The panel data model was used. The fixed effects approach and random effects approaches were used in the analysis of data. The random effects model was used because it was believed that it was more appropriate. The study showed that a positive association exists between profitability and ratio of dividend payout. It was also established that a negative association exists between size of a firm and ratio of dividend payout. However, the studies focused on all non-financial companies thus there is need to study these companies per sector

Uwuigbe (2013) did a study to establish the factors determining dividend policy of selected companies listed in Nigeria. 50 companies were selected and were analyzed using judgmental sampling. Secondary data was used for a six-year period between 2006 and 2011. For data analysis, regression analysis was used. He examined the influence of financial performance, company size, financial leverage (capital structure) and independence of the board on the decisions of dividend payments of firms listed in Nigerian stock exchange. He established that that these factors and dividend payouts are positively related. However the study involved Nigerian firms which are in a different operating environment from those in Kenya.

Mudeizi (2017) researched on the impacts of using debt on the amount of dividends paid by firms listed at the NSE. Descriptive cross sectional design was applied in the study. All the firms listed at NSE as at 31<sup>st</sup> December 2016 where a census sampling was adopted, thus all the companies were studied. Secondary data was used for a five-year period between 2012 and 2016. SPSS software was used and also the multiple regression analysis. Line graphs and tables were also used, where financial ratios were used to analyze the quantitative data. End results showed that use of debt for financing negatively affects the ratio of dividend payout. Firm size showed a positive relation with the ratio of dividend payout. Liquidity and profitability were shown to have no association with the amount of dividends paid. The study however concentrated on debt financing as a determinant of ratio of dividend payout.

Mworia (2016) carried out a study to establish whether financial leverage and ratio of dividend payout have any significant relationship; a case of companies listed at the NSE. All the 64 listed firms at the NSE were studied. There was no sampling since all the listed companies were studied. The study period was between 2011 and 2015. Secondary type of data was used, this was extracted from past annual reports as they had been announced by the companies. Regression analysis was in carrying out the analysis of data. The findings showed that leverage and ratio of dividend payout have a negative relationship. Increase in leverage leads to low dividend payout. The study only concentrated on financial leverage as a determinant of ratio of dividend payout hence need to study other factors.

Kimani (2016) did a research to establish whether capital structure and ratio of dividend payout of companies listed at the NSE have any relationship. Descriptive research design was used. All the listed companies at the NSE were studied. There was no sampling because all the companies were tested. Secondary type of data used



was extracted from the past financials as published by these companies. Data analysis involved using descriptive statistics: mean, percentages, standard deviation, variance was analyzed using SPSS and also regression analysis. In this study, the control variable was the size of the firm. The findings showed that there were both negative and positive relationships. Leverage (capital structure) and ratio of dividend payout are negatively related. Size of the firm and ratio of dividend payout were observed to be positively related. Other factors which affect ratio of dividend payout were not tested in study. Therefore, there is need to test other factors.

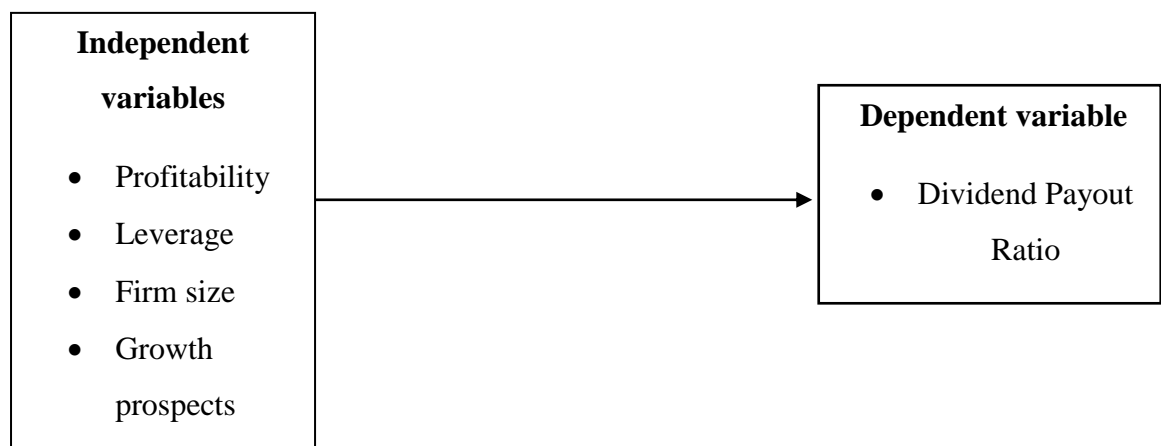
Chumari (2014) examined whether the amount of dividends paid and profits made of companies which are listed at the NSE have any association. Descriptive research design was applied. All the companies listed at the NSE were studied, with a sampling of 30 companies where banks and insurance companies were excluded. The data used was secondary which was for a length of five years between 2008 and 2012. T-tests and multiple regression were of use to analyze the data. Cash flow, growth in sales and market-to-book value were the independent variables in this study while financial performance was the dependent variable. Results showed that growth in sales and market-to-book value have a negative association with financial performance. Cash flow was shown to be positively associated to financial performance. However, the study studied all the companies as a whole and not per sectors.

Kitur (2014) researched on whether the earnings made and payout of dividends of commercial banks in Kenya have any association. The research design used was descriptive research design. The population comprised of 43 commercial banks registered with the CBK. The sample comprised of all the banks which were continuously in operation during the five-year period between 2008 and 2012, therefore 10 banks were selected. Questionnaires, interviews and annual reports were

used to obtain data used in the research. Descriptive statistics and the multiple regression model were used to carry out data analysis. Results showed that profits realized and the ratio of dividend payout is strongly related. The liquidity position and rates of inflation which acted as control variables were also positively related with the ratio of dividend payout. The study only concentrated on commercial banks.

## 2.5 Conceptual Framework

The research tries to establish the relationship between selected company characteristics and dividend payout ratio of firms listed at the Nairobi Securities Exchange. The purpose of a conceptual framework is to show what is expected from a research. It shows how the variables are going to relate with each other to give the end result. Below is the conceptual framework:



**Figure 2 1 Conceptual Framework**

**Source: Research Findings (2018)**

## 2.6 Summary of Literature Review

There are many theories and researches which have been done in relation to dividend payout ratios. The theories relating to this study have been discussed critically and the relationship clearly defined. Some determinants of ratio of dividend payout have also

been discussed in this section. Empirical studies by both international and local researchers have been done in this section. However, there are research gaps which have been identified from these researches thus there is need for further research. The agriculture sector has not been given much attention by most researchers. Most of them have done research of all the listed companies as a whole which might not be a representative of each individual sector. Conflicting results have also been shown on the determinants of ratio of dividend payouts.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter focuses on the research design adopted, population of the study, methods of collecting data and analysis of this data. The objective of the study was to establish whether selected company characteristics and dividend payout ratio of agricultural firms listed at the NSE have any significant relationship.

### **3.2 Research Design**

These are techniques applied for collecting and analyzing data (Ritchie et al. 2013). This study adopted descriptive research design in so as to achieve the intended objective. The research design defines the various characteristics of the population which are under study; it is concerned with how, where and what of the research topic. It gathers information which can be quantified and used to statistically analyze the population. It is used to describe a particular subject without manipulating the variables in any way. Therefore it gives the association among variables. It aided in determining the correlation between the company characteristics and ratio of dividend payout.

### **3.3 Population**

It refers to a total set of items to be observed and measured (Maxwell 2012). The target population comprised of all the 7 companies grouped under the agricultural segment at the NSE as at 31<sup>st</sup> December 2017. The list of these firms was shown in the appendices section. Listed firms were used because their data are readily available; they are usually published in the NSE handbook. Data for six years was used from 2012 to 2017. The census sampling technique was used because all the 7 agricultural

firms were comprised in the sample. This sampling technique is where all the elements of a population are included in the study. Its advantage is that it ensures accuracy and reliability of data.

### **3.4 Data Collection**

Data collection involves the gathering and measurement of information obtained from different sources (Creswell, J. W. 2013). It enables a researcher to solve a research problem by answering questions and evaluating outcomes of the study. Secondary data used was obtained from NSE handbook and also from past annual reports of the 7 listed companies of the agricultural sector. The period of study was (2012-2017). This was a period of six years; it gave enough data to make comparison and conclusions about the relationships between variables. The data collected comprised of dividend payout ratio, debt ratio, data on sales which is used to measure growth, assets and return on equity.

### **3.5 Diagnostic Tests**

The nature and strength of association between the dependent and independent variables in linear regression model was measured through various diagnostic tests such as tests for Multicollinearity, normality and the test of autocorrelation. The Durbin Watson statistic was made into use to test for serial correlation or autocorrelation while the variance of inflation was used to test multicollinearity. Kolmogorov-Smirnova and Shapiro-Wilk tests were used to check normal distribution of data.

### **3.6 Data Analysis**

Typically involves application of statistical measures and logical methods to evaluate and establish a relationship between data (Tully, 2014) Descriptive statistics,

correlation analysis and a multiple regression model were used to make analysis of the secondary data obtained from the yearly reports of the agricultural companies listed at the NSE. The descriptive statistics was used in summarizing data; mean and standard deviation, correlation was made into use in establishing the association among the variables while a multiple regression analysis model was used in determining the extent of association between the dependent as well as independent variable. SPSS version 22 was used to analyze the collected data.

### **3.6.1 Analytical Model**

The multiple regression model was the analytical model applied in this study. Regression analysis gives the numerical estimates of each of the variable and gives the link between the variables and also an approximation of the line of best fit of the observed data

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Y = dividend payout ratio. It is measured as DPS or dividend paid/EPS or net income

X<sub>1</sub> = profitability measured as the ROA

X<sub>2</sub> = size of the firm, it is measured as the natural log of total assets

X<sub>3</sub> = Leverage measured using debt ratio which is the ratio of total debt to total assets

X<sub>4</sub> = growth prospects measured as the annual percentage change in sales

β<sub>0</sub> = constant of the regression equation

β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub> and β<sub>4</sub> = regression coefficients that will be estimated

ε = error term or disturbance term

### **3.6.2 Tests of Significance**

In determining the statistical significance of the predictor variables, T-test was used.

F-tests and ANOVA were applied in testing the statistical significance of the

regression equation. The statistical significance of the regression equation was determined at 5% and 95% confidence interval.

# CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

## 4.1 Introduction

This chapter will show the findings of data analysis to determine the association between selected companies' characteristics and dividend payout ratio. Secondary data was gathered from financial statements of listed agricultural companies in the NSE. The data collected was coded in SPSS after which analysis commenced. The findings were analyzed by both descriptive and inferential statistics.

## 4.2 Diagnostic Tests

The study assessed multicollinearity through variance of inflation factors, normality through Kolmogorov-Smirnov and Shapiro-Wilk tests and autocorrelation through Durbin-Watson test.

### 4.2.1 Multicollinearity Test

A test of Multicollinearity was undertaken. Tolerance of the variable and the VIF value were used where values more than 0.2 for Tolerance and values less than 10 for VIF means that there is no Multicollinearity.

**Table 4 1: Test for Multicollinearity**

Coefficients		
Model	Collinearity Statistics	
	Tolerance	VIF
Profitability	.840	1.191
Firm Size	.369	2.711
Leverage	.905	1.105
Growth	.320	3.122

a. Dependent Variable: Dividend Payout

Source: Research Findings (2018)



The findings showed that all the variables had a tolerance values  $>0.2$  and VIF values  $<10$  as shown in table 4.2.1 implying that no Multicollinearity exists among all the independent variables.

#### 4.2.2 Normality Test

**Table 4 2: Normality Test**

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Dividend Payout	.127	42	.089	.959	42	.141
Profitability	.044	42	.729	.908	42	.332
Firm Size	.074	42	.423	.874	42	.647
Leverage	.077	42	.442	.900	42	.721
Growth	.098	42	.200*	.945	42	.062
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

**Source: Research Findings (2018)**

Both Kolmogorov-Smirnova and Shapiro-Wilk tests recorded o-values greater than 0.05 implying that the data used in research was distributed normally and therefore the null hypothesis was rejected. This data was therefore appropriate for use to conduct parametric tests such as Pearson's correlation, regression analysis and ANOVA.

#### 4.2.3 Autocorrelation

Autocorrelation tests were executed so as to check for correlation of error terms across time periods. Durbin Watson test was used to test autocorrelation.

**Table 4 3: Test for Autocorrelation**

<b>Model Summary</b>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.665 <sup>a</sup>	.443	.383	.0938569	1.593
a. Predictors: (Constant), Growth Prospects, Leverage, Profitability, Firm Size					
b. Dependent Variable: Dividend Payout					

**Source: Research Findings (2018)**

From the findings durbin-watson statistic was 1.593 indicating that the variable residuals were not serially correlated since the value was within the acceptable range of between 1.5 and 2.5.

#### **4.3 Descriptive Analysis**

The descriptive analysis of the research findings are indicated in Table 4.4. N represents the number of observations which are 42.

**Table 4 4: Descriptive Statistics**

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
Dividend Payout	42	.0000	2.5000	.504825	.5664425
Profitability	42	-.0994	.3940	.083227	.0966817
Firm Size	42	5.3475	7.2053	6.369661	.5672689
Financial Leverage	42	.0280	.5888	.171647	.0844897
Growth Rate	42	-.5669	.5066	.055413	.2136948
Valid N (list wise)	42				

**Source: Research Findings (2018)**

From the findings, dividend payout had 0.5048 as mean with a 0.5664 standard deviation. Profitability had a 0.0832 mean and 0.0967 standard deviation. Firm size resulted to 6.369661 mean with a 0.5672 standard deviation. Leverage had a mean of

0.1716 and a standard deviation of 0.0845 while growth rate recorded a 0.0554 mean with a 0.2137 standard deviation.

#### 4.4 Correlation Analysis

It is used to test whether there is an association between the two variables and often range between (-1) indicating a strong negative correlation and (+1) perfect positive correlation. The study employed the Pearson correlation to analyze the level of correlation between the dividend payout ratio and firm characteristics (profitability, firm size, leverage and growth prospects).

**Table 4 5: Correlation Analysis**

Correlations						
		Dividend Payout	Profitability	Firm Size	Leverage	Growth
Dividend Payout	Pearson Correlation	1	.604**	-.402**	.046	.413**
	Sig. (2-tailed)		.000	.008	.772	.007
Profitability	Pearson Correlation	.604**	1	.223	-.009	-.375*
	Sig. (2-tailed)	.000		.157	.953	.015
Firm Size	Pearson Correlation	-.402**	.223	1	-.005	-.777**
	Sig. (2-tailed)	.008	.157		.973	.000
Leverage	Pearson Correlation	.046	-.009	-.005	1	.189
	Sig. (2-tailed)	.772	.953	.973		.230
Growth	Pearson Correlation	-.413**	-.375*	-.777**	.189	1
	Sig. (2-tailed)	.007	.015	.000	.230	
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

**Source: Research Findings (2018)**

The study found out that there was a strong positive and statistically significant correlation ( $r = .604$ ,  $p = .000$ ) between profitability and dividend payout ratio. The study further established that a negative and significant correlation exists between growth prospects and dividend payout ratio of quoted agricultural firms as evidenced by ( $r = -.413$ ,  $p = .007$ ). Firm size showed a weak negative but significant association with dividend payout ratio as evidenced by ( $r = -.402$ ,  $p = .008$ ). Leverage was found to have a positive and insignificant correlation with dividend payout ratio as evidenced by ( $r = .046$ ,  $p = .772$ ).

#### 4.5 Regression Analysis

Dividend payout ratio of listed agricultural firms in the NSE was regressed against four predictor variables; profitability, firm size, leverage and growth prospects. The regression analysis was executed at 5% significance level. The study obtained the model summary statistics as illustrated in table 4.5 below.

##### 4.5.1 Model Summary

**Table 4 6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.665 <sup>a</sup>	.443	.383	.0938569

a. Predictors: (Constant), Growth Prospects, Leverage, Profitability, Firm Size

**Source: Research Findings (2018)**

Regression analysis results presented in table 4.5 above indicate R which is simple correlation coefficient was 0.665 which points to a strong relationship between the studies variables. Coefficient of determination ( $R^2$ ) of 0.443 indicates that 44.3% of the variation in dividend payout ratio is expounded by the specific factors in the analytical model (profitability, firm size, leverage and growth prospects). Other

specific factors not included in the model justify for 55.7% percent of the variations in dividend payout ratio of listed agricultural firms in Kenya.

#### 4.5.2 Analysis of Variance

**Table 4 7: Analysis of Variance**

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.259	4	.065	7.353	.001 <sup>b</sup>
	Residual	.326	37	.009		
	Total	.585	41			
a. Dependent Variable: Dividend Payout						
b. Predictors: (Constant), Growth prospects, Leverage, Profitability, Firm Size						

**Source: Research Findings (2018)**

The significance value is 0.01 which is less than  $p=0.05$ . This implies that the model was statistically significant in predicting how profitability, firm size, leverage and growth prospects affect dividend payout ratio of listed agricultural firms in Kenya.

#### 4.5.3 Coefficient of Determination

**Table 4 8: Coefficients of Determination**

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.127	.152		.835	.409
Profitability	.249	.060	.552	4.123	.000
Firm Size	-.157	.100	-.318	-1.572	.124
Leverage	.066	.176	.049	.377	.708
Growth	-.008	.034	-.050	-.231	.819
a. Dependent Variable: Dividend Payout					

**Source: Research Findings (2018)**

From the table above, it was evident that at 95% confidence level, profitability (t= 4.123, p= 0.000), leverage (t= 0,377, p= 0.708) produced a positive effect on the dividend payout ratio of listed agricultural firms in Kenya. However, the effect of profitability was found to be statistically significant. Firm size (t= -1.572, p= 0.124) and growth (t= -0.231, p= 0.819) had a negative effect on the dividend payout ratio of listed agricultural firms' in Kenya. However, the effect was found to be statistically insignificant.

The following regression equation was estimated:

$$Y = 0.127 + 0.249X_1 - 0.157X_2 + 0.066X_3 - 0.008X_4$$

Where;

Y= Dividend Payout Ratio

X<sub>1</sub>= Profitability

X<sub>2</sub>= Firm Size

X<sub>3</sub>= Leverage

X<sub>4</sub>= Growth

#### **4.6 Discussion of Research Findings**

The research purposed to explore the effect companies' characteristics on ratio of dividend payout of agricultural firms quoted at the NSE. Profitability was measured by ratio of net income to total amount of assets, firm size as measured by the natural log total assets, leverage as measured by total debt to total assets and growth measured as a percentage change in sales were the independent variables while ratio of dividend payout of agricultural firms listed at the NSE as measured by dividend

paid by net income on an annual basis was the dependent variable. The impact of each of the independent variable on the dependent variable was analyzed in terms of strength and direction.

The Pearson correlation coefficients between the variables revealed that strong positive and statistically significant correlation ( $r = .604$ ,  $p = .000$ ) between profitability and ratio of dividend payout of agricultural firms quoted at the NSE. The association between growth prospects and dividend payout ratio of agricultural firms quoted at the NSE was found to be moderate and negative significant. The study also showed that a weak positive association exists between leverage and ratio of dividend payout of agricultural firms quoted at the NSE while firm size was established to have a moderate and significant negative association with dividend payout ratio of agricultural firms listed at the NSE.

The model summary revealed that the independent variables (profitability, firm size, leverage and growth prospects) explains 44.3% of variation in the dependent variable as depicted by an  $R^2$  value implying that other factors were not included in the model account for 55.7% of changes dividend payout ratio of agricultural firms listed at the NSE. The model is fit at 95% confidence level as the F-value was 7.353. Therefore, the overall multiple regression model is statistically significant and suitable in predicting how the independent variables selected affects ratio of dividend payout of agricultural firms quoted at the NSE.

The study is in agreement with Lestari (2018) who did a study on the factors that determine the corporate policy on dividends in Indonesia. 32 companies in the manufacturing sector were sampled for a five-year period between 2011 and 2015. Secondary data was used which was obtained from the annual reports of these

companies and also from the Indonesia Stock Exchange fact books. The research design used was hypothesis testing. Multiple regression model was made into use in analyzing the data. The findings showed that free cash flow, size of a firm and dividends which are lagged have an effect on the dividend policy. Debts (leverage), growth prospects, opportunities on investment, large number of shareholders and risks of the firm have no significant effect on the dividend policy.



## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter shows the summary of the results of the prior chapters, the conclusions drawn from the study findings and the encountered shortcomings during the course of the study. The chapter makes also policy recommendations, which can be executed to attain high dividend payout ratio. Finally, the chapter shows suggestions for future research studies, which can be helpful to future scholars.

### **5.2 Summary of Findings**

The study sought to investigate the effect which the selected company characteristics had on dividend payout ratio of agricultural firms listed at the NSE. The independent variables were (profitability, firm size, leverage and growth prospects) and the dependent variable was ratio of dividend payout. The study used quantifiable secondary data which was analyzed using both descriptive and inferential statistics on SPSS version 22. The study focused on 7 agricultural firms listed at the NSE covering a six year time frame as from January 2012 to December 2017.

From the results of correlation analysis, it was established that a strong positive and statistically significant correlation between profitability and ratio of dividend payout ( $r = .604$ ,  $p = .000$ ). The association between growth prospects and dividend payout ratio was found to be moderate and negative significant. The study also showed that there exists a weak positive association between leverage and dividend payout ratio while firm size was found to have a significant negative relationship with dividend payout ratio of agricultural firms listed at the NSE.

The co-efficient of determination R-square value was 0.443 implying that the predictor variables selected for this study explains 44.3% of changes in the dependent variable. This means that there are other factors not included in this model that account for 55.7% of changes in dividend payout ratio of agricultural firms listed at the NSE. The model was fit at 95% confidence level and F-value of 7.353. Therefore, the overall multiple regression model was statistically significant and thus suitable in explaining how the dividend payout ratio of the agricultural firms quoted at the NSE is affected by the selected independent variables.

Regression results show that when all the independent variables selected for the study have zero value, dividend payout ratio of agricultural firms listed at the NSE would be 0.127. One-unit increase in profitability and leverage would result to an improvement in dividend payout ratio by 0.249 and 0.066 respectively. Increase in firm size and growth prospects would reduce by financial performance by 0.157 and 0.008 respectively.

These findings are in line with Kazmiersika and Jozwiak (2014) who investigated on factors that determine dividend policy of companies not in the financial sector which are listed in Poland. The study showed the existence of a positive association between profitability and ratio of dividend payout. It was also established that a negative association exists between firm size and ratio of divided payout.

### **5.3 Conclusion**

From the findings of the research, a conclusion can be made that ratio of dividend payout of agricultural firms listed at the NSE is significantly affected by profitability, firm size, leverage and growth prospects of the companies. Profitability was noted to have a positive and statistically significant association with dividend payout ratio of

and this means an increase in profitability leads to an increase in dividend payout ratio to a significant extent. The study found that firm size had a negative and significant effect on dividend payout ratio. The study therefore concludes that firm size results to a decrease in dividend payout ratio of firms listed at the agricultural segment at the NSE to a significant extent.

The study established that leverage had a positive and insignificant effect on ratio of dividend payout and therefore the conclusion was that a higher level of leverage leads to an increase in dividend payout ratio. Growth prospects was found to have a negative and statistically significant association with ratio of dividend payout and therefore this study concludes that growth does significantly reduce dividend payout ratio of agricultural firms quoted at the NSE.

This study concludes that independent variables chosen for this study profitability, firm size, financial leverage and growth prospects affect to a large extent dividend payout ratio of agricultural firms quoted at the NSE. It could be therefore concluded that these variables significantly affect dividend payout ratio as depicted by the model summary. Since the four independent variables explain 44.3% of changes in dividend payout ratio imply that the variables not included in the model explain 55.7% of the changes.

#### **5.4 Recommendations**

The study found out that profitability influences ratio of dividend payout positively and in a statistically significant way. The managers of listed agricultural firms in Kenya should therefore consider utilizing the resources available at their disposal to enhance shareholders return. The study also established that growth prospects influence dividend payout ratio negatively in statistically significant way. The study

therefore recommends that the managers of listed agricultural firms should consider establishing moderate and sustainable growth rate so as to guarantee shareholders a fair return.

Finally, the research also concluded that leverage and firm size do not affect the performance of firms under the agricultural segment in financial terms. The study however recommends that the management of agricultural firms should hold optimal levels of debt since debt may affect other core areas of an organization.

### **5.5 Limitations of the Study**

The study was carried out for a six-year period from 2012-2017. It has not been determined if the results would hold for a longer study period. Furthermore it is uncertain whether similar findings would result beyond 2017. A longer study period is more reliable as it will take into account major happenings not accounted for in this study.

This study focused only on agricultural firms listed at the NSE thus the findings may only be applied only to the sampled firms. The study also focused on the mode of dividend payment and the payout ratio but there are other measures of dividend policies which may produce different results an example being the dividend per share, the timing of dividend payment among others.

The quality of the data is another limitation because it is difficult to ascertain its accuracy. It is illusion to derive conclusions from the study since the legitimacy of the situation cannot be ascertained. The data that has been used is only assumed to be accurate. The methodology used may keep on deviating over time subject based on conditions prevailing at the current time. Secondary data that had already been retrieved was utilized for the study, primary data is usually first-hand information.

The study also considered selected characteristics and not all the factors affecting dividend payments by agricultural firms quoted at the NSE.

### **5.6 Suggestions for Further Research**

Further research on effect of firm characteristics on dividend payout ratio should be done covering a longer period (more than six years) and more firms rather than agricultural firms listed at the NSE. Future scholars should establish whether there is significant change in dividend payout ratio when dividend policy changes. Further research should include other macro-economic characteristics to establish how they affect dividend payout ratio

The selected company characteristics only explained 44.3% of the changes in dividend payout ratio of agricultural firms listed in Kenya. Further studies would be necessary to establish the other key factors determining the dividend payout ratio of listed firms in Kenya.

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## **APPENDICES**

### **APPENDIX I: AGRICULTURAL FIRMS LISTED AT THE NSE**

1. Eaagads Limited
2. Kapchorua Tea Ltd
3. Kakuzi
4. Limuru Tea Ltd
5. Rea Vipingo Limited
6. Sasini Limited
7. Williamson Tea (K) Limited

## APPENDIX II: SECONDARY DATA

Y	X1	X2	X3	X4
0.921715	0.03803	5.758424	0.152396	0.506585
0.339407	0.118534	5.698589	0.124027	-0.56693
0.52898	0.093505	5.649133	0.106334	0.40588
0.215646	0.049205	5.633402	0.068083	0.060992
0.430335	0.062667	5.881479	0.064259	0.241889
0.062904	0.019622	5.965109	0.065795	0.112783
0.376317	0.176839	5.770426	0.588755	0.128392
0.163256	0.086466	6.317745	0.195084	-0.03802
0.155231	0.065309	6.285368	0.221154	-0.11877
0.19478	-0.01149	6.297375	0.222422	-0.09937
0.52356	0.049472	6.331344	0.195876	0.125834
0.470146	-0.0255	6.307562	0.190632	0.068636
0.179858	0.119292	6.534746	0.182286	-0.34166
0.445379	0.046222	6.552712	0.186629	-0.1153
0.458787	0.043534	6.565852	0.18894	0.220708
0.139287	0.126061	6.621796	0.177282	0.468619
0.174245	0.121012	6.667236	0.172434	0.068238
0.198769	0.115347	6.710052	0.157371	0.065151
0.088379	0.329042	5.490641	0.217305	0.193011
0.315645	0.085168	5.524767	0.222351	-0.10189
0.357143	0.001027	5.508219	0.218929	-0.11462
0.471143	0.008919	5.455729	0.195087	0.326547
0	-0.07501	5.4053	0.19098	-0.15084
0	-0.09945	5.347467	0.156319	-0.22658
0.173487	0.160073	6.375959	0.166829	0.198685
0.149164	0.158169	6.446759	0.171907	-0.00063
0.188072	0.109558	6.505575	0.035739	0.050754
0.045	0.300474	6.688528	0.027951	0.321258
0.891691	0.393982	6.679618	0.144912	0.146061
0.261826	0.206314	6.663654	0.174728	-0.13719

0.25	0.013909	6.95051	0.214116	0.042765
0.462963	0.010126	6.956858	0.214284	0.013292
0.25	0.003042	7.174048	0.1523	-0.01927
0.29274	0.068635	7.205327	0.125794	0.008535
0.581395	0.044024	7.117475	0.089592	0.281575
0.657895	0.02572	7.120443	0.089133	0.176598
0.034114	0.137285	6.794211	0.205744	0.098176
0.034344	0.117451	6.862442	0.19587	-0.03236
0.210349	0.027704	6.914705	0.199142	0.006132
0.061455	0.089912	6.915837	0.200922	-0.26243
0.734465	0.054051	6.950919	0.171862	0.307132
1.212762	0.031276	6.922421	0.167626	0.008956