

**THE RELATIONSHIP BETWEEN AGENCY COSTS AND DIVIDEND
POLICY AMONGST LISTED FIRMS AT NAIROBI SECURITIES
EXCHANGE**

BY

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DECLARATION

I declare that this research project is my original work and has not been presented for an award of any degree in any other University.

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DEDICATION

To my wife Ruth and my son Wabwino and daughter Bertha for your support and enduring my absence from home.

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First and foremost my appreciation to the Almighty God for the opportunity availed to me to study and for answering to my prayers.

My wife and children for always being there for me with your support and encouragement when situation became thick.

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ABBREVIATIONS

AIM	Alternative Investment Market
AUR	Asset Utilization Ratio
DPR	Dividend Payout Ratio
FIMS	Fixed Income Market Securities
FOM	Futures and Options Market
GDP	Gross Domestic Product
IOS	Investment Opportunity Set
LIQ	Liquidity
MIM	Main Investment Market
NSE	Nairobi Stock Exchange
OER	Operating expenses ratio
PROFIT	Profitability
SIZE	Firm Size
SPSS	Statistical Package for Social Sciences

ABSTRACT

The paper investigates the relationship between agency costs and dividend policy in the context of developing economy of Kenya. Dividend policy has been and still remains a tricky topic as the results are not conclusive as to allow a definite position to be made. Thus therefore, the study has used 10 year data from 2007 to 2016 based on a sample of 40 companies. This has seen employment multi linear regression technic to analyze the results which confirms the results of other studies that agency costs do influence dividend policy. The independent variables were positively correlated to the dependent variable, the dividend policy as expected but only asset utilization ratio and profitability had significant influence at P-Value of .011 and .002 respectively. The R^2 of 40.2 percent of the model explain the effect of change influenced by the agency cost variables on dividend policy. The P. Value of F-test was significant at 0.003 ($0.003 < .05$) indicating linear relationship. Therefore, the study concluded that agency costs influences the dividend policy of firms listed on NSE.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The management of an organization is shrouded in many contractual conflicts because of the very nature of understanding between those hired to work on behalf of principals. Jensen's theory of firm describes agency relationship as service agreement between principal and agent, where the agent is to work in the best interest of principal (Jensen 1986). However, the two are 'utility maximizers' and their relationship is often associated with conflicts (Collier & Agyei-Ampomah, 2006). There is greater propensity to venture in sub-optimal investments by the agent in his quest to appease his interests rather than the principal's. The problems, then give rise to agency costs which unfolds itself in skewness of information and uncertainties and rise in perquisites both in cash and otherwise paid to managers (Kantarelis, 2007). Agency costs, therefore, is the loss in value experienced by owners resulting from variances in interests. To minimize the diverging interests owners incur monitoring costs to sway managers to their interests. Among many alternatives dividend is viewed as one of mechanisms to reduce agency costs (Easterbrook, 1984).

Jensen and Meckling (1976) observed that principal / agent relationship is continually rocked in some controversies due to the diverging interests of the parties. The inevitability of conflicts arise from the fact that control and ownership is separated (Manos, 2001). All these conflicts culminate into agency costs defined as sum total of monitoring, bonding and ultimate residual loss (Jensen and Mecklin, 1976). Free cash flow theory says agency conflicts are as a result of excess cash flow position which

unless taken out in form of dividend and debt repayment will tempt managers to yield to self-interest motives. Managers' inclination is to possess a substantial portion of cash in the firm for reinvestment purposes than making payment to owners in form of dividend (Almeida, Campello, & Welsbach, 2004). Jensen, (2000) refers "free cash flow" as cash available after all operational expenses and positive net present value projects are considered. Deangelo et al. (2009), rather concluded that due to asymmetry of information firms continue paying dividend because of the signaling capability.

Many theories have alluded managers as rational and the dividends on the other hand as effective means of resolving or a mechanism of reducing agency conflicts or as a signaling tool to arrest the problem of information asymmetry. Allen & Michaely (2003) and Frankfurter & Wood (2006) concluded that theories established on agency or signaling are not consistent with the empirical evidences. Evidently most of the studies on this topic are done in developed nations with fewer in developing or less countries. Therefore, the context of the study is Nairobi Security Exchange (NSE) where there are less studies done on agency cost and dividend policy. The aim of study rests on seeking to establish the relationship or impact of agency costs on dividend policy amongst firms on NSE. It has been established in other studies that dividend is paid as a way of reducing agency costs arising from agency conflicts. So are NSE firms using dividend policy to avert agency conflicts?

1.1.1 Agency Costs

Agency costs are prices paid due variances in interest between owners (principals) and managers (agents) over the best actions for the firm. Jensen and Meckling (1976) summed all expenses of principals' monitoring, agents' bonding and residual loss resulting from divergence in interests as agency costs. In a public firm, they are those

costs which may arise because managers' actions may center on their own interest to the disadvantage of owners. For instance, they may raise their peaks and benefits to inappropriate levels. Therefore, it is any loss suffered by shareholders for controlling agency behavior through their own measures and those executed by managers and costs resulting from any agency behavior left uncontrolled (Manos, 2001).

In order to get the best out of the managers, principals spend on setting measures aimed at controlling agents' behavior. Such expenses range from recruiting managers, setting their benefits and the whole spectrum of controls. On one hand, bonding costs, are borne by managers mostly as an expression to the owners of their good conduct which is viewed as advancing owners' welfare. These may constitute structures that management set constraining better behavior in interest of owners of capital. Failure to achieve that may result in compensation to shareholders. However, the company still suffers some losses even after the monitoring and the bonding measure are put in place called Residual (leftover) losses (Baker and Anderson, 2010). Costs of resolving these conflicts of interest are called agency costs described as total sum of monitoring as well as implementing control devices expenditures by the owners (Ross, Westerfield and Jaffe, 2002).

Divergences from owners' interests can be lowered by devising appropriate incentives and by incurring monitoring expenses aimed at minimizing the undesirable activities (Jensen and Meckling, 1976). Agency costs are categorized in two, those of direct and indirect nature (Baker and Powell, 2005). Shareholders suffer the former costs as a way of minimize budding problems with agents which are in the form of audit fees, managerial incentives, and infrastructure. Indirect agency costs accounts for inefficiency on the part of managers to make worthwhile investments (also referred to as mismanagement of cash flow). Most conflicts are as consequences of differing values

amongst the players, in this case the insiders and owners arising from the fact that ownership and management are separated. Conflicts are more pronounced in areas of capital structure and utilization of free cash flow.

1.1.2 Dividend Policy

Dividend policy constitutes a crucial element encompassing organization's financing decision referred to as the logic under which amount of dividend are decided and paid. The term encompasses both the amount paid and the pattern under which changes in the amount occur over time. Gibson (2009) referred it explicit or implicit decision of the company's board of directors with regard to residual earnings (past or current) as payout to owners of the corporation. It is "the practice that management follows in making dividend payout decisions or, in other words, the size and pattern of cash distributions over time to shareholders" (Lease, John, Kalay, Loewenstein, and Sarig. 2000). The most important question to ask is whether dividend payout policy is necessary. Allen and Michaely, (1995) propagated that one crucial decision managers make is the determination of what percentage of earnings and profit to distribute as a dividend. Moreover, good knowledge of the mechanics of dividend payout policy is vital in asset and corporate valuation aspects.

Managers' major responsibility is to increase the wealth of shareholders through proper use and optimal utilization of assets at their disposal and therefore knowledge of dividend payout policy is essential for this cause. More over Managers who work in the best interests of stockholders have incentives to avoid engaging in unprofitable projects by distributing any excess cash in form of dividend payout. By taking out this excess cash after all investments and operational expenses, agency costs as a result poor investment are minimized (Jensen (1986)).

The importance of a good dividend policy cannot be overemphasized particularly as the firm advances to maturity stages in its development. The payout policy hence can be viewed as signaling stability while confirming the going concern focus of the firm. In the investing world, the investors make use of the dividend in calculating the worthiness of taking a risk in seizing an opportunity available. There are three dividend payout ratios which a firm can use as it implements its dividend policy depending on its objective.

The constant payout ratio entitles shareholders to a fixed proportion of earnings over a period of time. The rate is fixed at a certain rate and the firm distribute the proportion of earnings as derived from the stated rate. It follows then that in the absence of positive earnings the firm is not obliged to distribute any dividend to its shareholders. This policy does not guarantee the shareholders of dividend, therefore, it is enshrouded with uncertainties. For the shareholder who prefers dividend over capital gain, there is a gamble because they are not sure whether there will be constant flow of dividends (Gitman, 1988).

Constant amount per share is determined in advance after considering investment issues and is fixed regardless of the earnings figures in any given period of time. Because the rate is fixed well in advance it is always set at a lower rate sustainable to the firm because of the uncertainty which surrounds the earning figures. It can, however, be raised depending on an assurance of hitting certain levels of earnings and sustainability of such increase. This policy is the most preferred one for those investors interested in dividend because there is certainty of getting paid and it is in line with the wealth maximization of the owners (Pandey, 1991). It has the advantage to the firm because of the lower levels of dividend payout particularly in periods of low earnings.

Constant dividend per share plus extra has an element of fixed dividend payout and the other component depends on the performance of the firm. In times when the firm is making super profits, the dividend is raised and likewise reduced when profits are low. This approach to dividend payout is only feasible in volatile circumstances because of the leeway to increase or to reduce dividend as the situation can demand.

1.1.3 Relationship between Agency Cost and Dividend Policy

Agency costs are viewed as “the sum of monitoring expenditures by the principal, the bonding expenditure by the agent and the residual loss as a result of divergences in interests” (Jensen & Meckling, 1976). It is clear that some expectations are missed because of conflicting interest set in by agency relationships where the agent is expected to perform his or her part of the bargain to the benefit of the principal. According to agency theory, it suggests that by paying dividend managers are encouraged to put the resources to better use, Jensen (1986). Dividend policy being guide to the company’s way of raising finance may persuade managers to seek outside source of funding in order to meet the firm’s budgetary needs thereby putting the company to close examination of capital markets as well as other monitoring agents (Easterbrook, 1984).

As the concentration of insider ownership gets more and more the agency costs become less and less as there is more congruency of interests between insiders and owners and therefore dividend payout fall out as a tool of reducing agency costs. Rozeff (1982) established an inverse kind of relationship of insider ownership to the dividend payout. This view is supported by Ekbo & Verma (1994); Moh'd, et al. (1995); Dickens, et al. (2002) and Akhigbe & Whyte (2012) whose studies also reveal a negative relationship. It follows therefore, that where shareholding becomes more dispersed, the agency costs also start to rise because shareholders will try to put structures and mechanisms in place

to force the manager into alignment with their interests. In the absence of comprehensive mechanisms to reduce the costs of the agency relationship, dividend payout is seen as another way of minimize the agency conflicts. Nevertheless, it is not a necessary means with good principles of governance leading to impeccable control systems aiming at mitigating the wastefulness of agency relationship (Kose and Anzhela (2006).

Manos (2002) found that Foreigners' are enticed to invest in companies that are properly managed and have few conflicts, as a result, have also low agency costs. Foreign investment brings with it a lot of scrutiny from local and international analysts. As more scrutiny is placed on operations of such firm, dividend as a mitigating mechanism of agency costs becomes less attractive and instead the firm is kept in check by other mechanisms. This equally applies to institutional ownership where there are various means available to the investors as monitoring instruments for the good management of the firm. These instruments oftentimes take precedent in monitoring the operations unlike the use of dividend payout. In a situation where institutional ownership is more, Manos (2001) study established a negative linear relationship supporting that such investors like banks, endowment funds and many more of similar by nature are better equipped in monitoring through regulatory oversight and audits.

Excessive free cash flow has always been attributable to the reason managers engage themselves in negative net present value type of investments in their quest to gratify their self-interests. Jensen (1986) suggests the distribution of the excess as dividend or repayment for debt. Managers with less idle cash in their control have less desire to invest in sub optimal investments and the lower the agency cost attributable to poor investment decisions.

1.1.4 Nairobi Securities Exchange

The Nairobi Security Exchange (NSE) operated as an informal market for local stocks and shares around 1920 before independence from British rule and was recognized as stock exchange around 1954. It continued to grow after independence to a modern facility with an automated trading system to keep pace with other major world stock exchanges. It is composed of 23 stock brokerage companies transacting in fixed and variable income instruments. The exchange is composed of primary and secondary market platforms and segmented into four, namely; Main Investments Market (MIM), Alternative Investments Market (AIM), Fixed Income Market Securities (FIMS) and Futures and Options Market (FOM).

The NSE is now using Automated Trading System (ATS) in trading shares and since 2009 the exchange has also included government bonds. This is significant move towards deepening capital markets by providing required liquidity. In 2011 saw Nairobi Stock Exchange Limited embracing a new name of Nairobi Securities Exchange in cognition of its decisive plans to advance into full scale securities trading market dealing in equity, debt instruments, derivatives and other instruments of similar nature. The exchange in 2015 formally became affiliated to the United Nations Sustainable Stock Exchanges (SSE) drive to free undertaking in informing their participants of the significance of assimilating viability in the capital market. The number of firms listed on NSE as of 2016 was sixty three. NSE is vital in the divestiture activities of government as it is for a firm seeking to raise capital. The exchange trade in shares and bonds of both short duration and long duration (NSE, 2015).

1.2 Research Problem

The motivation of any investment is to get a return or benefit at the end of the day. Therefore while running the firms, managers ought to make decisions that are in tandem with shareholders interest and aid to the growth of their assets. Often times, managers have a great appetite for excessive fringe benefits which reduces what the shareholders should have received as dividends. Furthermore, the shareholders incur additional agency costs in monitoring performance of the firm which effectively reduces their return. Shareholders are losing on returns due to excess agency costs which effectively reduces what they should have made as a return. Hence are the firms in Nairobi aim on reducing the agency costs by using dividend policy as has been alluded in other studies conducted on the subject.

Despite many research studies on this topic, no solution for the dividend puzzle has emerged (Baker and Anderson, 2010)). Allen, Antonio, Bernado and Ivo (2000) said, “Although a number of theories have been put forward in the literature to explain their pervasive presence, dividends remain one of the thorniest puzzles in corporate finance”. Dividend policy has remained a sticky issue and studies have been conducted in various countries to find the root motivation for dividend decisions and many more studies need to be conducted in order to widen the knowledge base for the topic, Baker & Powell (1999). Because of differing results in different regions and countries, studies continue to take place to obtain strong and undisputable evidence that can conclusively settle the dividend puzzle.

Rozeff (1982) in his study alluded to the fact that dividend payout policies reduce agency problems a view also shared by Porta (2000) and Lozano (2005). Easterbook

(1984) viewed dividend as means to reduce agency costs brought because of the agency conflicts. He proposed that firms can borrow if they have an insufficient fund to meet dividend payments which will subject them to external monitoring and effectively reduce the agency cost to shareholders. Jensen (1986) indicated that by paying dividend management hold on cash is lessened and this motivates them to only engage in beneficial projects with positive net present values.

Locally Kanyari (2009) and Acholla (2009) looked at the connection between agency costs and dividend policy by utilizing 5 and 8 years data ranging from 1998 and 1999 respectively and concluded that agency costs play a negligible part in determining dividend payout. It is noted that the data set for the two studies fell within the same period when the economy of Kenya was said to be at its lowest historic position. Therefore, this research uses 10-year data from 2007, the period characterized by a tremendous improved economy. This study investigates the relationship between agency costs and dividend policy amongst Kenyan firms listed on NSE whilst trying to answer the question *“as to whether agency costs exerts some influence on the formulation of dividend policies of NSE listed firms.”*

1.3 Study Objective

The objective of the study is to establish the relationship between agency costs and dividend policy amongst firms listed on Nairobi Securities Exchange.

1.4 Value of the Study

This study is envisaged to be helpful both to the academicians and the practicing world at large.

In the academic world, the study aims to beef up the existing body of knowledge and filling the gap in enhancing a better understanding of how agency costs impact on dividend policies amongst the NSE listed firms. It is of no doubt that the results of this study will form the basis for onward studies in the same or related areas.

The practicing world will gain a better understanding of the dividend policies prevailing in Kenya and help managers produce a better dividend payout policy that takes into account of the differing interests of their shareholders as well as the bondholders.

To the shareholders and those will be shareholders will be in a position to know the kind of agency costs and dividend policies in practice and whether the return they expect will be attainable taking into account the environment.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter introduces findings of academic investigations on agency costs and also dividend policy as foundation for a quickening understanding of this study. Firm's main objective is maximizing shareholder value and Nairobi Securities exchange listed firms are not exception from this noble goal. Oftentimes managers opt for a more luxurious working lifestyle, try to build empires with the shareholder's money or shun unpopular decisions instead of maximization of shareholders wealth. This conflict in interests is what is called the agency problem (Medura 2000).

2.2 Theoretical Framework

In their research findings, Modigliani and Miller (1961) underscores that in a perfect market, dividends are irrelevant. This was later dubbed dividend irrelevance theory because shareholders can easily diversify their risk. Shareholders can sell their stake of shares if they are in need of cash. To this effect, a lot of studies on dividend policies are founded. One of the crucial elements in meeting dividend distributions is availability of earnings. Consequently, when more is paid out in dividends, effectively the retained earnings and capital gains are decreased. Therefore, shareholders' wealth remains the same (Porta et al, 2000). However, firms are executing elaborate dividend policies which Black, (1976) referred as dividend puzzle. If the puzzle is solved questions and confusions as to why differing policies on dividend are executed across companies and countries will be settled.

So much reasoning has emerged in the field of economics in expressing the dividend puzzle. For instance, transaction cost theory deduces that by paying dividends firms are left with an option to borrow therefore suffer some costs in raising external funds for investments while costs of collecting and reinvestment are incurred by the investor (Manos, 2001). Dividend puzzle is also explained in the light of dividend policies as a means of mitigating agency conflicts amidst insiders and owners (Porta et al, 2000). In this research, the basis will be the latter explanation.

2.2.1 The agency theory of dividend policy

Financial economics state that entities face conflicts of interest as a result of diverging interests in the same assets by its participants mainly the managers and shareholders (Pietersz, 2016). Firms engage services of other people called managers to run the business as agents of the owners. Such is called the agency relationship built on the premise of maximizing owners' wealth by optimum use of resources at disposal of managers. The business of the firm is based on several contracts and one of such is the residual or equity contracts viewed as the working relationship between the manager herein called the agent and the shareholder referred to as the principle.

The relationship is usually rocked in some controversies due to the fact that the parties have differing interests and owing to the fact that powers are delegated to the agent who may abuse such privilege (Jensen and Meckling, 1976). And due to the fact that there is the segregation between ownership and control, shareholders and managers conflict is inevitable (Manos, 2001). Porta et al (2000) define the situation as conflict of interest between managers and owners herein called the agent and principal respectively. Managers may use resources to finance activities of their interest ranging from corporate jets to non-adding value expansion (Jensen and Meckling, 1976). All these

conflicts culminate into agency costs and involve spending in setting up structures and controls of minimizing their occurrence (Manos, 2001). Jensen and Meckling (1976) in defining these agency costs referred to them as the sum of expenses in monitoring, bonding and the ultimate residual expenditure resulting to the loss.

Many studies on dividend policy have underscored the importance of dividend payments in mitigating agency problems and let alone the associated costs. Reputation is also found to be equally important in bringing value to firm and management. Long (1994) concluded that nearly all managers are worried about their reputation. Therefore, in trying to preserve the value brought by reputation, managers will shun activities that bring conflict as put forward by agency theory hence will be interested to demonstrate the firm's freedom from agency conflicts.

The theory brings an awareness of how diverging interests of the owners and the managers can result in conflicts which erode the worthy of the owners. The Paying of dividends therefore, may indicate appropriateness in handling minority shareholders and improve reputation (Manos, 2001; Long, 1994). Whether dividends are paid by insiders as decent treatment or as result of being pressurized by minority owners, dividends obtain their value from mitigating agency problems. In his proposition, Jensen, (1986) indicated that unless management control over cash can be minimized, the impetus to spend on negative net present value projects will not arise. Hence as a way to minimizing firm's unnecessary cash is to increase dividend payouts (Allen and Michaely, 1995).

2.2.2 Agency Cost of Free Cash Flow Theory

Free cash flow according to Jensen, (1986) is the excess cash position above the required for favorable investments which when discounted pay over and above the cost

of capital. It is organically created capital within the firm which is readily available to the firm for financing its projects, particularly so where the company has difficulties in raising external finance due to inefficiency, flawed market or asymmetrical information by insiders and finance providers (Myers & Majluf, 1984). And because of high costs in raising external finance in a flawed market, the firm is better off financing its investments by this cash (Aggarwal, 2006; Kim, 2005; Fuad, 2008).

This cash depending on how it is used may increase or devalue firm worth (McCabe & Yook, 1997). The value of the firm is eroded because Managers usually use free cash flow in fringe benefits rather than in projects that have positive net present values because of lack of adherence to good planning methods (Chung, Firth, & Kim, 2005). In order to maximize shareholders wealth, the free cash flow must be paid back to the owners. This comes from the back drop of the relationship between Managers and shareholders being crowded with serious conflicts over the best corporate strategy because of the self-interest attitude. Agency costs are a sum of costs that arise as a way of monitoring managerial behavior through the production of audited financial statements and implementing compensation plans for wealth maximization actions.

The relevance of free cash flow in a firm cannot be over emphasized. Investments are financed cheaply when using organic earnings. However, managers are also known to love massive fringe benefits which are a cost to the firm. In the arguments of Jensen (1986), there is a variation of interests with regards to excess cash flows between managers and shareholders. Corporate managers have propensity to finance projects with negative net present value that erode owners' wealth. By paying cash to the shareholders management control over cash is minimized as such subject to capital market scrutiny if the need arises to raise new capital (Jensen, 1986). Enormous conflicts happen as a result of substantial cash flows which are not distributed to owner

resulting in managers making negative net present value investments or wastage through inefficiencies. However, when managers have good understanding and information about the firm, the cash flow becomes necessary for investment as it is assumed that they operate in the desirable interest of owners who have little information (Myers and Majluf, 1984)

2.2.3 Signaling Theory

It is believed investors do their investments after being lured to the possibility of cash flows in future based on signals sent by the firm. Because of Information skewness managers make use of the dividend payments to show to the outside world of the performance of the firm. To this effect managers avoid to increase dividend unless they are sure of the firm will achieve certain earning positions. In the same way reducing dividend conveys bad news to investors of the inability of the firm to generate adequate earnings, Miller (1980). Investors do not have much information about the profitability of a company as the managers, therefore, payment of dividend signals stability and cash flow position of the firm, Bhattacharya (1979). This view was also shared by Miller & Rock (1985).

Managers as agents of shareholders are more satisfied when company stocks increase in value. This appreciation in value signals the likelihood of achieving more cash flows. Therefore, by paying or increasing the dividend the firm achieves in relaying its confidence to the investors which possibly trigger the appreciation of its market value. Nevertheless, shareholders benefit from dividend payouts is reduced by the high taxes applicable to dividend as compared to lower tax rates of capital gains. However, dividend announcements give hope of better results by the firm. This signaling effect is particularly pronounced in situations where there is information asymmetry.

In contrast to the signaling effect DeAngelo & Skinner (1996) also Benartzi et al (1997) introduced new evidence to the fact that dividend does not very well give information about future earnings. They argued that with greater asymmetry of information it could be possible for smaller firms to be paying more dividend unlike the bigger ones.

The election of dividend payout policy determines whether or not dividend does indicate information to investors. When the firm devise dividend policy in such a way that it pays a fixed dividend, the signaling effect is lost because the dividend payments do not show the managers' confidence in future earnings and cash flow.

This theory is relevant in the sense that while dividend payments is used as a means of relying information to investors about the managers confidence in attaining certain profit levels. It has also the impact of signaling good treatment of investors and less conflicts of interest which result in agency costs. So the effect is that the firm is seem as being operated efficiently.

2.3 Determinants of Dividend Policy

Dividend policy is the guideline helping companies in matters of dividend pay outs. In order to have a dividend policy the company needs analysis of certain factors and some of them are discussed below.

2.3.1 Taxation Policy

Modigliani and Miller, (1961) in his perfect capital market assumption count out possible tax effects and therefore unlike tax application between dividends and capital gains. Nevertheless, taxes are unavoidable in actual experience such that investors' interest is always aroused by the after tax return. Dividend distributions and capital

gains are taxed differently in the hands of the recipient and also at separate occasions with dividend being taxed immediately at high rate and differed in the case of capital gains to a later date when the stock is sold.

2.3.2 Liquidity position

Dividends are paid out of the free cash flows after operating and investing expenses. It is therefore related to the liquidity position of an enterprise. Following this, only firms which are liquid may pay dividend. Firms in growing stages may not elect to pay dividend rather invest it in the positive net present value opportunities. Liquidity is measured by dividing current assets by current liabilities according to (Kania & Bacon, (2005); Kanwal & Kapoor, (2008); Ahmed & Javid, (2009)). Signaling theory posits that companies with more cash are likely to pay more dividends as compared to companies with unstable cash position (Ho, 2003). Agency theory on the other hands says companies with substantial cash flow distribute more in form of dividends in order to reduce agency problems between insiders and owners, Jensen (1986). By doing so managers run away from the risk of pursuing their own interest.

2.3.3 Firm size

Fama and French, (2000) argued that bigger firms which are making profit are well positioned to distribute dividend owing to their sustenance ability. The bigger the firm the more dispersed its shareholding as a result the greater the conflicts because of the diverging interests between the owners and those managing on their behalf. Hence the more dispersed the ownership the more dividend is used as conflict mitigating instruments. On the other hand, a more stable and profitable firm has easy access to capital markets and other forms of financing. More reliance is placed on internally

generated earnings for growth activities by small and unstable entities, therefore, less to no dividend payments.

Gill et al. (2009) used natural logarithm of total assets to measure firm size. The bigger the size of the firm the more its ability to bargain for cheap capital due to their good credit rating and because of the market they command which is an assurance of making profit, therefore, enables to meet the dividend payments (Dickens et al., (2002); Lloyd et al., (1985); Jensen et al., (1992).

2.3.4 Ownership structure

Ownership of shares performs a crucial part in influencing firm's decisions. Particularly so in a situation where a single majority shareholder may use the rights accorded to him/her by virtue of owning more shares to dictate dividend policy to the disadvantage of other shareholders. However, where there are significant numbers of dispersed ownership there is a lot of agency conflict owing to the fact that the minority owners of shares are not in a better position to monitor whatever is done within the firm. Therefore, they get more assurance of good management of their assets when the firm is paying dividends.

2.3.5 Legal and regulatory constraints

Dividends are either paid from current or past earnings and most economies have interest in protecting the minority investors from scrupulous entities and majority shareholders who may yield their powers to reap them of their resources. By restricting the distribution of dividends from earnings rather from capital the legal instruments aims at protecting other stakeholders like the debt providers who may end losing their investments should the firm be allowed to pay dividend out of capital.

2.3.6 Restrictions in Debt Contracts

In preventing debt providers from losing their money oftentimes restrictions are deliberately included in the debt contracts so that the levels of earnings that can be distributed as dividend are regulated. Similar restrictions are evident in the case of preference shareholders where they are entitled to getting their dividend ahead of the common shareholders. Because of the debt restrictions, some evidence have indicated firms with debts pay less dividends than those which are free from debt restrictions (Jensen et al., (1992); Agrawal & Jayaraman, (1994); Faccio et al., (2001); Gugler & Yurtoglu, (2003); Al-Malkawi, (2005)) because of obligations to service the debt. Similar banks with high debts are under pressure not to distribute more in dividends (Dickens et al., 2002).

2.4 Empirical Evidence

Many studies about dividend policy have been done over the years. Bremberger et al (2016) have studied dividend policy of firms in regulated network industries, focusing on the impact of different regulatory regimes and government control. The findings were that incentive-regulated firms smooth their dividends less than cost-based regulated firms and that they report higher target payout ratios.

Cheng et al, (2015) concluded that corporate dividend policy should strike a balance between paying cash to shareholders when there are excess resources and retaining sufficient resources in the company to fund worthwhile projects. Using excess resources to pay dividends can help to avoid overinvestment by the company in inappropriate projects and/or other potential misuse of funds by managers for their own benefit.

Kuwari (2009) while seeking to establish the determinants of dividend policy, conducted his research on nonfinancial firms within Gulf Co-operational Council (GCC) countries. In the outcome, the evidence pointed to the fact that the motive of the firms by paying dividend is to minimize agency costs and further found the tendencies of GCC firms to change their payout policy repeatedly and do not in long run chose target dividend policy. A strong positive relationship was established between dividend policy to ownership by government size of the firm and its profitability while leverage was found to be inversely related

Through research conducted on 341 firms in a 17 years period between 1972 to 1989, Moh'd et al (1995) found that reducing agency cost is not the motivational for paying dividend. The observation, therefore, was that the payout ratios do not adjust because of the changes in the agency cost. While Lloyd et al (1985) while using a sample of 987 US firm alluded the fact that agency cost and size effects influence the dividend payout policy of firms.

Easterbrook (1984) stated that when firms distribute cash dividends and source outside financing there is mitigation of agency costs between managers and the shareholders. The resultant effect is less cash is kept by agents effectively minimizing likelihood of sub optimal investments. External financing effectively brings the monitoring of the capital markets. By paying more dividend the company is left with less cash to be used on fringe benefits and wastages in poor investments. Capital markets brings expert scrutiny of the firm and therefore, aiding good investment decisions and reduction of other monitoring expenses.

Majority of the researches are conducted in developed nations and not much in the developing nations. In Kenya just like the other developing countries limited studies

have covered the issue of agency costs and dividend policy. Kathuo and Kimoro (2016) conducted their study around three variables; profitability, cash flow and bank size to find the factors that influence dividend policy in the banking sector of Kenya. A 5-year data from 2011 to 2015 from 11 sampled quoted banks on NSE was used. The results suggested profitability and cash flow to be positively associated to dividend policy and significantly influencing dividend policy decisions. On the other hand, bank size was found to be of not exerting influence to dividend policy in the banking sector of Kenya.

Acholla (2009) conducted his study using 8 years data from 1999 to 2006 aiming at establishing the association of dividend policy and agency costs. The study observed that individual statistical significance (t Stat) shows that Operating expenses ratio (OPER), Asset Utilization ratio (AU), Growth (GROW) and Investment opportunity set (IOS) are not linearly related to Dividend to Earnings (DTE). The agency costs explain only a small portion of the dividend policies, therefore, not sufficient enough to suggest that dividend policies of the firms in various sectors are designed to mitigate the agency costs.

In Kanyari (2009) tested the responsiveness of dividend policy to agency costs by using a 5 years data from the year 1998 to 2002 of 35 sampled firms registered on NSE. In his findings, a positive association was established between dividend policy and agency costs in the commercial and industrial and allied sectors of the economy. Despite the positive relationship, the correlation coefficient was found to be significantly small as to exert any influence on the dividend policy of those sectors. In addition the study established that payout ratios were generally high compared to industry average of NSE listed firm.

Njuguna (2006) conducted his research from 1999-2005 focusing on establishing factors influencing the dividend payout. He established that prevailing and impending profitability ranked highest. Additional determinants were cash position, instant financial requirements, and opportunity of profitable investment

Karanja (1987) studied dividend practices prevalent on firms at the NSE. Among several reasons, firms pay dividend when there is no viable investments to make and also the liquidity position. Olteita (2002) observed that there is no relationship between state, institutional and individual ownership and performance in his study of relationship of ownership structure and firm performance. But established strong relationship between foreign ownership and performance.

While in developed world dividend policy and agency costs have been researched extensively less has been done in developing economies. Literature shows very few studies have specifically tackled the issue of agency costs and dividend policy here in Kenya. So far only two done on agency costs and dividend policy. Acholla (2009) and Kanyani (2009) have studied agency costs and dividend policy of firms listed on NSE and almost come to the same conclusion that dividend policies in practice by NSE listed firms is not influenced by the agency cost. However, it is noted that these two studies were done almost concurrently using same data set. During the same period, the economic status of Kenya was hovering around its worst historic lowest GDP position.

As rightly put by Anil and Kapoor (2008), that no single factor can exhaustively explain the behavior of dividend policy. So by using a different data set encompassing periods of improved GDP levels and lengthening the study period as recommended by Acholla (2009) this study aim to use 10 years data from 2007 to 2016. In this period Kenya has improved greatly in its economic activities.

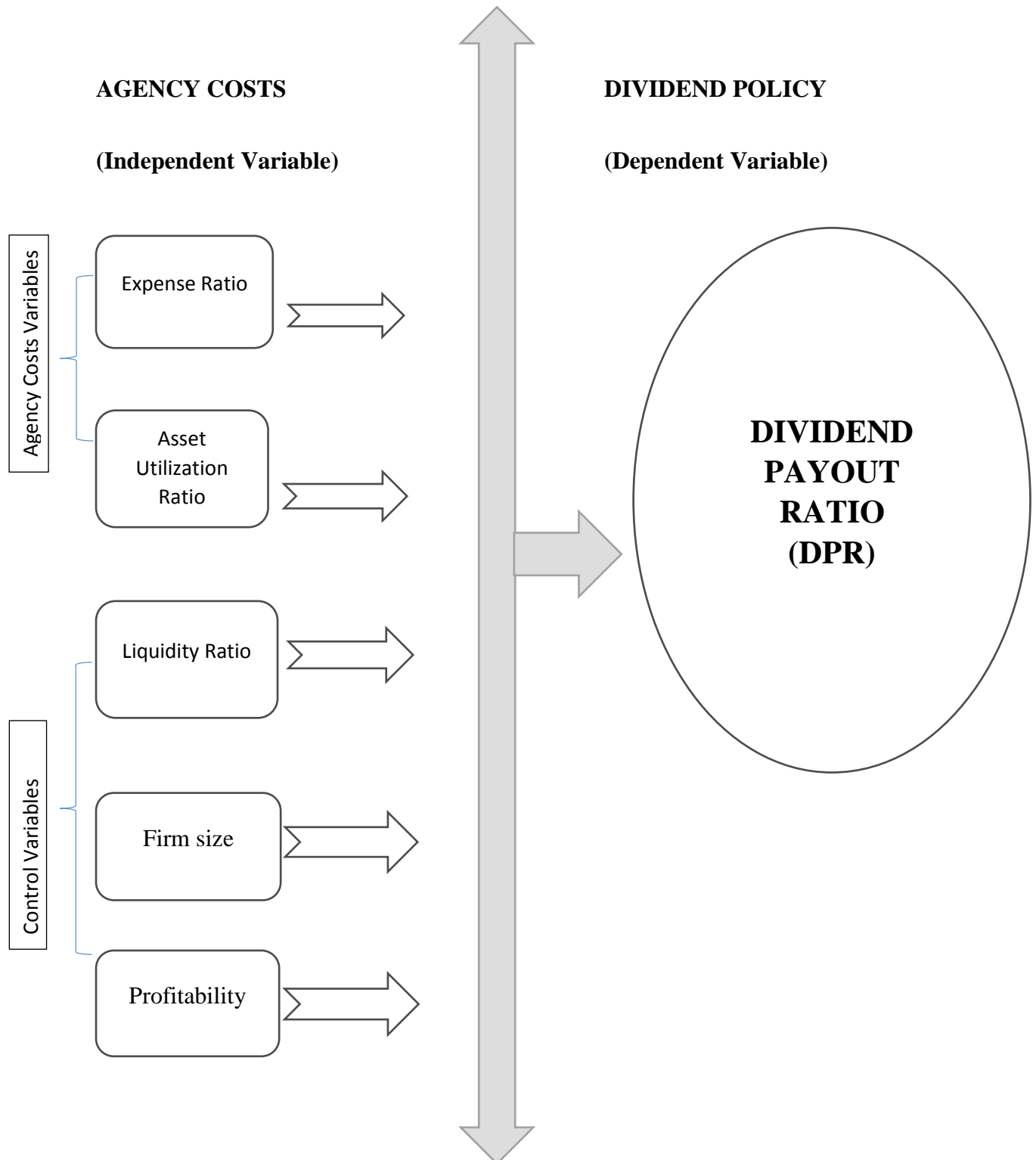
This research, therefore, endeavor to add to existing knowledge as well as filling some gaps in the literature by seeking to establish the relationship of agency costs and dividend policy whose measurements are expected to affect the dependent variable measure, dividend payout ratio as depicted in fig 2.1.

Figure 2.1 Variable direction and Measurement

Variable	Expected impact direction of independent variables on Dividend Policy	Measurement of Variables
Independent Variables (Agency Costs)		
Operating Expense Ratio	+	OER = (Operating Expenses / Total Sales)
Asset Utilization Ratio	+	AUR = (Avg Sales / Total Assets)
Control Variables		
Liquidity Ratio	+	Current Ratio = (C. Assets / C. Liabilities)
Firm Size	+	Size of the firm = Natural Log of Total Assets
Profitability	+	ROE = (NPAT / Total Equity)

2.6 Conceptual Framework

Figure 2.2 Conceptual Framework



2.7 Summary of Literature Review

Modigliani and Miller (1961) argued that markets are perfect and that dividends are irrelevant means of wealth maximization for the investor as they can ably create their own dividend by selling part of the stock if they so wish to raise cash. This is based on the assumption of the perfect nature of the market where no uncertainties, transaction cost, tax and other imperfections prevail. The biggest question then, why firms are continuously engage in distributing dividends if it is irrelevant and investors can easily raise their own dividend (Black, 1976).

The relationship between the managers and shareholders is subjected to a lot antagonistic views due to the diverse interests of its participants (Jensen ad Meckling, 1976) in the same assets. Manos (2001) explained that because of the very nature of the agreement where there is segregation of ownership and control, conflicts are inevitable. All these conflicts graduate into agency costs which are incurred setting up structure of control and measurements to align those in control of the assets to the interests of the owners of the assets (Manos, 2001). Agency problems, therefore, result in wasted opportunities through wasteful investments. These wastages are sum total of the monitoring and bonding costs aimed at bringing managers interest to complete alignment with owners' interests. The conflicts to a large extent exist between the agents and their principals and also between owners and providers of capital (Breally & Myers, 2000)

So many studies have tried to tackle the issue of minimizing agency costs by the use of dividend payout policy. Easterbrook (1984) and Jensen (1986) made their conclusions in support of the fact that free cash flow can be controlled by the use of dividend payments which effectively minimizes cash in the hands of the managers who may end

up investing poorly. Several empirical studies and theories have been discussed to shed more light on the need to increase the shareholders wealth by way of releasing the excess of cash as dividends. Much as releasing excess cash flow can minimize agency costs, dividend payment can also be used to signal investors of the firm's good treatment of its shareholders.

There is information asymmetry between managers and owners and outside world can only know its performance through dividend. In the same way reducing dividend conveys bad news to investors of the inability of the firm to generate adequate earnings, Miller (1980). Investors do not have much information about the profitability of a company as the managers, therefore, payment of dividend signals stability and cash flow position of the firm, Bhattacharya (1979). This view was also shared by Miller & Rock (1985) and may indicate the wish of managers to minimize agency costs. This signaling effect is particularly pronounced in situations where there is information asymmetry.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter lays down methods and techniques employed in the research. It discusses research design, how the data was collected and sampled and analyzed.

3.2 Research Design

Heppner et al (1992) expressed research design as scheme or construction used in examination or a checklist of particulars and methods for administering and regulating research project. This study, therefore, adopted descriptive design approach to assess the relationship of agency costs and dividend policy of NSE listed companies. The major role of descriptive studies was in finding out "what is," type of investigation. The interest, therefore, lied in seeking to establish whether there was link between agency costs and dividend payout policies and influences agency costs had on dividend policy. To this effect data was collected on financials of NSE listed firms from NSE Bulletins and arranged in a manner that gave meaning. Borg & Gall, (1989) alluded that descriptive data often illuminates knowledge that might otherwise not be noticed or encountered.

3.3 Population

The study population comprised all companies on NSE registers as at the close 2016 calendar. In total 63 firms (appendix 1) were registered as of 31st December 2016 and these were only public companies. Private companies were not included due to the scarcity of information.

3.4 Sample

The study used 10-year data such that only firms which were registered by the year 2007 and remained actively trading up to 31st December 2016 and had paid dividend in any period within the period were considered. As the interest was to investigate whether there was a relationship between independent variables and the dependent variable in this case whether a relationship exists between agency costs and dividend payout therefore only those firms with positive dividend payout ratio were included in the sample. Out of the 63 firms on NSE, 40 firms made up the sample. The period of ten years from 2007 to 2016 was felt long enough for a relationship to be established and at the same time during that period the economy experienced tremendous development from a backdrop of -0.5 Gross domestic Product (GDP) in 2003 and the preceding years.

3.5 Data Collection

The study used secondary data from financial information published in NSE handbooks and companies annual reports. From NSE handbooks, dividend per share and earnings per share were extracted for calculation of dividend payout ratio (DPR) and also net profit after tax. The annual reports and audited financial statements from company websites were used to beef up information which was not clearly presented in the NSE handbooks.

3.5.1 Measurement of variables

The data extracted from the annual reports was Total revenue, Total Assets, operating expenses, Current assets, Current liabilities Total equity. This data was used to calculate

Operating expenses ratio, Asset Utilization Ratio, Current ratio as a measure of liquidity, Firm size and Return on equity as a measure of profitability.

3.5.2 Dividend Payout Ratio

Dividend policy was the dependent variable of the study and dividend payout ratio (DPR) was used as a proxy for the dependent variable calculated as:

$$\text{DPR} = \text{Dividend per share} / \text{Earnings per share}$$

The independent variable was the agency cost which was measured by two variables; expense ratio and asset utilization ratio while the control variables were liquidity ratio, profitability and firm size

3.5.3 Operating expenses ratio

Operating expenses ratio (**OER**) shows how efficient the managers are in putting the operating expenses under control while at the same time keeping in check the fringe benefit consumption and other agency costs which are direct in nature. The ratio is proxy for agency costs. A higher ratio, therefore, indicates more agency conflict resulting in more managerial expenses. It is measured as;

$$\text{OER} = \text{Operating expenses} / \text{Total sales}$$

3.5.4 Asset utilization ratio

Asset Utilization Ratio (**AUR**) dividing the average sales by total assets. It measures efficiency in utilizing the assets at the disposal of managers. The ratio proxies agency costs and the lower the ratio the higher the agency costs which may be attributable to suboptimal investments, less effort in reducing expenses resulting in stagnated revenue

figures. A lower ratio shows that management is using the assets in activities which are destroying wealth of the owners. The higher ratio indicates efficient utilization of assets and therefore value adding.

$$\text{AUR} = \text{Average Sales} / \text{Total Assets}$$

3.5.5 Liquidity

Liquidity (**Liq**) is a crucial element enabling distribution of dividend. In the study current ratio is used as measure of liquidity. It is also used by Al-shubiri (2011); Mehta (2012) in their studies.

Liquidity (**Liq**) is measured as;

$$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$$

3.5.6 Firm size

Firm size (**SIZE**) is calculated as natural log of total assets. The variable was also used and calculated the same way in the studies of Sharma (2011), Adjaoud and Ben Amir (2010), Akhigbe and Whyte (2012) and many others. Larger firms are more likely to pay dividends as compared to small one which still growing. This also serves as proxy for risk of bankruptcy, the level of risk of closure is less in bigger firms hence the possibility to pay dividend is greater and they have greater access to capital markets which afford them an opportunity to borrow in case they are running low on funds.

$$\text{Firm Size (SIZE)} = \text{Natural Log of Total Assets}$$

3.5.7 Profitability

Profitability (**ROE**) figure is useful in establishing relationship with dividend payout ratio. Many studies like (Anil and Kapoor, 2008) as well as (Amidu and Abor, 2006) have established the positive relationship to dividend payout ratio. Profitability is measured as;

$$\text{ROE} = (\text{NPAT} / \text{Total Equity})$$

3.6 Diagnostic Tests

The regression model is most of the time affected by some issues leading to wrong conclusions if not checked. Therefore, to maintain the purity of the variables diagnostic tests were performed to check that the regression model is free from multicollinearity, and autocorrelation problems. Besides, normality test will be conducted to make sure that the data is normally distributed which is requisite for parametric tests.

Multicollinearity is a situation when the independent variables are strongly linearly related and therefore disturb the outcome of the analysis. Multicollinearity is measured on scale of +1 or -1 and any correlation coefficient close to the two extremes indicate strong linearity of the variables. Multicollinearity happen because of a number of reasons ranging from inappropriate variable to many explanatory variables. These affect one another as independent variables instead of affecting the dependent variable which is the interest of the study. The problem of autocorrelation happen to a larger extent due to dependencies in the data of variables particularly in the time series data where results from previous data have a bearing on the current.

One of the assumption of linear regression is the normal distribution of the data. Gujarati and Porter (2009), normality tests whether error term is normally distributed or not. Gujarati (1995), under the Central Limit Theorem one of the assumptions

is huge number of explanatory variables and identically distributed random variables, then the distribution of their sum tends to a normal distribution.

3.7 Data Analysis Techniques

The study used regression analysis method to analyze the quantitative association of the variables. In this study are more than one independent variable as such the ideal statistical method used was multiple linear regression. The cost minimization model as advanced by Rozeff (1982) was used with minor alteration. While Rozeff's model combines the transaction and agency theory, this study focused on the latter part.

The model of the study takes the form of

$$\text{DPR} = a + \beta_1 (\text{OER}) + \beta_2 (\text{AUR}) + \beta_3 (\text{LIQ}) + \beta_4 (\text{SIZE}) + \beta_5 (\text{ROE}) + e$$

Where:

The intercept for the independent variables is denoted "a"

$\beta_1, \beta_2, \dots, \beta_5$ are slope for each regression line for the independent variables reflecting amount of change in dependent variable (DPR) associated with a change in one independent variable when the others are held constant. And "e" is an error term.

In order to make appropriate decision concerning the effects of the relationship, the hypothesis tests was conducted as follows;

H₀: There is no relationship between agency costs and dividend payout. Expressed differently

$$H_0 = \beta_1 = \beta_2 \dots \beta_5 = 0$$

H₁: There is a significant relationship between agency costs and dividend payout

$$H_1 \neq \beta_1 \neq \beta_2 \dots \beta_5 \neq 0$$

To measure the degree of association between the dependent variable and the independent variables coefficient of determination (denoted by R^2) was used in the analysis. It is interpreted as the proportion of the variance in the dependent variable that is predictable from the independent variable. The Coefficient of determination is measured between the scales of $0 \leq R \leq 1$. When R^2 is equal 1 or close to 1, means that observations are fully explained by the regression equation and the greater the relationship between the dependent and independent variables.

ANOVA (F-Test) was used find the significant model and aid in accepting or rejecting the null hypothesis. In order to reject the null hypothesis, the F-Test value has to be greater enough. The Statistical Package for Social Sciences (SPSS) was used to analyze relationships.

3.8 Summary

This chapter has discussed the research methodology which adopts descriptive design approach to test the association of agency costs on dividend policy of NSE listed firms. Secondary data from firms' financials as presented in their Annual reports and NSE booklets were used for extraction of data used in the study. 10-year data was used from 2007 to 2016. Multilinear regression model was formulated with dividend payout as dependent variable and operational expense ratio, asset utilization ratio, liquidity ratio, size and profitability as independent variables. Statistical Package for Social Sciences (SPSS) was used to run descriptive statistic, correlation analysis, and ANOVA tests.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

The chapter introduces descriptive statistics followed by the diagnostic tests aimed at checking that the data set for the study follows the assumptions of multi linear regression. This, is followed by regression analysis and test of significance.

4.2 Descriptive analysis

Table 4.1. Results of descriptive analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
DPR	40	0.05	0.94	0.3730	0.22932
OER	40	0.00	0.81	0.3150	0.21777
AUR	40	0.06	1.58	0.7150	0.44819
LIQ	40	0.66	2.19	1.4695	0.39945
SIZE	40	5.85	8.49	7.3045	0.73674
PROFIT	40	0.01	0.28	0.1570	0.07697
Valid N (listwise)	40				

Note: OER-Operational Expenses Ratio; AUR- Asset Utilization Ratio; LIQ- Liquidity; SIZE- Firm Size and PROFIT- Profitability.

Table 4.1 outlines the summary of descriptive statistics for the study variables modeled to determine dividend payout policy as a proxy for the dividend policy which is the study's dependent variable among the firms listed at Nairobi Securities Exchange between the years 2007 to 2016.

As previously discussed in prior chapter, DPR is measured by dividing dividend payout ratio by earnings per share. Mean DPR is 37 percent with a standard deviation of 23 percent. This entails that on average NSE firms paid 37 percent of their income after tax as dividend and this figure deviate on either side +/- 23 percent.

OER relate to DPR on average by mean of 32 percent with a standard deviation of 28 percent within the minimum value of 0 and 0.81. On the other hand AUR, LIQ, SIZE and PROFIT relate with DPR by means of 71%, 1.43, 7.30 and 16% with standard deviation of 0.44819, 0.39945, 0.73674 and 0.07697 respectively. The minimum and maximum values of AUR, LIQ, SIZE and PROFIT are 0.6 to 1.58, 0.66 to 2.19, 5.85 to 8.49 and 0.01 to 0.28 respectively.

4.3 Diagnostic Tests

4.3.1 Normality Test

Table 4.2a. Results of Normality test

Descriptives				
		Statistic	Std. Error	(Stat./Std.Error)
OER	Skewness	0.491	0.374	1.312
	Kurtosis	-0.719	0.733	-0.981
AUR	Skewness	0.218	0.374	0.584
	Kurtosis	-1.041	0.733	-1.421
LIQ	Skewness	0.156	0.374	0.417
	Kurtosis	-0.845	0.733	-1.153
SIZE	Skewness	-0.223	0.374	-0.597
	Kurtosis	-1.015	0.733	-1.385
PROFIT	Skewness	-0.111	0.374	-0.296
	Kurtosis	-0.936	0.733	-1.277

Table 4.2b. Results of Normality test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
OER	0.146	40	0.031	0.949	40	0.071
AUR	0.102	40	.200*	0.950	40	0.077
LIQ	0.101	40	.200*	0.962	40	0.198
SIZE	0.102	40	.200*	0.955	40	0.111
PROFIT	0.093	40	.200*	0.964	40	0.232

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

One of the assumptions for performing parametric tests is normality of the data of the independent variables. By using Shapiro – Wilk Test, all variables P-Values are above 0.05 (Shapiro & Wilk, 1965; Razali & Wah, 2011) indicating that the data is approximately normally distributed for all independent variables. Skewness and Kurtosis measures within -1.217 and + 1.312 for all variables. This is derived by dividing the statistic by standard error in Table 4.2a we get values which are within decision threshold of -1.96 and +1.96 (Cramer & Howitt, 2004; Doane & Seward, 2011)

4.3.2 Correlation Analysis

The examination of degree of relationship between dividend Payout, Operational Expense Ratio, Asset Utilization Ratio, Liquidity, Firm Size and Profitability was conducted by using Pearson correlation as shown in Table 4.3a.

Table 4.3a Results of correlation analysis

		Correlations					
		DPR	OER	AUR	LIQ	SIZE	PROFIT
DPR	Pearson Correlation	1					
OER	Pearson Correlation	0.267	1				
AUR	Pearson Correlation	.321*	-0.047	1			
LIQ	Pearson Correlation	0.192	0.036	0.212	1		
SIZE	Pearson Correlation	-0.115	0.082	-.473**	-.570**	1	
PROFIT	Pearson Correlation	.409**	0.150	-0.147	-0.153	0.161	1

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

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

The results indicate a fairly strong positive relationship between Dividend Payout ratio and Asset Utilization ratio and profitability at 0.321 and 0.409 respectively. And the negative correlation coefficient for firm size and Asset Utilization and liquidity is moderately strong at -0.473 and -0.570. As a rule of thumb multicollinearity is established when the correlation coefficient is close to -1 or +1. Therefore the variables coefficient are not close to the two extremes. Then the conclusion is that the variables are not showing any sign of multicollinearity. It is assumed that multicollinearity is absent from the effector variables when conducting parametric tests. This test is carried out, because strong linear relationship between the independent variable disturbs the outcome of the regression analysis. Table 4.3a shows the correlation coefficients of independent variable to be positive related to dependent variable DPR except SIZE with -0.115.

Table 4.3b Results of Multicollinearity Test

Coefficients^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	OER	0.961	1.040
	AUR	0.765	1.308
	LIQ	0.657	1.522
	SIZE	0.538	1.860
	PROFIT	0.939	1.065
a. Dependent Variable: DPR			

Using Tolerance and VIF test decision rule is multicollinearity is not present when Tolerance is >0.2 and VIF is between 1 and 10 and any number between 1 and 3 ideal said to be ideal. So the results so far indicate non multicollinearity between the variables.

4.3.3 Autocorrelation Test

Table 4.4 Results of Autocorrelation Test

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.634 ^a	0.402	0.314	0.18987	2.443

a. Predictors: (Constant), PROFIT, AUR, OER, LIQ, SIZE

b. Dependent Variable: DPR

The problem of autocorrelation happen to a larger extent due to dependencies in the data of variables particularly in time series data where results from previous data have a bearing on the current. When using Durbin – Watson Test there is no autocorrelation problem within P- Values 1.5 and 2.5, therefore, P- Value of 2.443 from Table 4.4 is within the limit though close to upper limit.

4.4. Regression Analysis

Having completed testing the assumptions underlying linear regression, the regression model is now good to be tested. Since the objective of the study is to establish the kind of association between agency costs and dividend policy amongst firms listed on

Nairobi Securities Exchange, the regression analysis will therefore be tested using the following model.

$$DPR = a + \beta_1 (OER) + \beta_2 (AUR) + \beta_3 (LIQ) + \beta_4 (SIZE) + \beta_5 (ROE) + e$$

Table 4.5. Model Summary Result

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.634 ^a	0.402	0.314	0.18987	0.402	4.578	5	34	0.003

a. Predictors: (Constant), PROFIT, AUR, OER, LIQ, SIZE

b. Dependent Variable: DPR

Table 4.5 shows a positive coefficient of correlation (R) of 0.634 and coefficient of determination (R²) of 0.402 which can be translated as 40.2 percent of the total change in the dependent variable DPR is explained by a combination of PROFIT, AUR, OER, LIQ, SIZE and the other remainder of 59.8 percent is attributed to other factors.

The adjusted R² of 0.314 help in explaining R² with observed standard error of the estimate at 0.18987 lower when compared to Table 4.1 DPR standard deviation of 0.22932. Though R² only account for 40.2 change in DPR still good.

In the table 4.6 the relationship of the dependent variable and the independent variables is highlighted. The unstandardized Coefficients (B) show that the predictors' variables

are positively related to response variable DPR while the intercept is negatively related to it.

Table 4.6. Coefficients Result of Variables

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.538	0.525		-1.024	0.313
	OER	0.207	0.141	0.198	1.465	0.152
	AUR	0.208	0.078	0.406	2.680	0.011
	LIQ	0.138	0.094	0.240	1.467	0.152
	SIZE	0.038	0.056	0.124	0.684	0.499
	PROFIT	1.362	0.408	0.457	3.341	0.002

a. Dependent Variable: DPR

$$\text{DPR} = -0.538 + 0.207 (\text{OER}) + 0.208 (\text{AUR}) + 0.138 (\text{LIQ}) + 0.038 (\text{SIZE}) + 1.362 (\text{ROE}) + e$$

The expression above illustrate that a change in DPR is influenced by the operation of OER, AUR, LIQ, SIZE and PROFIT. When OER is increased by one unit and the rest of the variables are held constant DPR increases by 0.207 units. And applying the same to all the other variables in turn, DPR increases by 0.208, 0.138, 0.038 and 1.362 units to one unit increase to AUR, LIQ, SIZE and PROFIT respectively.

Additionally the Beta of standardized coefficients illustrates the association of the independent variables and the dependent variable. The Beta value is highest for PROFIT at 0.457 followed by AUR at 0.406 signifying strong correlation with DPR

unlike the other variables at 0.198, 0.240 and 0.124 for OER, LIQ and SIZE respectively.

AUR and PROFIT are positively correlated to dividend policy (DPR) at P – Values of 0.011 ($0.011 < 0.05$) and 0.002 ($0.002 < 0.05$) respectively and affect significantly dividend policy of firms listed at NSE. On the other hand though OER and LIQ are positively correlated to the DPR, they are not significant to affect dividend policy of NSE firms at P-Value of 0.152 ($0.152 > .05$). SIZE at P – Value of 0.499 ($0.499 > 0.05$) is equally not significantly affecting the dividend policy of NSE firms.

4.5. Testing of the Overall Significance of the Regression

Table 4.7. Overall Significance of Regression Result ANOVA

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.825	5	0.165	4.578	.003 ^b
	Residual	1.226	34	0.036		
	Total	2.051	39			

a. Dependent Variable: DPR

b. Predictors: (Constant), PROFIT, AUR, OER, LIQ, SIZE

The results from Table 4.7 shows that regression is only explained by less than dominant number of variations in DPR. The regression only accounts for a less than dominant number of variations in DPR; 0.825 out of 2.051 sum of squares which accounts for 40.2 percent and the rest of the variations attributed to some external forces

(residual) to the model as seen from Table 4.7. The Residual represents the unexplained variations from the regression line of best fit. It also gives the summary significance of the regression with F- Value of 4.578 with .003 level of significance ($.003 < 0.05$). This translate to the appropriateness of the model, therefore, the regression is significant and the variables linearly related. Therefore we reject the null hypothesis;

H_0 : There is no relationship between agency costs and dividend payout.

$$H_0 = \beta_1 = \beta_2 \dots \beta_5 = 0$$

And accept the alternative hypothesis;

H_1 : There is a significant relationship between agency costs and dividend payout

$$H_1 \neq \beta_1 \neq \beta_2 \dots \beta_5 \neq 0$$

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Introduction

The important findings and analysis of chapter four are presented and conclusions and implications from the findings are highlighted. Furthermore, shortcomings of the study, recommendations and suggestions for onward studies are put forward.

5.2 Summary of findings

The motivation of the study was to find the relationship of agency costs and dividend policy among Nairobi Securities Exchange listed firms. In the study dividend payout ratio was used as proxy for dividend policy which is dependent variable being regressed by operational expense ratio, asset utilization ratio, liquidity, firm size and profitability as agency costs variables which is the independent variable from the year 2007 to 2016. Data for the variables was extracted from the NSE handbooks and companies annual reports as input for regression analysis. The analysis has found that agency costs (OER, AUR, LIQ, SIZE and PROFIT) exert a substantial influence of 40.2% of change in dividend policy as indicated by the reading of R^2 statistics of 0.402 in Table 4.5 and Table 4.7 the model account for 0.725 out of 2.051 about 40.2 percent attributed to a change in the DPR leaving a residual of 59.8 percent attributable to other factors.

Individually only AUR and PROFIT at P – Values of 0.011 ($0.011 < 0.05$) and 0.002 ($0.002 < 0.05$) respectively are found to have significant effect on dividend policy of firms listed at NSE. While OER and LIQ at P-Value of 0.152 ($0.152 > .05$) and SIZE at P – Value of 0.499 ($0.499 > 0.05$) do not have significant effect on dividend policy of NSE listed firms (Table 4.6). Despite this, F- Value of 4.578 with .003 level of

significance ($.003 < 0.05$) was found to be significant enough to conclude that agency costs affect to dividend policy (Table 4.7).

5.3 Conclusion of the study

In conclusion, the study has found that the agency costs have fairly strong impact in the determination of dividend policy among Kenyan listed firm on NSE. The R^2 statistics of 40.2 percent from Table 4.5 fairly explains the changes in the dividend Payout proxy for dividend policy as a result of influence from the agency costs variables (OER, AUR, LIQ, SIZE and PROFIT). However, only AUR and PROFIT are the only variables significant enough at P-Value of 0.011 and 0.002 and standardized coefficients Beta of 0.406 and 0.457 respectively from Table 4.6. However, OER, LIQ and SIZE though positively related, their P- Value were found to be insignificant at 0.152, 0.152 and 0.499 respectively (Table 4.6) therefore not influential in the changes in dividend policy on NSE listed firms.

5.4 Recommendations

The study has used operational expenses ratio, assets utilization ratio, liquidity, firm size and profitability which explains 40.2 percent influence of the agency costs on dividend payout as proxy for dividend policy of firms listed on Nairobi Securities Exchange leaving a residual of 59.8 percent unexplained. The implication therefore, is that there are some factors that also affect dividend policy that were not included in the model. It is therefore, the recommendation of the study that further studies are needed and there is need to broaden the scope to include other factors in an attempt to find the factors that are attributed for the residual.

The study is not conclusive as it does not provide all the answers in explaining changes in dividend policy of NSE listed firms, however it adds to the body of knowledge to the academic fraternity and create basis for onward studies in the same topic or related topics.

5.5 Limitations of the Study

The focus of the research was restricted to NSE listed firms only and a sample of 40 companies for a period of 10 year. In Kenya there are a lot more companies not listed on NSE and this makes the results not to be applied wholesale to explain each and every company on the land. The sample of 40 companies and a period of 10 years is not sufficient enough therefore need for increase.

5.6 Areas for further Study

It is the view of this study that a lot more studies are needed on dividend policy by delineating them to sector or industry to see whether all variables affect dividend policy the same way in all industries.

REFERENCES

- Acholla, S.A., (2009); *Empirical Investigation of the Relationship between Dividend Policy and Agency Costs: The case of the listed Companies in Kenya*
Unpublished MBA research project UoN.
- Adjaoud, F., & Ben-Amir, W. (2010). *Corporate governance and dividend policy: Shareholders protection or expropriation?* Journal of Business, Finance & Accounting, 37, 648–667.
- Agrawal, A., & Jayaraman, N. (1994). *The dividend policies of all equity firms: A direct test of free cash flow theory.* Managerial Decision Economics, 15, 139–148.
- Aggarwal, R., & Zong, S. (2006). *The cash flow-investment relationship: International evidence of limited access to external finance.* Journal of Multinational Financial Management, 6(1), 89 - 104
- Ahmed, H., & Javid, A. (2009). *Dynamics and determinants of dividend policy in Pakistan: Evidence from Karachi stock exchange non-financial listed firms.* International Research Journal of Finance and Economics, 29, 110–125.
- Aivazian, V., Booth, I. and Cleary, S. (2003). *Do Emerging Market Firms Follow Different Dividend policies US Firms?* Journal of Financial Research, 26(3) 371-387
- Allen, F. and Michaely, R., (1995). *Dividend policy*, in R.A. Jarrow, V. Maksimovic and W.T. Ziemba (eds.), *Handbooks in Operations Research and Management Science: Finance 9*, Amsterdam: Elsevier.
- Almeida, Heitor, Murillo Campello, and Michael S. Weisbach, (2004), *The cash flow sensitivity of cash*, Journal of Finance 59, 1777–1804.

- Allen, Franklin, Antonio E. Bernardo, & Ivo Welch, (2000). *A Theory of Dividend Based on Tax Clienteles*. *Journal of Finance*, 55, 2499-2536.
- Allen, Franklin, and Roni Michaely. 2003. *Payout policy*. In *Handbook of the economics of finance*, (eds.) George M. Constantinides, Milton Harris, and René M. Stulz, Volume 1, 337–429. Amsterdam: North-Holland.
- Alli, K.L., Khan, A.Q., Ramirez, G.G., (1993). *Determinants of Corporate Dividend Policy: a Factorial Analysis*. *The Financial Review*, 28 (4), 523-547
- AL- Shubiri, F.N., (2011), *Determinants of Changes Dividend Behavior Policy: Evidence from the Amman Stock Exchange*, *Far East Journal of Psychology and Business*, 4 No 2 Paper 1 August, (1), 1-15
- Al – Kuwari, D., (2009), *Determinants of dividend policy of companies listed on emerging stock exchanges: The case of the Gulf Cooperation Council (GCC) Countries*; *Global Economy and Finance Journal*, Vol. 2, 38-63
- Akhigbe, A., & Whyte, A. M. (2012). *Does the use of stock incentives influence the payout policy of financial institutions?* *The Quarterly Review of Economics and Finance*, 52(1), 63-71.
- Amidu, M., Abor J. (2006). *Determinants of Dividend Payout Ratios in Ghana*. *Journal Risk Finance*, 7, 136-145.
- Anil, K., Kapoor, S. (2008). *Determinants of Dividend Payouts Ratios – a Study of Indian Information Technology Sector*. *International Research Journal Econ*, 15, 1-9.

- Al-Malkawi, H. N. (2005). *Dividend policy of publicly quoted companies in emerging markets: The case of Jordan*. (Unpublished doctoral dissertation). School of Economics and Finance, University of Western Sydney, Sydney.
- Baker, H. K. and Anderson, R. (2010). *corporate governance: a synthesis of theory, research and practice*. John Wiley and Sons, Hoboken, New Jersey.
- Baker, H. K. & G.E. Powell. (1999). *How Corporate Managers View Dividend policy*. Quarterly Journal of Business and Economics. Lincoln, (Spring)
- Bhattacharya, S. (1979). *Imperfect information, dividend policy, and "The Bird in the Hand" Fallacy*. The Bell Journal of Economics, 10(1), 259–270.
- Black, F. and Scholes, M., (1974). *The effects of dividend yield and dividend policy on common stock prices and returns*, Journal of Financial Economics, 1 (1), 1-22.
- Black, Fischer (1976). *The Dividend Puzzle, The Journal of Portfolio Management, Evidence from United States*. The Open Business Journal, 3, 8-13.
- Borg, W.R. & Gall, M.D. (1989). *Educational Research: an Introduction*, 5th ed. White Plains, NY: Longman.
- Brealey, R.A and Myers, S.C. (2003), *Principles of corporate finance*, International edition, New York: McGraw Hill, Boston, MA.
- Brealey, R.A., Myers, S.C. and Allen, F. (2005) *Corporate Finance: 8th Edition*. New York: McGraw-Hill Irwin.
- Bremberger, F., Cambini, C., Gugler, K. and Rondi, L. (2016), *Dividend Policy in Regulated Network Industries: Evidence from EU*. Econ Inq, 54: 408–432.

- Caskey, J. and Hanlon, M., (2005). *Do dividends indicate honesty? The relation between dividends and the quality of earnings, working paper*, University of Michigan.
- Chung, R., Firth, M., & Kim, J.B. (2005). *Earnings management, surplus free cash flow, and external monitoring*. *Journal of Business Research*, 58, 766–776.
- Cheng, Z., Cullinan, C.P., Zhang, J. (2015) *Frees Cash Flow, Growth Opportunities, and Dividends*. *Journal of Applied Bus. Research*; Leranie 30.2
- Collier, P. M., & Agyei-Ampomah, S. (Eds.). (2006). *Management Accounting-Risk and Control Strategy: Paper P3. CIMA Learning Systems Strategic Level 2007*. Elsevier Science & Technology.
- Cramer, D. & Howitt, D. (2004). *The Sage Dictionary of Statistics*. London: SAGE
- DeAngelo, Harry, Linda DeAngelo, and Douglas Skinner. 2009. *Corporate payout policy*. *Foundations and Trends in Finance* 3:2-3, 95–287
- Dickens, R. N., Casey, M., & Newman, J. (2002). *Bank dividend policy: Explanatory factors*. *Journal of Business and Economics*, 41, 3–12.
- Denis, D.J. and Osobov, I., (2008). *Why do firms pay dividends? International evidence on the determinants of dividend policy*, *Journal of Financial Economics*, 89 (1), 62-82
- Doane, D.P., & Seward, L.E. (2011). *Skewness Journal of Statistics*. *Educ*, 19(2), 1-18
- Easterbrook, F.H. (1984). *Two Agency-cost Explanations on Dividends*. *American Economic Review*.

- Faccio, M., Lang, L., & Young, L. (2001). *Dividends and expropriation*. American Economic Review, 91, 54–78.
- Fama, E. F. and French, K. R. (2001). *Disappearing dividends: Changing Firm characteristics or lower propensity to pay?* J. of Financial Economics, 60(1), 3-43
- Fuad, R. A., & Mohd-Saleh, N. (2008). *The effect of free cash flow agency problem on the value relevance of earnings and book value*. Journal of Financial Reporting and Accounting, 6(1), 75–90.
- Gibson C. (2009). *Financial Reporting & Analysis: Using Financial Accounting* Journal of Finance, 43, 1-19.
- Gugler, K., & Yurtoglu, B. (2003). *Corporate governance and dividend pay-out policy in Germany*. European Economic Review, 47, 731–758.
- Gill, A., Biger, N., Pai, C., & Bhutani, S. (2009). *The determinants of capital structure in the service industry: evidence from United States*. Open Bus Journal, 2, 48–53.
- Gill, A., Biger, N., & Tibrewala, R. (2010). *Determinants of Dividend Payout Ratios: Evidence from United States*. The open Business Journal, 3, 8-13.
- Gitman L. J. (1998); *Principles of Managerial Finance*, Addison - Wesley. Mexico City USA.
- Gordon, M.J. (1963). *Dividends, Earnings and Stock Prices*. Review of Economics and Statistics, 41, May, pp.99-105.
- Gujarati, D. N. (1995). *Basic Econometrics* (3rd edition). New York: McGraw-Hill Book Inc.

- Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics*. (5th ed.). Boston, MA: McGraw-Hill/Irwin.
- Heppner, P. P., Kivlighan, D. M., Jr., & Wampold, B. E. (1992). *Research design in counseling*. Pacific Grove, CA: Brooks/Cole.
- Ho, H., 2003. *Dividend Policies in Australia and Japan*. International Advances in Economic Research, 9(2) 91-100
- Jensen, M.C. and Meckling, W.H., (1976). *Theory of the firm: Managerial behavior, agency costs and ownership structure*, Journal of Financial Economics, 3, 305-360.
- Jensen, M.C., (1986). *Agency costs of free cash flow, corporate finance and takeovers*, American Economic Review, 76 (2), 323-329.
- Jensen, G., Solberg, D., & Zorn, T. (1992). *Simultaneous determination of insider ownership, debt, and dividend policies*. Journal of Financial and Quantitative Analysis, 27, 247–263.
- Kania, S. L., & Bacon, F. W. (2005). *What factors motivate the corporate dividend decision?* American Society of Business and Behavioral Sciences E-Journal, 1(1), 95–107.
- Kantarelis, D. (2007). *Theories of the firm*. Inderscience Genève Switzerland
- Kanwal, A., & Kapoor, S. (2008). *Determinants of dividend payout ratios: a study of Indian information technology sector*. International Research Journal of Finance and Economics, 15, 63–71.
- Kanyari, S.A., (2009); *The Influence of the Agency Costs on Dividend Payout policies: The case of the listed Companies in Kenya* Unpublished MBA research project UoN.

- Karanja, J., (1987), '*The dividend practice of publicly quoted companies in Kenya*'
MBA project, University of Nairobi
- Kim, J. (2005). *Blockholders and corporate governance*, Unpublished PhD
Dissertation, Michigan State University.
- Kimoro, J.N., & Kathuo, S.M., (2016), *Factors influencing the choice of capital
structure for Banks listed on NSE: International Journal of Management and
Business Studies*, Vol.6, issue3, 76-81
- Kose, J., and Anzhela, K., (2006). *Payout Policy, Agency Conflicts, and Corporate
Governance* Available at SSRN: <http://ssrn.com/abstract=841064>
- Lease, R.C., John, K. A. Kalay, U. Loewenstein, and O.H. Sarig (2000), *Dividend
Policy: It's Impact on Firm Value*, Harvard Business School Press, Boston,
MA.
- Lintner J, (1962) "Dividends, Earnings, Leverage, Stock Prices and Supply of Capital
to Corporation," *Review of Economics and Statistics*, 44, 243-269.
- Lloyd, W.P., Jahera jr, J.S. & Page, D.E., (1985). *Agency costs and dividend
payout ratios*, *Quarterly Journal of Business and Economics*, 24, 19-29.
- Manos, R., (2002). *Dividend policy and agency theory: Evidence on Indian
firms*, *Working paper*, Department of Economics, Loughborough University.
- McCabe, G. M., & Yook, K. C. (1997). *Free cash flow and the returns to bidders*. *The
Quarterly Review of Economics and Finance*, 37(3), 697–707.
- Mehta, A., (2012), '*An Empirical Analysis of Determinants of Dividend Policy –
Evidence from the UAE Companies*', *Global Review of Accounting
and Finance*, Vol. 3. No.1,18 – 31.
- Michaely, R., Brav, A., Graham, J.R., Harvey, C.R. (2003), "*Dividend Payout in the
21st Century*". National Bureau of Economic Research, Cambridge MA

- Modigliani, F. and Miller, M.H. (1963). *Corporate income taxes and the cost of capital:a correction*. The American Economic Review, 53 (2), 433-443.
- Moh'd, M.A. Perry, L.G. and Rimbey, J.N., (1995). *An investigation of the dynamic relationship between agency theory and dividend policy*, The Financial Review, 30 (2), 367-385
- Myers, S.C., & Malouf, N.S. (1984). *Corporate financing and investment decisions when firms have information that investors do not have*. Journal of Financial Economics, 13(2), 187–221.
- Njuguna, I.M., (2006); *Determinants of Dividend Payout: The case of the listed Companies in Kenya* Unpublished MBA research project UoN.
- Pandey, I. M. (2004); *Financial Management*, Publishers New Delhi.
- Pietersz, G. (2016). *Agency Theory*: <http://moneyterms.co.uk/agency/>
- Razali, N.M., & Wah, Y.B. (2011). *Power Comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors and Anderson-Darling Tests*. Journal of Statistics Modelling and Analytics, 2(1), 21-33
- Rozeff, M.S., (1982). *Growth, beta and agency costs as determinants of dividend payout ratios*, Journal of Financial Research, 5 (3), 249-259.
- Shapiro, S.S., & Wilk, M.B., (1965). *An Analysis of Variance Test for Normality (Complete Samples)*. Biometrika, 52 (3/4), 591-611
- Sharma, V. (2011). *Independent directors and the propensity to pay dividends*. Journal of Corporate Finance, 17, 1001–1015.
- Titman, S. and Wessels, R. (1988). *The determinants of capital structure choice*, The
- Walter, J.E., (1956). *Dividend policies and common stock prices*, Journal of Finance, 11 (1), 29-41.

APPENDICES

Appendix 1.			
Study Population			
No.	Name of Firm	No.	Name of Firm
1	Eaagads Limited	33	Bamburi Cement Company Limited
2	Kakuzi Limited	34	Crown Paints Kenya Limited
3	Kapchorua Tea Company Limited	35	East African Cables Limited
4	Limuru Tea Company Limited	36	East African Portland Cement Company
5	Sasini Tea And Coffee Limited	37	Kenol Kobil Limited
6	Williamson Tea Kenya Limited	38	Kenya Electricity Generating Company (Kengen)
7	Car And General (Kenya) Limited	39	The Kenya Power & Lighting Co. Limited
8	Marshalls (EA) Limited	40	Total Kenya Limited
9	Sameer Africa Limited	41	Umeme Limited
10	Barclays Bank Of Kenya Limited	42	Britam Limited
11	CFC Stanbic Bank	43	CIC Insurance Limited
12	Co-operative Bank Of Kenya	44	Jubilee Holdings Limited
13	Diamond Trust Bank (Kenya) Limited	45	Kenya Reinsurance Corporation Limited
14	Equity Bank Limited	46	Liberty Kenya Holdings Limited
15	Housing Finance Company Limited	47	Pan Africa Insurance Company Limited
16	I & M Holdings Ltd	48	Nairobi Securities Exchange
17	Kenya Commercial Bank Limited	49	Centum Investment Company (ICDCI) Limited
18	National Bank Of Kenya Limited	50	Home Africa
19	NIC Bank Limited	51	KURWITU VENTURES <i>LTD</i>
20	Standard Chartered Bank Kenya Limited	52	Olympia Capital Holdings Limited
21	Atlas evelopment Services	53	Transcentury Limited
22	Deacons enya Ltd	54	Boc Kenya Limited
23	Express Kenya Limited	55	British American Tobacco Kenya Limited
24	Kenya Airways Limited	56	Carbacid Investments Limited
25	Longhorn Kenya Limited	57	East African Breweries Limited
26	Nairobi Business Venture	58	Eveready East Africa Limited
27	Nation Media Group Limited	59	FTG HOLDINGS LTD
28	Scangroup Limited	60	KENYA ORCHARDS <i>LTD</i>
29	Standard Group Limited	61	Mumias Sugar Company Limited
30	TPS Eastern Africa Limited (Serena Hotels)	62	Unga Group Limited
31	Uchumi Supermarket Limited	63	Safaricom
32	ARM Cement Limited		

Appendix 2:											
DIVIDEND PAYOUT RATIO (DPR)											
FIRM NAME	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	AVG
Kakuzi limited	0.00	0.11	0.14	0.16	0.13	0.19	0.45	0.46	0.19	0.21	0.20
Limuru Tea Company Limited	0.35	0.71	0.20	0.71	0.14	0.17	0.71	0.07	0.00	0.00	0.31
Car and General (Kenya)	0.09	0.07	0.08	0.07	0.07	0.07	0.08	0.10	0.16	0.00	0.08
Sameer Africa Limited	0.00	0.00	0.88	0.00	0.57	0.37	0.17	0.00	0.00	0.00	0.20
Barclays Bank of Kenya	0.46	0.49	0.56	0.70	1.01	0.62	0.50	0.65	0.65	0.74	0.64
CFC Stanbic Bank	0.38	0.22	0.00	0.12	0.00	0.07	0.17	0.40	0.45	0.47	0.23
Co-operative Bank Of Kenya	0.15	0.13	0.24	0.31	0.26	0.27	0.23	0.30	0.35	0.30	0.25
Diamond Trust Bank (Kenya)	0.30	0.27	0.24	0.14	0.13	0.12	0.10	0.11	0.10	0.10	0.16
Equity Bank Limited	0.29	0.28	0.35	0.41	0.29	0.38	0.42	0.39	0.44	0.46	0.37
Housing Finance Company	0.39	0.38	0.49	0.42	0.44	0.43	0.41	0.36	0.38	0.19	0.39
Kenya Commercial Bank	0.51	0.51	0.54	0.45	0.45	0.46	0.48	0.38	0.37	0.41	0.46
NIC Bank Limited	0.31	0.14	0.15	0.10	0.09	0.17	0.12	0.14	0.18	0.19	0.16
Standard Chartered Bank	0.84	0.88	0.72	0.73	0.57	0.54	0.55	0.57	0.95	0.77	0.71
Kenya Airways Limited	0.20	0.18	0.00	0.23	0.20	0.23	0.00	0.00	0.00	0.00	0.10
Scangroup Limited	0.60	0.35	0.28	0.27	0.27	0.27	0.15	0.33	0.45	0.45	0.34
Standard Group Limited	0.22	0.31	0.00	0.13	0.15	0.00	0.21	0.19	0.00	0.00	0.12
ARM Cement Limited	0.29	0.25	0.23	0.22	0.17	0.20	0.22	0.20	0.00	0.00	0.18
Bamburi Cement Company	0.61	0.68	0.60	0.61	0.55	0.70	0.94	0.61	0.90	0.83	0.70
Kenol Kobil Limited	0.00	0.42	3.69	0.43	0.45	0.00	0.26	0.27	0.18	0.21	0.59
Kenya Electricity Generating	0.72	0.34	0.53	0.34	0.53	0.47	0.25	0.31	0.12	0.00	0.36
The Kenya Power & Lighting	0.14	0.18	0.20	0.17	0.27	0.12	0.00	0.06	0.13	0.13	0.14
Total Kenya Limited	0.84	0.62	0.62	0.34	0.00	0.00	0.29	0.31	0.30	0.30	0.36
CIC Insurance Limited	0.22	0.16	0.14	0.01	0.33	0.16	0.19	0.24	0.26	1.57	0.33
Jubilee Holdings Limited	0.24	0.23	0.21	0.12	0.15	0.17	0.16	0.16	0.18	0.15	0.18
Kenya Reinsurance	0.33	0.25	0.23	0.14	0.13	0.10	0.15	0.16	0.15	0.17	0.18
Boc Kenya Limited	0.82	0.66	0.86	2.32	0.88	0.50	0.50	0.44	0.68	0.46	0.81
British American Tobacco	0.76	1.00	1.00	0.99	0.98	0.99	0.99	0.92	0.85	0.93	0.94
Carbacid Investments Limited	0.73	0.68	0.66	0.55	0.56	0.52	0.43	0.36	0.45	0.48	0.54
East African Breweries	0.72	0.59	0.61	0.69	0.67	0.65	0.64	0.49	0.53	0.59	0.62
Mumias Sugar Company	0.55	0.51	0.38	0.39	0.40	0.38	0.00	0.00	0.00	0.00	0.26
Unga Group Limited	0.00	0.00	0.00	0.28	0.21	0.27	0.29	0.21	0.19	0.23	0.17
Safaricom	0.33	0.14	0.38	0.53	0.61	0.69	0.70	0.82	0.80	0.80	0.58
TPS Eastern Africa Limited	0.32	0.60	0.35	0.36	0.29	0.36	0.39	1.00	0.00	0.49	0.42
National Bank of Kenya	0.00	0.00	0.14	0.13	0.13	0.14	0.00	0.00	0.00	0.00	0.05
Longhorn Kenya Limited	0.21	0.74	0.50	0.00	0.69	0.54	0.58	0.45	0.21	0.53	0.45
Nation Media Group Limited	0.85	0.19	0.62	0.63	1.04	0.82	0.70	0.30	0.85	1.12	0.71
Crown Paints Kenya Limited	0.42	0.19	0.19	0.22	0.23	1.00	1.00	1.09	1.40	0.32	0.61
East African Cables Limited	0.00	0.86	0.73	0.57	0.70	1.12	0.82	0.54	0.46	0.50	0.63
Pan African Insurance	0.00	0.00	0.34	0.41	0.43	0.50	0.67	0.00	0.00	0.00	0.24
Transcentury Limited	0.00	0.00	0.38	0.24	0.20	0.16	0.15	0.15	0.00	0.00	0.13

Appendix 3:											
OPERATIONAL EXPENSE RATIO (OER)											
FIRM NAME	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	AVG
Kakuzi limited	0.17	0.15	0.16	0.20	0.21	0.26	0.24	0.28	0.26	0.23	0.22
Limuru Tea Company Limited	0.10	0.07	0.04	0.03	0.05	0.04	0.05	0.06	0.06	0.07	0.06
Car and General (Kenya)	0.23	0.31	0.30	0.30	0.20	0.32	0.32	0.30	0.22	0.26	0.28
Sameer Africa Limited	0.18	0.21	0.20	0.19	0.12	0.13	0.10	0.13	0.18	0.40	0.18
Barclays Bank of Kenya	0.59	0.61	0.59	0.54	0.52	0.52	0.56	0.52	0.53	0.53	0.55
CFC Stanbic Bank	0.43	0.64	0.74	0.76	0.73	0.66	0.53	0.52	0.51	0.58	0.61
Co-operative Bank Of Kenya	0.72	0.65	0.68	0.64	0.66	0.60	0.62	0.63	0.59	0.58	0.64
Diamond Trust Bank (Kenya)	0.51	0.50	0.54	0.47	0.55	0.51	0.50	0.49	0.52	0.55	0.51
Equity Bank Limited	0.59	0.60	0.60	0.51	0.50	0.49	0.55	0.54	0.53	0.51	0.54
Housing Finance Company	0.65	0.55	0.45	0.38	0.27	0.21	0.36	0.34	0.32	0.31	0.38
Kenya Commercial Bank	0.65	0.62	0.69	0.63	0.60	0.61	0.60	0.59	0.56	0.58	0.61
NIC Bank Limited	0.56	0.53	0.60	0.47	0.43	0.44	0.46	0.44	0.54	0.62	0.51
Standard Chartered Bank	0.46	0.50	0.41	0.42	0.46	0.41	0.40	0.40	0.45	0.45	0.44
Kenya Airways Limited	0.20	0.18	0.19	0.24	0.21	0.19	0.22	0.22	0.27	0.26	0.22
Scangroup Limited	0.70	0.71	0.72	0.72	0.70	0.84	0.94	0.87	0.93	0.93	0.81
Standard Group Limited	0.45	0.44	0.44	0.47	0.44	0.46	0.48	0.51	0.66	0.54	0.49
ARM Cement Limited	0.10	0.10	0.11	0.10	0.09	0.08	0.08	0.10	0.11	0.15	0.10
Bamburi Cement Company	0.10	0.09	0.05	0.04	0.03	0.04	0.04	0.05	0.06	0.05	0.06
Kenol Kobil Limited	0.03	0.02	0.03	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
Kenya Electricity Generating	0.78	0.78	0.65	0.67	0.60	0.54	0.65	0.68	0.28	0.23	0.59
The Kenya Power & Lighting	0.94	0.91	0.21	0.20	0.24	0.21	0.44	0.36	0.31	0.33	0.42
Total Kenya Limited	0.03	0.02	0.03	0.03	0.04	0.04	0.03	0.03	0.04	0.05	0.03
CIC Insurance Limited	0.26	0.26	0.27	0.26	0.25	0.22	0.22	0.22	0.23	0.30	0.25
Jubilee Holdings Limited	0.19	0.19	0.17	0.13	0.17	0.15	0.14	0.13	0.18	0.17	0.16
Kenya Reinsurance	0.14	0.14	0.12	0.11	0.10	0.10	0.09	0.08	0.08	0.11	0.11
Boc Kenya Limited	0.15	0.23	0.23	0.22	0.22	0.27	0.25	0.25	0.27	0.30	0.24
British American Tobacco	0.12	0.09	0.07	0.04	0.10	0.04	0.04	0.04	0.04	0.04	0.06
Carbacid Investments Limited	0.11	0.14	0.08	0.07	0.12	0.12	0.13	0.13	0.21	0.21	0.13
East African Breweries	0.12	0.14	0.13	0.14	0.15	0.20	0.13	0.15	0.12	0.14	0.14
Mumias Sugar Company	0.12	0.13	0.13	0.12	0.10	0.15	0.24	0.23	0.53	0.34	0.21
Unga Group Limited	0.05	0.06	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.04
Safaricom	0.21	0.24	0.27	0.26	0.27	0.28	0.29	0.22	0.22	0.21	0.25
TPS Eastern Africa Limited	0.39	0.41	0.41	0.35	0.36	0.34	0.38	0.42	0.44	0.40	0.39
National Bank of Kenya	0.64	0.65	0.62	0.57	0.67	0.75	0.75	0.82	0.78	0.74	0.70
Longhorn Kenya Limited	0.28	0.24	0.29	0.31	0.17	0.35	0.23	0.22	0.30	0.24	0.26
Nation Media Group Limited	0.56	0.55	0.15	0.15	0.14	0.13	0.17	0.55	0.58	0.61	0.36
Crown Paints Kenya Limited	0.44	0.40	0.45	0.36	0.55	0.18	0.19	0.22	0.25	0.23	0.33
East African Cables Limited	0.07	0.06	0.08	0.06	0.05	0.05	0.05	0.05	0.11	0.09	0.07
Pan African Insurance	0.15	0.19	0.12	0.12	0.17	0.11	0.11	0.12	0.20	0.23	0.15
Transcentury Limited	0.18	0.14	0.18	0.20	0.19	0.17	0.21	0.25	0.21	0.32	0.21

Appendix 4											
ASSET UTILIZATION RATIO (AUR)											
FIRM NAME	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	AVG
Kakuzi limited	0.63	0.62	0.72	0.70	0.75	0.66	0.60	0.76	0.68	0.64	0.68
Limuru Tea Company Limited	1.12	1.20	1.10	1.10	0.95	0.76	0.63	0.77	0.69	0.78	0.91
Car and General (Kenya)	0.90	1.09	1.35	1.23	1.09	1.00	1.02	1.02	1.01	0.98	1.07
Sameer Africa Limited	1.10	0.98	1.09	1.18	1.20	1.20	1.10	0.98	0.90	0.88	1.06
Barclays Bank of Kenya	0.12	0.14	0.14	0.15	0.16	0.15	0.14	0.13	0.12	0.12	0.14
CFC Stanbic Bank	0.11	0.14	0.15	0.13	0.26	0.35	0.30	0.50	0.54	0.40	0.29
Co-operative Bank Of Kenya	0.13	0.12	0.17	0.10	0.21	0.12	0.12	0.16	0.11	0.12	0.14
Diamond Trust Bank (Kenya)	0.03	0.04	0.05	0.03	0.05	0.04	0.03	0.08	0.07	0.07	0.05
Equity Bank Limited	0.21	0.18	0.16	0.25	0.15	0.21	0.17	0.22	0.23	0.24	0.20
Housing Finance Company	0.18	0.15	0.19	0.17	0.20	0.16	0.14	0.13	0.21	0.22	0.18
Kenya Commercial Bank	1.01	0.70	2.20	0.70	0.50	0.48	0.80	0.68	0.52	0.90	0.85
NIC Bank Limited	0.03	0.07	0.08	0.08	0.04	0.07	0.04	0.07	0.04	0.05	0.06
Standard Chartered Bank	0.07	0.08	0.06	0.08	0.07	0.09	0.11	0.11	0.11	0.11	0.09
Kenya Airways Limited	0.76	0.78	0.96	0.97	1.09	1.39	0.81	0.71	0.61	0.73	0.88
Scangroup Limited	0.66	0.38	0.41	0.29	0.42	0.45	0.30	0.39	0.40	0.36	0.41
Standard Group Limited	1.18	1.05	0.92	0.94	0.90	1.03	1.16	1.17	1.03	1.09	1.05
ARM Cement Limited	0.86	0.73	0.42	0.36	0.40	0.42	0.48	0.37	0.28	0.25	0.46
Bamburi Cement Company	1.07	0.97	0.93	0.84	1.07	0.87	0.79	0.88	1.14	1.13	0.97
Kenol Kobil Limited	2.10	1.55	1.09	1.16	1.34	1.49	2.00	1.32	1.48	2.28	1.58
Kenya Electricity Generating	0.83	0.72	0.67	1.08	0.97	1.03	0.77	0.67	0.54	0.60	0.79
The Kenya Power & Lighting	0.81	0.70	0.91	0.91	0.55	0.54	0.26	0.28	0.29	0.29	0.55
Total Kenya Limited	1.33	1.37	1.51	1.71	1.62	1.43	1.37	1.25	1.03	2.06	1.47
CIC Insurance Limited	0.79	0.73	0.78	0.73	0.64	0.63	0.94	0.81	0.85	0.88	0.78
Jubilee Holdings Limited	0.27	0.29	0.30	0.32	0.28	0.30	0.30	0.33	0.26	0.27	0.29
Kenya Reinsurance	0.32	0.35	0.33	0.37	0.42	0.45	0.42	0.44	0.46	0.44	0.40
Boc Kenya Limited	0.81	0.62	0.85	0.57	0.86	0.75	0.77	0.96	0.71	0.89	0.78
British American Tobacco	1.60	1.69	1.65	1.03	1.46	1.01	1.06	1.58	1.62	1.78	1.45
Carbacid Investments Limited	0.34	0.35	0.40	0.36	0.33	0.46	0.43	0.33	0.27	0.27	0.35
East African Breweries	0.98	0.98	1.96	1.01	0.90	1.02	1.02	1.97	0.99	1.04	1.19
Mumias Sugar Company	0.87	0.85	0.67	0.85	0.68	0.67	0.64	0.75	0.67	0.73	0.74
Unga Group Limited	1.06	1.28	1.09	1.28	1.31	1.50	1.57	1.68	1.77	1.70	1.42
Safaricom	0.84	0.83	0.77	0.81	0.83	0.88	1.03	1.07	1.04	1.23	0.93
TPS Eastern Africa Limited	0.54	0.50	0.58	0.68	0.52	0.60	0.62	0.60	0.59	0.58	0.58
National Bank of Kenya	0.12	0.12	0.11	0.12	0.10	0.11	0.18	0.25	0.15	0.20	0.15
Longhorn Kenya Limited	1.35	1.55	1.48	1.01	1.40	1.17	1.41	1.52	1.21	0.76	1.29
Nation Media Group Limited	1.30	1.25	1.25	1.20	1.28	1.16	1.17	1.12	0.97	0.93	1.16
Crown Paints Kenya Limited	1.35	1.27	1.11	1.67	0.56	1.75	1.75	1.51	1.48	1.45	1.39
East African Cables Limited	1.04	1.29	0.79	0.80	1.00	0.69	0.66	0.65	0.75	0.70	0.84
Pan African Insurance	0.42	0.44	0.44	0.45	0.37	0.48	0.40	0.32	0.27	0.25	0.38
Transcentury Limited	0.62	0.80	0.62	0.60	0.48	0.62	0.50	0.53	0.54	0.43	0.57

Appendix 5:											
LIQUIDITY RATIO											
FIRM NAME	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	AVG
Kakuzi limited	0.78	1.07	1.50	2.07	2.35	1.68	1.99	2.38	2.22	2.46	1.85
Limuru Tea Company Limited	0.56	2.78	1.84	1.99	2.61	1.77	2.11	2.02	2.90	1.72	2.03
Car and General (Kenya)	1.32	1.29	1.30	1.31	1.12	1.16	1.11	1.20	1.06	1.01	1.19
Sameer Africa Limited	2.12	2.25	2.23	2.26	2.02	1.83	2.17	1.52	2.11	1.58	2.01
Barclays Bank of Kenya	1.30	1.56	1.67	1.46	1.50	1.62	1.21	1.26	1.28	1.34	1.42
CFC Stanbic Bank	1.54	1.45	1.58	1.70	1.38	1.47	1.38	1.52	1.38	1.56	1.50
Co-operative Bank Of Kenya	1.09	1.17	1.12	1.14	1.09	1.13	1.09	1.11	1.15	1.20	1.13
Diamond Trust Bank (Kenya)	1.16	1.17	1.15	1.12	1.12	1.16	1.13	1.15	1.14	1.13	1.14
Equity Bank Limited	1.49	1.36	1.57	1.63	1.29	1.35	1.53	1.19	1.37	1.36	1.41
Housing Finance Company	1.38	1.56	1.45	1.74	1.62	1.66	1.97	1.89	1.69	1.63	1.66
Kenya Commercial Bank	1.15	1.08	1.08	1.13	1.15	1.16	1.14	1.15	1.14	1.16	1.13
NIC Bank Limited	0.95	0.92	0.90	0.94	0.94	0.80	0.95	1.04	1.18	1.21	0.98
Standard Chartered Bank	0.90	0.87	1.15	1.14	0.99	1.12	1.20	1.17	1.09	1.12	1.08
Kenya Airways Limited	1.39	1.52	0.91	0.87	1.06	0.92	0.56	0.46	0.51	0.40	0.86
Scangroup Limited	1.41	2.13	2.07	1.68	2.05	2.15	2.46	2.46	2.16	2.19	2.08
Standard Group Limited	1.33	1.37	1.27	1.32	1.08	1.12	1.16	1.22	0.95	1.17	1.20
ARM Cement Limited	0.98	1.02	0.39	1.32	0.84	1.22	0.95	0.47	0.38	0.59	0.82
Bamburi Cement Company	2.20	1.84	1.58	1.72	2.12	2.15	1.58	2.30	2.36	2.40	2.03
Kenol Kobil Limited	1.30	1.30	1.30	1.38	1.22	0.97	0.93	0.95	1.24	1.26	1.19
Kenya Electricity Generating	1.36	1.34	2.17	2.71	4.74	1.49	1.42	1.10	0.10	1.20	1.76
The Kenya Power & Lighting	1.07	1.12	1.15	1.05	1.16	0.90	0.97	1.03	1.64	0.98	1.11
Total Kenya Limited	1.26	1.24	1.12	1.38	1.70	1.63	1.28	1.49	1.53	1.65	1.43
CIC Insurance Limited	1.29	1.53	1.40	1.66	1.93	1.64	1.75	1.64	1.46	1.45	1.58
Jubilee Holdings Limited	1.14	1.19	1.19	1.22	1.31	1.23	1.28	1.28	1.33	1.11	1.23
Kenya Reinsurance	1.54	1.41	2.54	1.59	2.42	2.42	2.50	2.64	2.49	2.34	2.19
Boc Kenya Limited	2.14	2.08	2.24	2.48	1.84	2.08	2.23	2.14	2.06	2.08	2.14
British American Tobacco	1.13	1.35	1.98	1.17	1.31	1.18	1.26	1.25	1.45	1.41	1.35
Carbacid Investments Limited	1.24	1.42	1.06	1.16	1.77	2.13	2.02	2.10	2.26	2.42	1.76
East African Breweries	2.21	1.74	1.69	1.49	1.05	1.80	0.70	0.72	1.02	1.77	1.42
Mumias Sugar Company	2.28	1.35	1.36	2.00	2.20	1.26	1.84	1.41	1.19	0.18	1.51
Unga Group Limited	1.57	1.92	1.84	1.54	2.52	1.91	1.43	2.27	2.27	2.30	1.96
Safaricom	0.77	0.51	0.49	0.67	0.64	0.56	0.69	0.74	0.82	0.71	0.66
TPS Eastern Africa Limited	1.05	1.23	1.54	1.41	1.50	0.89	0.87	1.80	1.04	1.64	1.30
National Bank of Kenya	1.15	1.13	1.17	1.15	1.13	0.99	1.85	0.87	0.84	0.93	1.12
Longhorn Kenya Limited	2.15	2.51	2.04	1.90	1.77	1.12	1.62	1.75	1.50	1.65	1.80
Nation Media Group Limited	1.88	1.75	2.13	1.99	2.21	2.15	2.13	2.07	2.10	2.07	2.05
Crown Paints Kenya Limited	1.52	1.44	1.44	1.69	1.66	1.54	1.68	1.53	1.81	1.18	1.55
East African Cables Limited	1.53	1.66	1.56	1.68	1.36	1.28	1.15	1.17	0.98	1.05	1.34
Pan African Insurance	1.21	1.24	1.21	1.21	1.21	1.17	1.19	1.18	1.16	1.03	1.18
Transcentury Limited	1.53	1.75	1.80	1.59	1.72	1.28	1.49	1.59	1.63	1.50	1.59

Appendix 6:											
FIRM SIZE											
FIRM NAME	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	AVG
Kakuzi limited	6.43	6.46	6.46	6.51	6.58	6.55	6.57	6.59	6.65	6.70	6.55
Limuru Tea Company Limited	5.55	5.63	5.36	5.63	5.72	5.51	6.40	5.96	6.37	6.32	5.85
Car and General (Kenya)	6.31	6.44	6.51	6.59	6.75	6.76	6.84	6.91	6.95	6.99	6.70
Sameer Africa Limited	6.50	6.49	6.48	6.45	6.49	6.53	6.56	6.59	6.57	6.52	6.52
Barclays Bank of Kenya	8.20	8.23	8.22	8.24	8.22	8.27	8.32	8.35	8.38	8.41	8.28
CFC Stanbic Bank	7.64	8.05	8.11	8.15	8.18	8.16	8.26	8.23	8.30	8.33	8.14
Co-operative Bank Of Kenya	7.81	7.92	8.04	8.19	8.23	8.30	8.36	8.46	8.53	8.54	8.24
Diamond Trust Bank (Kenya)	7.56	7.75	7.82	7.92	8.03	8.13	8.22	8.33	8.43	8.52	8.07
Equity Bank Limited	7.72	7.90	8.00	8.16	8.29	8.39	8.44	8.54	8.63	8.68	8.27
Housing Finance Company	7.02	7.16	7.26	7.47	7.50	7.61	7.68	7.76	7.86	7.86	7.52
Kenya Commercial Bank	8.08	8.28	8.29	8.40	8.52	8.57	8.59	8.69	8.75	8.77	8.49
NIC Bank Limited	7.50	7.63	7.68	7.77	7.90	8.03	8.08	8.16	8.22	8.23	7.92
Standard Chartered Bank	7.96	8.00	8.09	8.15	8.21	8.29	8.34	8.35	8.37	8.40	8.22
Kenya Airways Limited	7.89	7.89	7.87	7.86	7.90	7.89	8.09	8.17	8.26	8.20	8.00
Scangroup Limited	6.24	6.58	6.59	6.90	6.93	6.94	7.11	7.12	7.10	7.13	6.86
Standard Group Limited	6.34	6.43	6.48	6.52	6.55	6.54	6.62	6.61	6.64	6.64	6.54
ARM Cement Limited	6.65	6.80	7.08	7.22	7.31	7.43	7.47	7.57	7.72	7.71	7.30
Bamburi Cement Company	7.32	7.45	7.51	7.52	7.53	7.63	7.63	7.61	7.54	7.53	7.53
Kenol Kobil Limited	7.12	7.44	7.50	7.51	7.66	7.51	7.45	7.38	7.24	7.38	7.42
Kenya Electricity Generating	8.01	8.03	8.04	8.16	8.21	8.21	8.28	8.40	8.53	8.56	8.24
The Kenya Power & Lighting	7.68	7.78	7.85	7.90	8.13	8.25	8.27	8.34	8.44	8.47	8.11
Total Kenya Limited	7.10	7.16	7.50	7.48	7.55	7.52	7.60	7.51	7.53	7.56	7.45
CIC Insurance Limited	6.39	6.48	6.54	6.87	7.05	7.15	7.23	7.37	7.40	7.43	6.99
Jubilee Holdings Limited	7.25	7.31	7.38	7.49	7.58	7.67	7.79	7.87	7.92	7.96	7.62
Kenya Reinsurance	7.11	7.14	7.18	7.24	7.28	7.36	7.44	7.51	7.56	7.59	7.34
Boc Kenya Limited	6.27	6.31	6.30	6.31	6.26	6.30	6.42	6.36	6.37	6.35	6.32
British American Tobacco	6.97	7.01	7.03	7.05	7.14	7.18	7.23	7.26	7.27	7.27	7.14
Carbacid Investments Limited	6.04	5.96	6.08	6.17	6.24	6.30	6.34	6.40	6.47	6.49	6.25
East African Breweries	7.42	7.52	7.56	7.58	7.70	7.73	7.76	7.80	7.81	7.79	7.67
Mumias Sugar Company	7.08	7.15	7.24	7.26	7.37	7.44	7.43	7.37	7.31	7.43	7.31
Unga Group Limited	6.57	6.68	6.75	6.70	6.76	6.81	6.91	6.90	6.94	6.96	6.80
Safaricom	7.75	7.87	7.96	8.02	8.06	8.09	8.08	8.13	8.20	8.20	8.04
TPS Eastern Africa Limited	6.83	6.81	6.84	7.08	7.12	7.13	7.21	7.20	7.20	7.23	7.07
National Bank of Kenya	7.53	7.63	7.71	7.78	7.84	7.83	7.97	8.09	8.10	8.06	7.85
Longhorn Kenya Limited	6.04	5.62	5.63	5.72	5.85	5.82	5.84	5.87	6.27	6.27	5.89
Nation Media Group Limited	5.57	5.95	6.15	6.29	6.39	6.40	6.47	6.59	6.66	6.70	6.32
Crown Paints Kenya Limited	5.57	5.95	6.15	6.29	6.39	6.40	6.47	6.59	6.66	6.70	6.32
East African Cables Limited	6.51	6.48	6.55	6.65	6.70	6.80	6.84	6.90	6.92	6.88	6.72
Pan African Insurance	6.78	6.83	6.89	7.03	7.06	7.22	7.33	7.39	7.43	7.45	7.14
Transcentury Limited	6.87	6.91	6.94	7.05	7.35	7.34	7.38	7.29	7.34	7.28	7.17

Appendix 7:											
PROFITABILITY											
FIRM NAME	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	AVG
Kakuzi limited	0.21	0.13	0.21	0.18	0.20	0.14	0.06	0.05	0.16	0.20	0.15
Limuru Tea Company Limited	0.07	0.23	0.48	0.63	0.40	0.61	0.16	0.01	0.02	-0.13	0.25
Car and General (Kenya)	0.20	0.19	0.15	0.17	0.19	0.12	0.13	0.10	0.03	0.04	0.13
Sameer Africa Limited	0.06	0.07	0.07	0.03	0.04	0.08	0.15	-0.03	-0.01	-0.36	0.01
Barclays Bank of Kenya	0.28	0.27	0.25	0.34	0.28	0.30	0.24	0.22	0.21	0.17	0.26
CFC Stanbic Bank	0.15	0.04	0.03	0.06	0.08	0.11	0.16	0.15	0.13	0.11	0.10
Co-operative Bank Of Kenya	0.24	0.17	0.18	0.22	0.26	0.26	0.25	0.18	0.24	0.21	0.22
Diamond Trust Bank (Kenya)	0.14	0.16	0.17	0.24	0.23	0.22	0.22	0.18	0.15	0.16	0.19
Equity Bank Limited	0.13	0.20	0.18	0.26	0.30	0.28	0.27	0.26	0.24	0.20	0.23
Housing Finance Company	0.05	0.04	0.06	0.09	0.13	0.14	0.17	0.16	0.12	0.09	0.11
Kenya Commercial Bank	0.23	0.20	0.18	0.18	0.25	0.22	0.23	0.22	0.24	0.20	0.22
NIC Bank Limited	0.16	0.19	0.16	0.22	0.26	0.20	0.18	0.18	0.17	0.14	0.19
Standard Chartered Bank	0.32	0.28	0.34	0.26	0.28	0.26	0.26	0.26	0.15	0.20	0.26
Kenya Airways Limited	0.19	0.15	-0.24	0.10	0.15	0.07	-0.25	0.12	0.72	0.73	0.17
Scangroup Limited	0.40	0.15	0.17	0.18	0.24	0.18	0.10	0.07	0.06	0.05	0.16
Standard Group Limited	0.37	0.39	0.27	0.23	0.10	0.11	0.10	0.11	-0.15	0.10	0.16
ARM Cement Limited	0.24	0.24	0.16	0.22	0.19	0.18	0.17	0.16	-0.17	-0.10	0.13
Bamburi Cement Company	0.25	0.21	0.33	0.25	0.27	0.17	0.13	0.15	0.22	0.22	0.22
Kenol Kobil Limited	0.12	0.11	0.13	0.17	0.28	-0.97	0.08	0.15	0.24	0.24	0.06
Kenya Electricity Generating	0.04	0.07	0.03	0.05	0.03	0.04	0.07	0.04	0.08	0.04	0.05
The Kenya Power & Lighting	0.08	0.07	0.12	0.13	0.11	0.11	0.07	0.12	0.13	0.12	0.11
Total Kenya Limited	0.11	0.14	0.05	0.10	-0.01	-0.01	0.09	0.09	0.09	0.12	0.08
CIC Insurance Limited	0.22	0.23	0.24	0.19	0.14	0.21	0.17	0.15	0.15	0.03	0.17
Jubilee Holdings Limited	0.17	0.25	0.27	0.36	0.31	0.28	0.20	0.20	0.16	0.18	0.24
Kenya Reinsurance	0.12	0.19	0.15	0.15	0.17	0.20	0.16	0.16	0.16	0.14	0.16
Boc Kenya Limited	0.19	0.14	0.10	0.05	0.11	0.14	0.10	0.13	0.09	0.07	0.11
British American Tobacco	0.30	0.25	0.22	0.25	0.28	0.26	0.32	0.32	0.36	0.28	0.28
Carbacid Investments Limited	0.17	0.16	0.22	0.24	0.21	0.24	0.25	0.23	0.16	0.14	0.20
East African Breweries	0.26	0.23	0.27	0.27	0.32	0.35	0.26	0.25	0.28	0.30	0.28
Mumias Sugar Company	0.17	0.13	0.16	0.14	0.13	0.13	-0.12	-0.25	-0.53	0.23	0.02
Unga Group Limited	0.06	0.13	0.06	0.07	0.12	0.09	0.06	0.08	0.08	0.09	0.08
Safaricom	0.37	0.32	0.21	0.24	0.20	0.18	0.22	0.25	0.31	0.33	0.26
TPS Eastern Africa Limited	0.11	0.06	0.09	0.07	0.08	0.06	0.05	0.02	-0.03	0.02	0.05
National Bank of Kenya	0.15	0.20	0.19	0.20	0.15	0.08	0.11	0.07	-0.19	0.01	0.10
Longhorn Kenya Limited	0.18	0.26	0.07	0.07	0.32	-0.08	0.24	0.22	0.24	0.14	0.17
Nation Media Group Limited	0.29	0.30	0.24	0.29	0.20	0.35	0.31	0.28	0.25	0.19	0.27
Crown Paints Kenya Limited	0.10	0.04	0.10	0.10	0.12	0.11	0.16	0.12	0.13	0.06	0.10
East African Cables Limited	0.21	0.40	0.20	0.10	0.17	0.24	0.17	0.14	-0.30	0.08	0.14
Pan African Insurance	0.12	-0.08	0.10	0.32	0.23	0.25	0.37	0.23	0.01	0.02	0.16
Transcentury Limited	0.25	0.20	0.14	0.47	0.14	0.21	0.15	-0.56	-0.51	-0.22	0.03