# EFFECT OF WORKING CAPITAL MANAGEMENT ON DIVIDEND PAYOUT OF ENERGY AND PETROLEUMFIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

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# DECLARATION

I, the undersigned, hereby swear that this is my own original work, and that it has not been submitted for review to any other organization or university but the University of Nairobi.

Signed: _____Date:___20th November, 2022_____

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**D61/87892/2016**

This research project has been submitted for examination with my approval as the University Supervisor.

Signed: _____Date: ___21st November, 2022_____

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# ACKNOWLEDGEMENT

# DEDICATION

This research project is dedicated to my family who inspire me greatly to reach for the stars and without whom I would not have scaled the heights that I have

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# LIST OF ABBREVIATIONS

**ADF**            Augmented Dickey Fuller

**ANOVA**       Analysis of Variance

**CCC**            Cash Conversion Cycle

**CMA**           Capital Markets Authority

**DIO**            Days Inventory Outstanding

**DPR**            Dividend Payout Ratio

**DPS**            Dividend Per Share

**EPS**            Earnings Per Share

**FCF**            Free Cash Flow

**NSE**            Nairobi Securities Exchange

**VIF**            Variance Inflation Factors

**WCM**          Working Capital Management

# ABSTRACT

The art of balancing firm working capital and dividend payments often dictates the success or failure of a business depending on how well disposable resources are managed and on how prudent a firm is when it comes to handling operational issues. As a result of this, the majority of companies have focused a lot of their energy, time, and resources on identifying suboptimal operating levels. At these levels, investment quality is not harmed and financial resources are not being held in fixed assets for no good reason. The unfavorable effects of both overinvesting and underinvesting in working capital have encouraged research on the most effective policy for managing working capital. The main intention of this study was to examine WCM effect on dividend payout of listed energy and petroleum firms in Kenya. The trade-off theory, the Keynesian liquidity preference theory, and the free cash flow theory were adopted to anchor the study. A descriptive research design was utilized in this research. The target population was the 4 listed energy and petroleum firms in Kenya. Secondary data was gotten from the CMA and specific listed energy and petroleumfirms annual financial statements for a 10year period (2012 to 2021). Upon collection of the data, inferential as well as descriptive statistics generated included frequencies and percentages and simple and multiple linear regression respectively. The regression results produced a 0.311 R square which implies that 31.1% of the changes in dividend pay-out among listed energy and petroleum firms can be described by the six selected variables for this research. The overall model was found to be statistically significant as exhibited by a 0.043 p value that was below 0.05. The study further revealed that individually, DIO, DSO and DPO do not have a significant impact on dividend payout of energy and petroleum firms listed at the NSE ($\beta=0.081$, $p=0.232$); ($\beta=0.-101$, $p=0.133$); ($\beta=-0.026$, $p=0.822$). Both firm size and profitability positively affected dividend payout as shown by ($\beta=0.261$, $p=0.000$) and ($\beta=0.214$, $p=0.000$) respectively. Financial leverage exhibited a negative and significant dividend payout influence as shown by ($\beta=-0.202$, $p=0.008$). The research recommends management of listed energy and petroleum firms ought to focus on enhancing their asset base and their profitability as this will enhance dividend payout. The study further recommends the need to for listed energy and petroleum firms to set debt limits as high debt levels might have a negative impact on dividend payout. The research recommends the necessity for further researchers to focus on other dividend payout determinants.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the Study

The literature on corporate finance has included discussions on a variety of variables that affects dividend policy of a firm such as leverage, size and age of a firm, ownership structures among others(Al-Najjar, 2017). Working capital management (WCM) is an important issue that has gotten less attention in the literature about the variables that impact dividend distributions (Yakubu, Alhassan &Fuseini, 2017). Profits and dividends can be increased significantly if working capital is managed effectively (Beneish, 2017). In their contributions, Ahmed and Javad (2009) acknowledged a connection between a company's WCM and the amount of dividends it pays out. According to WCM, successful businesses have a surplus of cash after covering their fixed expenses, from which they may distribute dividends to their owners.

The trade-off theory, the Keynesian liquidity preference theory, and the free cash flow theory are the three primary theories that serve as the foundation for this research. Myers' (1984) trade-off theory serves as the primary theoretical framework for this investigation since it was crucial in the development of WCM. In accordance with the theory's tenets, firms must find a middle ground between the benefits of dividend distributions and the drawbacks of illiquidity. Deterioration in a company's liquidity might be caused by the payment of dividends; hence, this argument points to a detrimental connection between the variables under investigation. According to Keynes's liquidity preference theory, an efficient WCM would lead to more stable economic cycles, increasing profits and making it possible to increase dividend

payments. When a company has a lot of free cash flow but no good investment prospects, according to Jensen's (1986) free cash flow theory, management is more likely to squander money on wasteful expenditure and duplicate overhead.

Energy and petroleum firms with a listing at the NSE are important in growth and development of the Kenyan economy since they enable creation of employment opportunities, increasing the Gross Domestic Product (GDP) and proceeds from foreign exchange for the major period post-independence (Chahenza, 2017). Energy and petroleum listed firms and other listed firms have faced a myriad of issues in the recent past that has brought about the debate on WCM among these firms.This context has also been chosen because some energy and petroleumfirms at the NSE have not been paying dividends and therefore offers a good context to investigate whether WCM can explain the tendency.

### 1.1.1 Working Capital Management

As described by Adeniji (2008), working capital management is the process by which a firm allocates its liquidity to satisfy its operational needs on a day-to-day basis. Working capital is the gap between a bank or other financial institution's short-term assets and its short-term commitments. The term working capital refers to the money a company has on hand to use toward producing goods or offering services (Akinsulire, 2008). According to Finkler (2010), working capital managementis the efficient administration of a firm's short-term assets and liabilities. In the context of accounting, current assets and current liabilities refer to assets and obligations that may be used or converted to cash within a year.

The ability of an organization to perform its operational tasks is directly proportionate to the judgments it makes regarding the proper levels of both its current assets and its

liabilities (Harris, 2005). Businesses that are thriving work hard to achieve the ideal combination of income and invested capital in their finances. Holding too little or too much inventory may prevent a company from fulfilling the requirements of its customers in a satisfactory manner. This highlights the need of ensuring a sufficient level of working capital is available to keep profits where they need to be. These assertions show that WCM is crucial to business success and has a major influence on the effectiveness of operations both now and in the future (Akoto, Awunyo&Angwor, 2013).

In operationalization of WCM choices, the Cash Conversion Cycle (CCC) is often utilized. CCC refers to the time it takes to turn an investment in input resources into cash from credit sales, less the time it takes to collect payment for products or services sold. It is the point in the business cycle at when the firm's resources are committed to an activity (Deloof, 2013). According to the results of their liquidity analysis, businesses can be classified as either aggressive, which prioritizes working capital investment and financing policies with high risk and high return, moderate, which prioritizes matching or cautious, with lower risk and return, or in between, which prioritizes a balance between the two extremes(Weinraub & Visscher, 2018). Aggressive enterprises often use working capital investment and financing strategies with a high risk/reward profile (Beneish, 2017). In this study, CCC metrics of Days Inventory Outstanding (DIO), Days Sales Outstanding (DSO), and Days Payable Outstanding (DPO) were used as measures of WCM.

## 1.1.2 Dividend Payout

Fumey and Doku (2013) define dividend payout as the proportion of a company's profit distributed to common shareholders as dividends. Distribution of dividends may

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be periodic or ongoing. According to Brockington (2013), the dividend payout is the amount of money distributed as dividends to shareholders out of the company's net income. Dividend payout is the ratio of dividend per share (DPS) to earnings per share (EPS). According to Petit (1972), a dividend payout is the distribution of a portion of a company's earnings to its shareholders. The ideal dividend payment permits the company to optimize both its present dividend payments and its future growth into an entity that will push up the stock price.

The majority of companies that pay dividends do so in the form of cash distributions (Al-Najjar, 2017). In order for a company to be eligible to pay this kind of dividend, the company must have sufficient cash on hand to pay dividends after they have been announced. If the corporation does not have enough cash on hand, it may borrow money in order to make the dividend payments. After dividends have been declared and paid, the overall assets and net worth of a commercial organization will, in the long term, drop as a result of the dividends that have been distributed. The ultimate effect of dividends is a reduction in the firm's reserve as well as cash accounts. When dividends are paid out to shareholders, the market price of the company's stock often declines over time(Bitrus, 2011).

When it comes to operationalization, dividend payout may be quantified in terms of the dividend yield, dividends cover,or payout ratio. All three of these metrics are interrelated. The proportion of a shareholder's overall return that is attributable to dividend payments alone is known as the dividend yield. The amount of a company's dividend payment may be determined by taking the dividend paid out on each share and dividing that number by the profits paid out on each share. Indicative of the dividend payment's steadiness in the face of a drop in profits, dividend cover is

determined by dividing the company's earnings per share by the dividend paid per share. This calculation can be done to establish the dividend cover (Menamin, 2010). Dividend payout was calculated as a ratio of DPS to EPS in the current study.

### 1.1.3 Working Capital Management and Dividend Payout

Myers' (1984) trade-off hypothesis suggests that in order for businesses to maximize profits, they must find a middle ground between the benefits of dividend payments and the risks of illiquidity. Deterioration in a company's liquidity might be caused by the payment of dividends; hence, this argument points to a detrimental connection between the variables under investigation. It might be more detrimental to a company if they attempt to increase their earnings by decreasing their degree of liquidity (Shin &Soenen, 1998). The trade-off model explains how a company chooses the amount of cash on hand that is most suitable for its operations by analyzing the marginal costs and benefits associated with keeping that amount of money on hand.

Keynes (1936) formulated liquidity preference hypothesis. According to this school of thought, investors will demand a higher premium for investments with a longer time to maturity and will favor liquid over illiquid assets. This theory assumes that all other factors will remain the same. The convenience of retaining cash is referred to as liquidity. At any particular point in time, a person or company may hold onto money for a variety of reasons. Even if this theory does not directly address the link between working capital management and dividend payouts, it is plausible to assume that a firm with adequate WCM is more likely to distribute a larger share of its earnings to shareholders(Bitrus, 2011).

According to Jensen's (1986) free cash flow theory, when there is a positive FCF, the agency conflict between shareholders and management becomes more severe. The

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issue arises due to the fact that there is no motivation for management to approach the capital markets in order to obtain money when the company has a cash surplus. In contrast to the restrictions imposed by capital providers if the funds had been raised on the capital market, the company's management is now free to make any spending and investment decisions they see fit. According to this theory, there should be an inverse connection between WCM and dividend payout.

**1.1.4 Energy and Petroleum Firms Listed at the Nairobi Securities Exchange**

The NSE is the regulatory body in Kenya for the securities market and is the only venue where Kenyan firms may be listed. Since its founding in 1954, this institution has expanded to become East and Central Africa's preeminent stock exchange. Shares (equity) and bonds (debt and leverage instruments) are the types of securities that are exchanged the most often. Both types of instruments fall under the category of financial instruments. The organization encourages both savings and investment by facilitating the connection between lenders and borrowers. Currently, the company has a total of sixty-three companies listed with it, and these companies are represented throughout a variety of business areas (NSE, 2021). Out of the 63, a total of 4are in the energy and petroleum sector and they will be the focus of the current study (Appendix II).

One of the requirementto determine whether companies are eligible for listing is whether or not they adhere to a dividend policy that is consistent and whether or not their total debt is more than 400% of their company value, with a debt ratio of 4:1 (NSE manual, 2013). Companies that have aspirations of being listed on the market are required, according to the Gazettement of Legal Notice No. 60 (2002), to provide an explanation of their dividend policy. This is one of the conditions for listing at the

exchange. The majority of publicly traded firms in Kenya distribute dividends twice a year. There are no regulatory regulations that promote or compel businesses to use a certain split payment plan. However, dividend payout is subject to several legal constraints, such as the prohibition on dividend payments made from the company's capital before liquidation has begun.

## 1.2 Research Problem

The art of balancing firm working capital and dividend payments often dictates the success or failure of a business depending on how well disposable resources are managed and on how prudent a firm is when it comes to handling operational issues (Mathuva, 2010). As a result of this, the majority of companies have focused a lot of their energy, time, and resources on identifying suboptimal operating levels. At these levels, investment quality is not harmed and financial resources are not being held in fixed assets for no good reason (Kieschnick et al., 2016). The unfavorable effects of both overinvesting and underinvesting in working capital have encouraged research on the most effective policy for managing working capital. An effective strategy for managing working capital enables businesses to cut their operating expenses to the absolute minimum while at the same time realizing significant gains in terms of their operational efficiency. Efficient WCM leads to availability of free cash flows which then act as a catalyst to dividend payout (Beneish, 2017).

Energy and petroleum firms trading at the NSE have an important part to play in achieving the goals of their respective economies and fostering economic progress. The expansion of an economy will be stunted if it does not have a robust energy and petroleum sector to support it. Having enough liquidity is crucial for firms in the industry since it allows for cost savings and a more effective capital mix for

investment opportunities. Firms will experience growth in benefits like these if they have optimal liquidity (Ndirangu, 2021). According to a research by Cytonn (2019), more than half of the companies that have a listing have either eliminated dividends entirely for their shareholders or cut the amount of money that is paid out for each share that is owned. There is a great deal of information that is contradictory on the reasons why several companies on the NSE chose not to declare dividends or award incentives to capital owners. The current study seeks to establish if WCM can explain the dividend payout trend among NSE listed energy and petroleum firms.

The empirical research conducted throughout the world has shown conflicting findings on WCM and dividend payout. Using companies that are listed on the London Stock Exchange, Xu, Gan, Li, and Wang (2021) investigate the influences of a company's profits as well as its working capital on the dividend distribution. The findings indicate that there is a link in the form of an inverted U-shape between a company's working capital and the dividends it pays out. Yakubu (2021) investigates how the dividend policies of publicly listed energy and petroleum firms in Ghana are affected by the efficiency with which their working capital is managed. The data shows a positive correlation between working capital management and dividend payouts, with inventory days outstanding having a major effect on payouts. Bhatia, Sivasankaran, Banerjee, and Chattopadhyay (2021) investigate the influence that working capital efficiency has on dividend payouts made by listed energy and petroleum companies in India. Results indicate a significant negative correlation between working capital efficiency and dividend payout ratios across the firms in the sample.

Locally, Ikunyua (2020) conducted research on a local level to investigate how WCM affects the dividend distribution of NSE-listed manufacturing companies. In the conclusion, the study concluded that dividend distribution among NSE-listed manufacturing businesses was not significantly affected by WCM as measured by the current ratio. Karimi (2020) focused on the effect of WCM on dividend distribution among NSE-listed firms. The findings indicated that WCM had a beneficial impact, although one that was not statistically significant, on dividend payout. Akenga and Olang (2017) made an effort to determine the impact that a company's working capital had on the amount of dividends that were paid out by companies that were listed on the NSE. The results of the study demonstrated that efficient cash management positively affects dividend payments. It was also observed that the management of inventories and accounts receivable had a beneficial impact on the choices about dividend payouts.

Although previous research has looked into the WCM impact on dividend payout, there are conceptual, contextual, as well as methodological gaps. Conceptually, it is possible that the disparities in results are due to the fact that WCM and dividend payout have each been conceptually operationalized in a unique manner by the prior researchers. Contextually, existing research on WCM and dividend payout has, for the most part, been conducted in developed markets, such as those in the western hemisphere and the Asia-Pacific region. Due to their different social and economic environments, emerging nations' findings may not be generalized to developing ones. In terms of methodology, the majority of the earlier research only took into account a few years (usually 5), which may not be enough to evaluate how WCM influences dividend payout. Based on these gaps and the desire of businesses to increase their dividend payout, this study sought to address the following question: how does the

management of working capital affect the dividend payout of energy and petroleum firms traded on the Nairobi Securities Exchange?

## 1.3 Research Objective

Theobjective of this research was to determine the effect of working capital management on dividend payout ofenergy and petroleum firms listed at the Nairobi Securities Exchange.

## 1.4 Value of the Study

The conclusions will aid investors as well as practitioners understand the relationship between the two variables. The findings will also help investors and practitioners better grasp the connection between a well-rounded management team, solid operations, vigilant WCM management, and extensive public confidence in the firm and their ability to maximize dividend distribution.

Governments, stock exchanges, central banks, and economic agencies are all examples of policymakers; they may use the findings of this study to inform their decisions on WCM and dividend distribution. It is possible that the authorities that make policy may utilize the study's suggestions as a basis for developing efficient WCM methods to increase dividend payment.

In conclusion, the research will provide novel insights to ongoing theoretical discussions of the tradeoff theory, the Keynesian liquidity preference theory, and the free cash flow theory. The findings of this study are significant because they contribute to the existing empirical literature on WCM and dividend payment. On the basis of the recommendations and proposals made for more study, other investigations could potentially be conducted.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

The theoretical underpinnings of WCM and dividend payment are explored in depth in this chapter. In addition, it summarizes prior empirical research, points out knowledge gaps, and concludes with a conceptual framework and hypotheses that propose a likely causal link between the investigated variables.

## 2.2 Theoretical Framework

This section covers the theories upon which the research of working capital management and dividend payout is based. The research examined trade-off theory, Keynesian liquidity preference theory and free cash flow theory.

### 2.2.1 Tradeoff Theory

Myers' (1984) trade-off theory serves as the primary theoretical framework for this investigation since it was crucial in the development of WCM. The theory proposes that for a firm to thrive, it must strike a balance between the rewards of dividend payments and the dangers of being too scarce on the market. Deterioration in a company's liquidity might be caused by the payment of dividends; hence, this argument points to a detrimental connection between the variables under investigation. It might be more detrimental to a company if they attempt to increase their earnings by decreasing their degree of liquidity (Shin &Soenen, 1998). The trade-off model explains how a company chooses the amount of cash on hand that is most suitable for its operations by analyzing the marginal costs and benefits associated with keeping that amount of money on hand. As a consequence of the low returns generated by a disproportionate allocation of resources to these assets, a

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company with a high percentage of current assets as an asset class should expect a low return on investment.

Critics of the tradeoff theory point to its flawed static modeling and the theory's assumption that earnings and working capital are positively correlated (Awan and Azhar, 2014: Chen and Chen, 2011: Frank and Goyal, 2003). However, proponents of the theory have justified the assumption that significant degrees of knowledge inequality occur in the real world, which is central to the theory. They stress the theory's ability to explain why an optimum amount of working capital exists, one that reduces financing costs while maximizing an organization's actual gains, according to Leary and Roberts, 2010; Hennessy and Whited, 2005; Strebulaev, 2007; and Sheikh and Wang, (2011). They also emphasize the theory's capacity to account for an optimum amount of working capital.

The notion of risk and return in finance is a cornerstone of this theory, and it is important to keep it in mind. The paper does this by demonstrating how marginal costs and benefits are used by businesses to estimate the appropriate level of cash on hand. Alternative working capital structure strategies may be described using the theory, as can the costs and benefits associated with taking either an aggressive or moderate approach to working capital management. The theory's applicability suggests this may be possible. The theory will provide light on why a company should maintain a healthy balance between its WCM levels and dividend distributions, which is the focus of this research. Profitability of the business and the benefits of WCM create a conflict that must be managed via dividend decisions.

## 2.2.2 Keynesian Liquidity Preference Theory

The Keynesian liquidity preference theory, which Keynes (1936) developed, is widely regarded as the theoretical cornerstone upon which WCM rests. Because investors dislike being in possession of assets that are difficult to sell quickly, Keynes postulated that they would demand a higher return on investments that had a longer maturity period. He maintains that this preference will exist even if all other conditions remain the same. The convenience of retaining cash is referred to as liquidity. At any particular point in time, a person or company may hold onto money for a variety of reasons (Bitrus, 2011). According to the hypothesis, companies keep cash on hand or inventory in order to satisfy their transactional, speculative, precautionary, and compensatory reasons. The necessity of the company to have cash or money on hand in order to satisfy ongoing transactions and commercial exchanges is the driving force behind the transaction motivation. Cash on hand is essential for businesses, as it allows them to meet their immediate financial obligations and pay for things like transportation, labor, and other essentials. Due to the incentive of safety, companies must have cash on hand as insurance against emergencies. Any given company will put some money away in order to weather difficult times or capitalize on unexpected business opportunities. The purpose of keeping assets in liquid form for speculative purposes by businesses, with the expectation of profiting from future changes in interest rates or bond prices, is known as the speculative motivation (Pandey, 2010).

Keynes's liquidity preference theory has been subjected to a significant amount of criticism for insinuating that the interest rate will be greater when the desire for liquidity is higher, and that it will be lower when the demand for liquidity is lower. During times of economic downturn, consumers have a great desire for liquidity,

while interest rates are at exceptionally low levels. In times of inflation, consumers have a low preference for liquid assets, despite the fact that interest rates are relatively high. These empirical findings contradict Keynes's theory. This is due to the fact that Keynes did not take into consideration different income levels. The contemporary determinate theory is able to provide a satisfactory explanation for this occurrence (Gill et al., 2010). In addition, Keynes operates on the assumption that the only two options available are illiquid bonds or liquid cash. As a result, we might refer to this theory as an all or nothing hypothesis. In point of fact, there are many different kinds of investable assets, each of which has a different level of liquidity (Stewart, 2011).

This study is relevant to the Keynesian theory of liquidity preference because it is hard to ignore the importance of cash flow to a business's ability to function normally. Managers of publicly listed corporations are obligated to safeguard sufficient working capital to allow the firm to achieve its main objective of increasing shareholder value. However, dividend distribution as a result of working capital management is not addressed in the theory. In any case, it is reasonable to assume that dividend payments will be made by corporations when they have achieved the target level of working capital management. Yet, it's possible to have too much cash on hand, and that might lead to lost investment opportunities. For this reason, firms should work to minimize both their liquidity costs and their illiquidity premiums. In order to maximize profits, businesses should practice working capital management (Pandey, 2010).

**2.2.3 Free Cash Flow Theory**

Free cash flow theory was developed by Jensen (1986) where FCF was described as net cash flow less the requirements of projects having a positive net present value. Jensen is credited with creating the notion of free cash flow. According to Jensen

(1986), a company's agency conflict with its shareholders is intensified when it generates positive free cash flow. The problem arises due to the fact that when a business has an excess of cash on hand, there is no need for the management of that business to utilize the capital markets in order to obtain further money. In contrast to the restrictions imposed by capital providers if the funds had been raised on the capital market, the company's management is now free to make any spending and investment decisions they see fit.

The free cash flow hypothesis has its critiques who believe it encourages short-term thinking by preventing investments that might result in long-term profits (Cornett, Guo, Khaksari, &Tehranian, 2010). If organizations' development possibilities are constrained and the surplus cash cannot be spent safely elsewhere, shareholders would rather have it returned to them via share buyback plans or dividends. Shareholders are concerned that the growth opportunities for the firms may be limited. On the other side, management would fritter away the spare cash on investments that did not produce a return, on administrative redundancy, and on benefits for management. The free cash flow (FCF) hypothesis states that when companies generate large amounts of FCF but lack access to attractive investment opportunities, the management of such companies would likely misuse the FCF, driving up agency costs (Pandey, 2010).

The FCF theory is related to the study's findings since Brush et al. (2000) found that when there is surplus FCF, managers' self-interest leads to wastefulness and inefficiency at work. This study aims to investigate this phenomenon. According to this concept, free cash flow (FCF) has an influence on a company's profitability because it raises agency costs inside the business. A decrease in the company's

profitability will result in a reduction in dividends. This suggests a negative relationship between liquidity and dividend payments, as predicted by the hypothesis.

## 2.3 Determinants of Dividend Payout

There are a variety of factors that might influence how much dividends a company pays out. These criteria are useful across a variety of different economic subsectors. Management of working capital, financial leverage, profitability, business size, ownership structure, regulatory limits, and macroeconomic variables are among the factors that fall under this category.

### 2.3.1 Working Capital Management

Investors should be aware that the corporation treats dividends as a cash outflow that must be recorded. Even if a firm could have accumulated sufficient profits to declare dividends, the cash that it have available at any one time might not be sufficient to cover the cost of those payments. When determining whether or not to pay dividends, it is consequently essential to take into account the financial position of the company; a company's capacity to do so grows along with the company's total liquidity and cash position (Pandey, 2010).

It is common for dividends to be more likely to be paid by long-established companies since they have more cash on hand. Because the majority of its money are not kept in working capital, a business like this has very few opportunities for investment because this ensures that its cash position is always solid. On the other side, rising companies struggle with the issue of not having enough money. When making a decision on whether or not to pay dividends, management must take into account how doing so would affect the liquidity of the company. If management believes that paying dividends may negatively affect the company's liquidity, they

may decide to retain profits instead. This would be consistent with a cautious payment plan (Pandey, 2010).

## 2.3.2 Financial Leverage

Jensen (1986) and Stulz (2000) argue that financial leverage is critical for keeping an eye on management's actions, cutting down on expenses caused by agency friction, and increasing the company's bottom line. Using debt, as proposed by Jensen (1986), may lessen shareholders' and managers' need to rely on dividends for resolving tensions arising from agency conflicts. This is one of the hypotheses that he presents in his book. As a result, the agency theory of free cash flow postulates that there will be an inverse link between dividends and debt.

In addition, protective covenants that restrict the amount that may be paid out are often included in agreements. Long-term debt divided by equity book value is one definition of financial leverage proposed by Fauzi and Locke (2012). This term is relevant to a business's financial standing. Therefore, the findings of this research provide support to the hypothesis that leveraged financial structures are associated with lower dividend payouts.

## 2.3.3 Firm Profitability

Indicators of a company's capacity to distribute profits to shareholders are widely agreed upon to be profitability and growth. For Lintner (1956), a company's dividend distribution history is a function of both past dividend payments and the current year's earnings. According to Baker and Powell (2000), dividends are substantially influenced by the amount of expected future profits.

According to Gitman and Pruitt (2013), the capacity of a corporation to pay dividends is heavily influenced by both the earnings of the current year and those of the years

prior to that. Dividends are mostly determined by the amount of future earnings in an industry, as revealed by Baker and Powell (2000) in their study of businesses trading on the New York Stock Exchange. This finding is in line with the theory put forward by Lintner, who argues that companies whose profits are less subject to periodic fluctuations would ultimately be more successful (Abala, 2013). The results imply that cyclical earnings have a major role in dividend decisions.

### 2.3.4 Firm Size

According to Eriotis's (2005) research, Greek corporations pay out dividends yearly based on a target payout ratio that considers both the company's size and the amount of revenues retained. Consideration of the company's size provides some insight into the dividend payout ratio (Lloyd, Jahera&Page, 1985). According to the findings of this research, bigger companies are seen as having a better level of financial maturity, which in turn grants them more access to money available via the capital markets. Because of this, they are less reliant on the cash produced domestically, and as a result, the ratio of dividend distributions is increased. Therefore, a company's dividend payout ratio tends to increase in tandem with its size.

Large corporations often have a longer track record and bigger financial resources, making them better able to provide shareholders with dividends. The greater ease of access to capital that huge corporations have over their smaller rivals is largely to blame. Sawicki (2005) said that monitoring the performance of major companies via the distribution of dividends was something that might be done. The high amount of information asymmetry that exists in big companies is caused by the separation of ownership that exists in such companies, and thus enhances the incapacity of shareholders to monitor the operations of the management of those companies. Since

a boom in dividends promoted debt financing, which resulted in surveillance due to the existence of debenture holders and trade payables, dividend payment is the correct course of action.

## 2.4 Empirical Review

The purpose, methods, and conclusions of studies conducted both locally and abroad that indicate a connection between WCM and dividend payout are examined.

### 2.4.1 Global Studies

Yakubu (2021) explores the ways in which WCM influences the dividend policy of non-financial businesses that are listed on public stock markets in Ghana. Research is conducted on the relationship between dividend policy and cash conversion cycle (CCC), days inventory outstanding (DIO), profitability, and the development of the company. It was found that dividend policy is significantly influenced by DIO, and that working capital management (as measured by cash conversion cycle and DIO) is favorably associated with dividend policy. Both of these findings were made possible by the discovery that DIO has a significant impact on dividend policy. For the purpose of this inquiry, ordinary least squares (OLS) was used. The findings also revealed a positive connection between the control variables of profitability and business growth and dividend policy, although a connection that was not statistically significant. The study's findings suggest that firms' dividend policy decisions are affected by working capital management, as assessed by days inventory outstanding (DIO). Since OLS was used, a known methodological flaw emerged when it came time to deal with outlying cases. One would have been better served by a fixed or random effect.

Bhatia et al. (2021) investigate the relationship between the dividend payout ratio of a firm and the length of time it takes for its net trade cycle. The Tobit regression model was employed in the research to analyze the data collected from the sample firms. The research used secondary data from the Bombay Stock Exchange, collected on 150 firms from 2012-2018. According to the results, the NTC is correlated with declining performance across sample businesses' DPRs. Conversely, it was found that NTC's beta coefficient is fairly low, suggesting that in the context of the Indian economy, a lower NTC may not necessarily result in a larger DPR for firms. Due to the fact that this research was carried out in India, its results cannot be extrapolated to reflect any other settings. As a result, this study displays a contextual gap.

Using a sample of companies that were listed on the London Stock Exchange between the years 1991 and 2015, Xu et al. (2021) investigate the link between a company's profitability and the amount of working capital it maintains as well as the amount of dividends it pays out. The findings indicate that unadjusted profits have a positive and substantial effect on dividend payments made by companies, however dividend-adjusted earnings do not have a significant affect on dividend payments made by these companies. This finding contradicts the hypothesis that dividend-adjusted earnings would have such an influence. In addition, they discover that there is a link in the form of an inverted U between the amount of working capital and the dividend distribution. These results give more cohesive evidence between the profits and dividend payment, and they underline the need of taking into consideration working capital as a driver when creating a strategy for the dividend distribution of a corporation. Because the emphasis of this research was on working capital as defined by current ratio, it does not address the relationship between WCM and the amount of dividends paid out. This leaves a conceptual vacuum.

Gill, Mand, Obradovich, and Mathur (2019) investigate how dividend choices are affected by an organization's ability to effectively manage its working capital. The findings imply that the decision-making process regarding the distribution of dividends by Indian manufacturing companies may be influenced by the management of working capital. The study's results suggest that cash on hand plays a key role in determining whether or not Indian producing businesses pay dividends. Companies in the Indian production industry with larger cash reserves than those that do not distribute profits to shareholders fall into this category. This study provides a substantial addition to the corpus of research that has already been done on the factors that impact the decisions that businesses make about the distribution of dividends. The study focused on only one measure of WCM. Further, the study was based on production firms and therefore results cannot be generalized to represent firms in other sectors.

Yakubu (2019) looked at the effect that WCM has on the dividend policies of Ghanaian firms that are not in the banking sector and are listed on public exchanges. In particular, the research looked at how factors such as a firm's growth rate, profitability, and Cash Conversion Cycle affect the dividend policy that the company chooses to implement (CCC). The findings demonstrated a positive correlation between WCM and dividend policy in terms of DIO and CCC, with DIO having a considerable influence on dividend policy. The data from the research were examined using the OLS regression approach. In addition, the data showed that growth and profitability of the firm, which served as controls, were positively related to dividend policy, even if this relationship was not statistically significant. Based on the findings, it was determined that WCM in connection to DIO is an important factor in a company's dividend policy decisions. This research was carried out in Ghana, which

has business practices and a social and economic environment that are distinct from those of listed enterprises in Kenya, which are the primary subject of the present investigation.

## 2.4.2 Local Studies

Karimi (2020) was interested in studying how WCM affects the dividends paid by NSE-listed firms. All 63 companies currently trading on the NSE were included in the analysis. Every year from January 2015 through December 2019, secondary data were gathered. A multiple linear regression analysis was carried out in order to investigate the dynamics of the connections that exist between the variables. The research found that factors such as business size and profitability had a favorable and considerable impact on the amount of dividends paid out. Both WCM and leverage produced favorable results for this investigation, although those results were not statistically significant. According to the findings of the research, WCM was conceived as just current ratio, leaving other key measurements such as CCC out of the equation.

Ikunyua (2020) centered their research on determining whether or not WCM had an effect on the dividend distribution of NSE-listed manufacturing companies. The sample comprised one representative from each of the nine manufacturing companies that are listed on the NSE. The collection of secondary data got underway in January 2015 and will go until December 2019 at the earliest. In the research, the interrelationships between the variables were investigated using a method known as descriptive cross-sectional analysis. Dividend payout ratios benefit from an organization's size, independent of the level of debt financing it uses, as shown by the results of recent research. In this particular research, the WCM and profitability created effects that were not statistically significant. The research was limited to

manufacturing companies, thus it doesn't take into account any other enterprises that are included.

Dividend policies of banks listed on the Nairobi Securities Exchange between 2013 and 2017 were investigated by Komora (2018) to assess the effect of stock liquidity on such policies. Dividend payout ratio and stock turnover rate were utilized as surrogates for stock liquidity and dividend distribution policy, respectively. Firm leverage and profitability, were included as control variables. Using a descriptive methodology, we extracted and analyzed data from the CMA and NSE, and our analysis revealed that the stock turnover rate, our predictor variable, had no effect on our dividend policy, our outcome variable. Results from this study reveal that it is not feasible to predict the dividend distribution policy of banks trading on the NSE by analyzing the liquidity of stocks alone. Because the research concentrated on stock liquidity rather than WCM, it creates a vacuum in our understanding of the relationship between the two.

Akenga and Olang (2017) made an effort to determine the impact that a company's working capital had on the amount of dividends that were paid out by companies that were listed on the NSE. Publicly accessible company financial records and annual reports were used as secondary sources for this investigation. The study's findings demonstrated that efficient financial management positively affects dividend payments. Observations were also made on the positive effect that effective inventory and accounts receivable management had on the decisions regarding dividend distributions. The study's results convinced its authors that companies should implement the study's suggestions to boost dividend payments to shareholders. These include ensuring that inventory is properly managed, implementing policies to ensure

that creditors pay their bills on time, and properly managing cash flow. Due to the fact that some parts of WCM, such as payables administration, were not taken into consideration in this research, a conceptual gap has been shown.

## 2.5 Conceptual Framework

Working capital management, as measured by Days Inventory Outstanding (DIO), Days Sales Outstanding (DSO), and Days Payable Outstanding, served as the investigation's independent variable (DPO). Profitability, company size, and leverage made up the control variables. The amount of dividends paid out served as the dependent variable, which was determined by the ratio of DPS to EPS.

**Independent variables**                                    **Dependent variable**

**Working capital management**
**DIO**
- (Inventory/COGs)*365

**DSO**
- (Receivables/sales)*365

**DPO**
- (Payables/COGs)*365

**Dividend payout**

DPS/EPS

**Control Variables**
**Profitability**
- Net income/equity

**Firm size**
- Natural log of total assets

**Financial leverage**
- Total debt to total assets
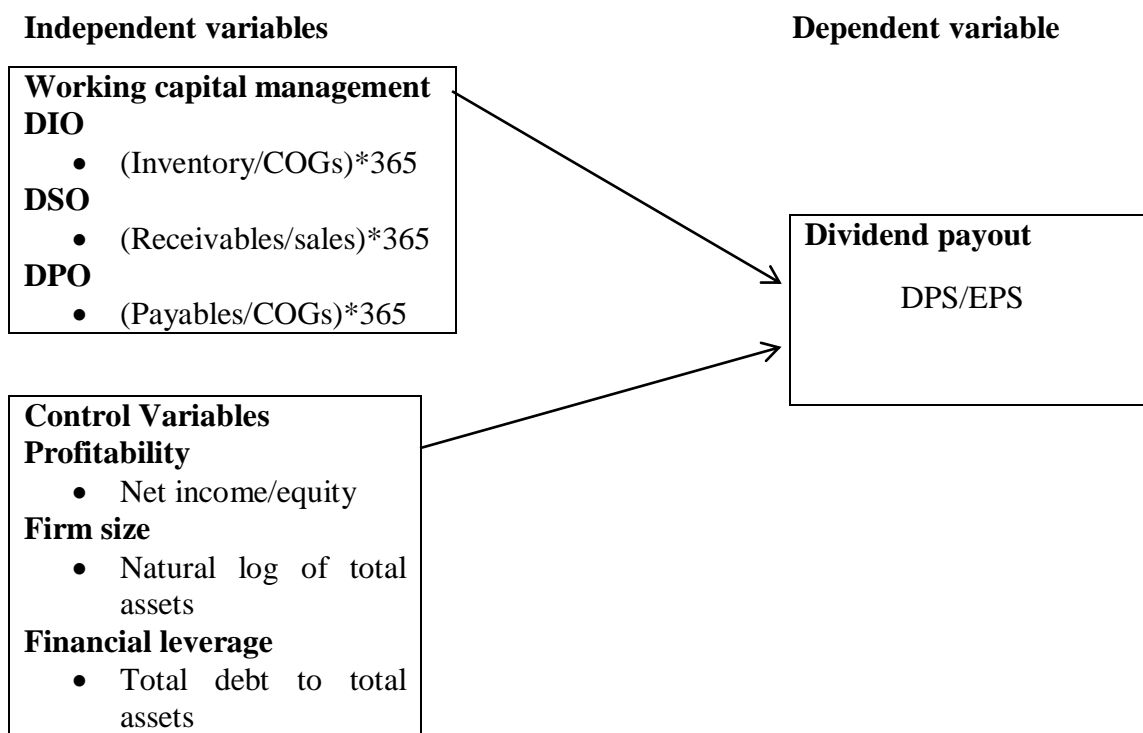
**Figure 2.1: Conceptual Model**

**Source: Researcher (2022)**

## 2.6 Summary of the Literature Review

Theoretical relationships between WCM and dividend payment have been modeled in a variety of ways. The free cash flow theory, the trade-off theory, and the Keynesian

liquidity preference theory are all covered. This segment too covers the primary factors of dividend payout. On WCM and dividend payout, both local and foreign researches have been conducted. In this segment, the results linked to them have been described. Simply the fact that earlier researchers had achieved some degree of consensus was sufficient basis for doing more study. This void was exploited in the recently conducted research.

The preceding section's empirical experiments indicated the existence presence of conceptual, methodological, as well as contextual gaps. Differences in the operationalization of WCM revealed conceptual gaps. Methodological shortcomings in empirical studies were exposed by the lack of agreement on standard research practices. Variations in study settings exposed a number of contextual gaps, which were uncovered during an examination of empirical studies. Most of the empirical research on this problem has been done in the developed world, and local studies have not focused on energy and petroleum enterprises that are traded on the NSE. These discrepancies suggest that further research is needed into WCM and the connections between dividend payout, and they also show that there is no empirical consensus on these hypothesized relationships. However, these gaps have also highlighted that there is a need for more research. The goal of the study was to make a contribution in this area.

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter outlines the methods that was used to determine whether and how WCM affects the dividend policy of energy and petroleumfirms listed on the NSE. There was a strong focus on research methodology, data collection, and statistical analysis.

## 3.2 Research Design

A descriptive researchwas used for this investigation. Examining the relationship that exists between WCM and dividend payment was the focus of this descriptive study's main objective. Given that the researcher is primarily interested in the phenomenon's fundamental characteristics, this approach is appropriate (Khan, 2008). It was also effective for defining the phenomena' interconnections. This design also represented the variables precisely and legitimately, yielding sufficient data to answer the research objectives (Cooper & Schindler, 2014).

## 3.3 Population

A population is comprised of all of the observations that have been gathered from a collection of interesting objects that have been specified in an investigation (Burns & Burns, 2008). The 4energy and petroleum companies that are listed on the NSE as of December 31st, 2021 made up the research population for this study (Appendix II).

## 3.4 Data Collection

Annual reported financials of energy and petroleum businesses listed on the NSE between 2012 and 2021 were collected through publically available sources and entered into data collecting forms as shown in Appendix I. DPS, EPS, total assets,

total debt, net income, equity, inventory, cost of goods sold, total sales, receivables, and payables are some of the items that were gathered.

## 3.5 Data Analysis

SPSS version 24 was used to do an analysis on the data collected. Charts and tables were used to quantitatively display the results. Together, the gathered descriptive statistics and the standard deviation served as the basis for measurements of central tendency and dispersion for each variable. Both correlation and regression played a role in the construction of inferential statistics. A panel regression linearly determined the relation between dependent as well as independent variables.

## 3.6.1 Diagnostic Tests

The diagnostic tests performed are outlined in Table 3.1

**Table 3.1: Diagnostic Tests**

| Assumption | Description | Test | Interpretation | Treatment |
|---|---|---|---|---|
| Normality | To verify normal distribution, the test is conducted | Shapiro–Wilk test | If p values are above 0.05, the variables are normally distributed | application of square roots or logs to non-normality |
| Multicollinearity | The phenomenon known as multicollinearity occurs when there is a connection between many variables, which then leads to the standard errors distorting the regression analysis. | VIF Test | Multicollinearity exist where the VIF > 10 | Eliminate highly correlated variables. |
| Heteroscedasticity | to determine whether the model's or the errors' variance is different for each observation | Breusch–Pagan test | Heteroscedasticity exist where the p-value p<0.05) | Use Natural log of variables |

| Autocorrelation | To determine the value of a single variable by considering other variables that are connected to it. | Breusch-Godfrey test. | If p-values are lower than 0.05, autocorrelation is present. | Hildreth-Lu Procedure |
|---|---|---|---|---|
| Stationarity test | In order to evaluate whether or not a time series variable has a unit root and whether or not it is stationary | ADF test | If p values are below 0.05, unit roots exist. | Use Natural log of variables |
| Hausman specification test | In order to distinguish between fixed-effects and random-effects models and to choose the most appropriate one | Hausman test | Use fixed effects model if p value is less than 0.05 and random effects if otherwise | Use natural log of variables |

### 3.6.2 Analytical Model

The equation shown below was relevant:

$$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Where: $Y$ = Dividend payout measured as the ratio of DPS to EPS

$\beta_0$ = y intercept of the regression equation.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ = are the regression coefficients

$X_1$ = DIO measured as (Inventory/COGs)*365

$X_2$ = DSO measured as (Receivables/sales)*365

$X_3$ = DPOmeasured as(Payables/COGs)*365

$X_4$ = Profitability as measured by the ratio of net income to equity

$X_5$ = Firm size as measured by total assets natural logarithm

$X_6$ = Financial leverage measured as ratio of total debt to total assets

$\varepsilon$ = error term

### 3.6.3 Tests of Significance

The relevance of the overall model as well as the variable was established via the use of parametric tests. To determine whether the model was useful, the F-test was used but to determine if any given variable is statistically significant, the t-test was used.

# CHAPTER FOUR

# DATA ANALYSIS RESULTS AND FINDINGS

## 4.1 Introduction

This chapter presents descriptive statistics and the results and interpretations of various tests namely; test of normality, Multicollinearity, heteroskedasticity tests, autocorrelation and stationarity test. The chapter also presents the results of Pearson correlation and regression analysis.

## 4.2 Descriptive Statistics

This segment presents the descriptive findings from the collected data. The descriptive results include mean and standard deviation for each of the study variables. The analyzed data was obtained from CMA reports and individual listed energy and petroleum firms' annual statements for 10 years duration (2012 to 2022). The number of observations is 40 (4*10) as 4 listed energy and petroleum firms provided complete data for the 10 year period. The outcomes are displayed in Table 4.1.

**Table 4.1: Descriptive Results**

|                    | N  | Minimum | Maximum  | Mean       | Std. Deviation |
|--------------------|----|---------|----------|------------|----------------|
| DPR                | 40 | .0000   | .9460    | .194588    | .2704513       |
| DIO                | 40 | 32.6300 | 252.5500 | 115.152500 | 53.8889165     |
| DSO                | 40 | 14.9000 | 210.6800 | 77.506500  | 43.0418313     |
| DPO                | 40 | 31.2000 | 423.6700 | 117.090500 | 79.3539080     |
| Profitability      | 40 | -.2502  | .7202    | .009393    | .1510795       |
| Firm size          | 40 | 9.5127  | 11.6166  | 10.651147  | .7565575       |
| Financial leverage | 40 | .0904   | 1.3073   | .501825    | .2939637       |
| Valid N (listwise) | 40 |         |          |            |                |

**Source: Research Findings (2022)**

**4.3 Diagnostic Tests**

As rationalised in chapter three, the researcher performed diagnostic tests in order to make sure all assumptions of Classic Linear Regression Model (CLRM) are not violated and to acquire the appropriate models to examine in the consequence that the CLRM hypotheses are infringed. Consequently, prior to carrying out the processing of regression model pre as well as post approximation analyses were carried out. The pre- approximation test performed in such scenario existed in the multicollinearity test and unit root tests while the post estimation tests are normality test, test for heteroskedasticity and test for autocorrelation. The research attained the analysis to refrain from factitious regression results.

**4.3.1 Normality Test**

The normality of data can be tested using a variety of methods. The most commonly employed tests include the Shapiro–Wilk test, Kolmogorov–Smirnov test, skewness, kurtosis, histogram, P–P Plot, box plot, Q–Q Plot, mean and standard deviation. The most extensively used normality tests are the Kolmogorov–Smirnov test and the Shapiro–Wilk test. The Shapiro–Wilk test is good for small sample sizes (n <50 samples), while it is possible to use it on more extensive samples selections, whereas the Kolmogorov–Smirnov test is good for n>50 samples. As a result, the study used the Kolmogorov–Smirnov test as the numerical method of determining normality. In both tests outlined above, the null hypothesis says that information is obtained from a population that is normally distributed. The null hypothesis will be rejected whenever P-value is below 0.05, and the data are said to be not normally distributed. If any violation of the assumption of normality was detected, necessary correction measures were applied.

**Table 4.2: Test for Normality**

|  | Kolmogorov-Smirnov | P-value |
|---|---|---|
| DPR | 0.869 | 0.178 |
| DIO | 0.918 | 0.202 |
| DSO | 0.881 | 0.194 |
| DPO | 0.874 | 0.191 |
| Firm size | 0.892 | 0.201 |
| Profitability | 0.923 | 0.220 |
| Leverage | 0.874 | 0.194 |

**Source: Research Findings (2022)**

From Table 4.2 results, all the study variables have a p value exceeding 0.05 and therefore were normal distribution.

### 4.3.2 Multicollinearity Test

Multicollinearity occurs when the independent variables in a regression model are significantly linked. Multicollinearity was assessed using the VIF and tolerance indices. Whenever VIF value is higher than ten and the tolerance score is below 0.2, multicollinearity is present, and the assumption is broken (Sheather, 2009). The VIF values are less than 10, indicating no problem with multicollinearity.

**Table 4.3: Multicollinearity**

| | Collinearity Statistics | |
|---|---|---|
| **Variable** | **Tolerance** | **VIF** |
| DIO | 0.587 | 1.704 |
| DSO | 0.782 | 1.279 |
| DPO | 0.535 | 1.869 |
| Firm size | 0.601 | 1.664 |
| Profitability | 0.598 | 1.672 |
| Leverage | 0.621 | 1.610 |

**Source: Research Findings (2022)**

### 4.3.3 Heteroskedasticity Test

The residual variance from the model must be constant and unrelated to the independent variable in linear regression models calculated using the OLS method(s). Homoskedasticity refers to constant variance, whereas heteroscedasticity refers to non-constant variance (Field, 2009). The study used the Breusch-Pagan/Cook-Weisberg test to check if the variation was heteroskedastic. The null hypothesis implies constant variance, indicating that the data is homoscedastic (Field, 2009). The outcomes are as depicted in Table 4.4.

**Table 4.4: Heteroskedasticity Results**

| Breusch-Pagan / Cook-Weisberg test for heteroscedasticity | | |
|---|---|---|
| chi2(1) | = | 0.8219 |
| Prob > chi2 | = | 0.6374 |

**Source: Research Findings (2022)**

Table 4.4 reveals that the null hypothesis was not rejected since the p-value was 0.6374, which was statistically significant (p<0.05). As a result, the dataset had homoskedastic variances. Since the P-values of Breusch-Pagan's test for homogeneity of variances were above 0.05. Thus the test confirmed homogeneity of variance. The data can therefore be used to conduct panel regression analysis.

### 4.3.4 Autocorrelation Test

Serial correlation, also known as autocorrelation, makes the standard errors of coefficients appear to be less than in linear panel data models, resulting in higher R-squared and erroneous hypothesis testing.Durbin-Watson test was utilized to test autocorrelation. Regression variables error terms are not correlated if Durbin-Watson test is equivalent to 2 (i.e. between 1 and 3). The nearer the figure to 2 is; the better. The outcomes are presented in Table 4.5.

**Table 4.5: Test of Autocorrelation**

| Durbin Watson Statistic |
|:---:|
| 2.147 |

**Source: Research Findings (2022)**

The outcomes in Table 4.5 indicates Durbin-Watson statistic to be 2.147. Given that the Durbin-Watson value was near to 2, it is implied that the error terms of the regression variables are uncorrelated.

**4.3.5 Stationarity Test**

The research variables were subjected to a panel data unit-root test to establish if the data was stationary. The unit root test was Levin-Lin Chu unit root test. At a standard statistical significance level of 5%, the test was compared to their corresponding p-values. In this test, the null hypothesis is that every panel has a unit root, and the alternative hypothesis is that at least one panel is stationary. The Levin-Lin Chu unit root test results are shown in Table 4.6.

**Table 4.6: Levin-Lin Chu unit-root test**

| Levin-Lin Chu unit-root test | | | |
|---|---|---|---|
| **Variable** | **Statistic** | **p value** | **Comment** |
| DPR | 6.4722 | 0.0000 | Stationary |
| DIO | 7.3975 | 0.0000 | Stationary |
| DSO | 6.2126 | 0.0000 | Stationary |
| DPO | 8.2031 | 0.0000 | Stationary |
| Firm size | 7.8718 | 0.0000 | Stationary |
| Profitability | 6.8447 | 0.0000 | Stationary |
| Leverage | 6.8132 | 0.0000 | Stationary |

**Source: Research Findings (2022)**

As demonstrated in Table 4.6, this test concludes that the data is stationary at a 5% level of statistical significance since the p-values all fall below 0.05.

## 4.4 Correlation Results

To determine the degree as well as direction of link connecting every single predictor variable to the response variable, correlation analysis was carried out. The correlation findings in Table 4.7 display correlation nature between the study variables in relation to magnitude a direction.

**Table 4.7: Correlation Results**

| | | DPR | DIO | DSO | DPO | Profitability | Firm size | Financial leverage |
|---|---|---|---|---|---|---|---|---|
| DPR | Pearson Correlation | 1 | | | | | | |
| | Sig. (2-tailed) | | | | | | | |
| DIO | Pearson Correlation | .222 | 1 | | | | | |
| | Sig. (2-tailed) | .169 | | | | | | |
| DSO | Pearson Correlation | -.312 | .440** | 1 | | | | |
| | Sig. (2-tailed) | .050 | .005 | | | | | |
| DPO | Pearson Correlation | -.194 | .364* | .539** | 1 | | | |
| | Sig. (2-tailed) | .230 | .021 | .000 | | | | |
| Profitability | Pearson Correlation | .539** | -.181 | .153 | -.118 | 1 | | |
| | Sig. (2-tailed) | .000 | .263 | .346 | .470 | | | |
| Firm size | Pearson Correlation | .375* | .047 | .141 | .521** | -.186 | 1 | |
| | Sig. (2-tailed) | .017 | .772 | .385 | .001 | .249 | | |
| Financial leverage | Pearson Correlation | -.447** | .309 | .415** | .478** | .007 | .211 | 1 |
| | Sig. (2-tailed) | .004 | .052 | .008 | .002 | .966 | .192 | |

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
c. Listwise N=40

**Source: Research Findings (2022)**

The results in Table 4.7 reveal that DIO and dividend payout are positively but not significantly correlated (r=0.222) at 5 % significance level. Moreover, the outcomes depict DPO and dividend payout are negatively but not significantly correlated (r=-

35

0.194) at 5 % significance level. Further, results show that DSO and dividend payout are also negatively though not significantly correlated (r=0.312) at 5 % significance level. In regards to the control variables, leverage exhibited a negative and significant association with dividend payout (r=-0.447) while firm size and profitability exhibited a significant link with dividend payout as shown by p values less than 0.05.

## 4.5 Regression Results

Regression analysis was performed to determine the extent to which dividend payout is clarified by the selected variables. Tables 4.8 to 4.10, which show the outcomes of the regression, were produced.

**Table 4.8: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .558[a] | .311 | .186 | .2439848 |

a. Predictors: (Constant), Financial leverage, Profitability, DIO, DPO, Firm size, DSO

**Source: Research Findings (2022)**

From the conclusions as $R^2$ denoted, the considered independent variables described 31.1% of the dividend payout variations among energy and petroleum listed firms in Kenya. This thus meant the six variables contributed 31.1% of the variations in dividend payout of listed energy and petroleum firms in Kenya whereas other factors not considered in this study contributed 68.9%.

**Table 4.9: ANOVA Analysis**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| | Regression | .888 | 6 | .148 | 2.487 | .043[b] |
| 1 | Residual | 1.964 | 33 | .060 | | |
| | Total | 2.853 | 39 | | | |
| a. Dependent Variable: DPR | | | | | | |
| b. Predictors: (Constant), Financial leverage, Profitability, DIO, DPO, Firm size, DSO | | | | | | |

**Source: Research Findings (2022)**

The overall model was statistically significant because the F-test statistic was statistically significant $(F_{(6, 39)} = 2.487, p<0.05)$.

**Table 4.10: Regression Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| | (Constant) | -.566 | .011 | | -5.354 | .000 |
| | DIO | .081 | .000 | .081 | 1.199 | .232 |
| | DSO | -.101 | .001 | -.103 | -1.507 | .133 |
| | DPO | -.026 | .052 | -.015 | -.226 | .822 |
| 1 | Firm size | .261 | .023 | .250 | 3.726 | .000 |
| | Profitability | .214 | .000 | .214 | 3.165 | .000 |
| | Financial leverage | -.202 | .046 | -.183 | -2.696 | .008 |
| a. Dependent Variable: DPR | | | | | | |

**Source: Research Findings (2022)**

The resultant regression coefficient model was;

**$Y = -0.566 + 0.261X_1 + 0.214X_2 - 0.202X_3$**

Where:

$Y$ = Dividend payout $X_1$ = Firm size; $X_2$ = Profitability; $X_3$=Leverage

## 4.6 Discussion of Research Findings

The research objective was assessing how WCM impactdividend payout of Kenyan listed energy and petroleum firms. The selected variables for this investigation

included; DIO, DPO, DSO, profitability, leverage and firm size. A descriptive research design was utilized. Secondary data was gathered from CMA and an analysis made via SPSS. Annual data for 4listed energy and petroleum firms for ten years from 2012 to 2021 was obtained from their annual reports.

The correlation outcomes at 5 % significance level depictDSO and DPO have a weak negative but not substantial link with dividend payout of listed energy and petroleum firms in Kenya. DIO possess weak positive but not significant link with dividend payout of listed energy and petroleum firms. The outcomes disclose that leverage and dividend payout have a negative as well as significant correlation. The outcomes also reveal that both size and profitability had positive as well as significant relation with dividend payout of listed energy and petroleum firms.

Multivariate regression outcomes revealed that the R square was 0.311 implying 31.1% of changes in dividend payoutare due to the six variables alterations selected for this study. This means that variables not considered explain 68.9% of changes in dividend payout. The overall model was also statistically significant as the p value was 0.000 which is less than the significance level of 0.05. This implies that the overall model had the required goodness of fit.

The multivariate regression analysis further revealed that individually, DIO, DSO and DPO do not possess significant impact on dividend payout of energy and petroleum firms listed at the NSE ($\beta$=0.081, p=0.232); ($\beta$=0.-101, p=0.133); ($\beta$=-0.026, p=0.822). Both firm size and profitability positively affecteddividend payout as shown by ($\beta$=0.261, p=0.000) and ($\beta$=0.214, p=0.000) respectively. Financial leverage exhibited a negative and significant dividend payout influence as shown by ($\beta$=-0.202, p=0.008).

These outcomes coincide with Karimi (2020) who was interested in studying how WCM affects the dividends paid by NSE-listed firms. All 63 companies currently trading on the NSE were included in the analysis. Every year from January 2015 through December 2019, secondary data were gathered. A multiple linear regression analysis was performed in order to investigate the dynamics of the connections that exist between the variables. The research found that factors such as business size and profitability had a favorable and considerable impact on the amount of dividends paid out. Both WCM and leverage produced favorable results for this investigation, although those results were not statistically significant.

The outcomes also correspond with Ikunyua (2020) who centered their research on determining whether or not WCM had an effect on the dividend distribution of NSE-listed manufacturing companies. The sample comprised one representative from each of the nine manufacturing companies that are listed on the NSE. The collection of secondary data got underway in January 2015 and will go until December 2019 at the earliest. In the research, the interrelationships between the variables were investigated using a method known as descriptive cross-sectional analysis. Dividend payout ratios benefit from an organization's size, independent of the level of debt financing it uses, as shown by the results of recent research. In this particular research, the WCM and profitability created effects that were not statistically significant.

# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

## 5.1 Introduction

The key aim of the research was determining how WCM influence the dividend payout of listed energy and petroleum firms in Kenya. This section includes a summary of the findings from the previous chapter and the conclusions and limitations of the study. Additionally, it makes recommendations for potential policy measures. The chapter provides recommendations for further research.

## 5.2 Summary of Findings

The research objective was to assessing how WCM influence dividend payout of listed energy and petroleum firms in Kenya. The research applied a descriptive design whereas population was the 4 listed energy and petroleum firms in Kenya. Complete data was acquired from all 4listed energy and petroleum firms in Kenya and which were considered adequate for regression analysis. The research applied secondary data that was acquired from CMA and individual listed energy and petroleum firms' annual statements. The independent variable was WCM measured as DIO, DSO and DPO while the control variables were; firm size, profitability and leverage. Both descriptive and inferential statistics were useful in examining the data. This section discusses the findings.

The correlation results disclose that DSO and DPO have a weak negative but not substantial link with dividend payout of listed energy and petroleum firms in Kenya. DIO has a weak positive but not significant link with dividend payout of listed energy and petroleum firms. The outcomes disclose that leverage and dividend payout have a negative as well as significant correlation. The outcomes also reveal that both size and

profitability had positive as well as significant relation with dividend payout of listed energy and petroleum firms.

Multivariate regression outcomes revealed that the R square was 0.311 implying 31.1% of changes in dividend payout are due to the six variables alterations selected for this study. This means that variables not considered explain 68.9% of changes in dividend payout. The overall model was also statistically significant as the p value was 0.000 which is less than the significance level of 0.05. This implies that the overall model had the required goodness of fit.

The multivariate regression analysis further revealed that individually, DIO, DSO and DPO do not possess significant impact on dividend payout of energy and petroleum firms listed at the NSE ($\beta$=0.081, p=0.232); ($\beta$=0.-101, p=0.133); ($\beta$=-0.026, p=0.822). Both firm size and profitability positively affected dividend payout as shown by ($\beta$=0.261, p=0.000) and ($\beta$=0.214, p=0.000) respectively. Financial leverage exhibited a negative and significant dividend payout influence as shown by ($\beta$=-0.202, p=0.008).

### 5.3 Conclusions

The researchobjective was establishingcorrelation between WCM and Kenyan listed energy and petroleum firms' dividend payout. The study concludes that DIO, DSO and DSO have no significant impact on dividend payout of listed energy and petroleum firms. The research also comes to the conclusion that WCM as measured by these three variables does not significantly affect the dividend payout of Kenya's listed energy and petroleum firms.

The research outcomes further depicted that firm size exhibited a positive as well as significant influence on dividend payout which might mean that an increase in asset

base of a listed firm leads to enhanced dividend payout. This can be described by the fact that listed energy and petroleum firms with more assets are likely to have developed structures to monitor the internal operations of a firm leading to better dividend payout. Bigger listed energy and petroleum firms are also likely to have better governance structure which can also explain the highdividend payout associated with firm size.

The study conclusionsrevealed that profitability had a positive and significant impact on dividend payout.This mightsignify that the listed energy and petroleum firms that have high profitability are able to fulfil their obligations whenever they fall due and are also able to undertake investment chance that might arise in the course of doing business and therefore enhanced dividend payout compared with firms that are less profitable.

The findings designated that leverage had a negative significant impact on dividend payout of listed energy and petroleum firms.This may imply that listed energy and petroleum firms with high debt levels tend to have low levels of dividend payout. This can be clarified by the sense that debt comes with some covenants and it also imply closer monitoring of management actions which negatively affects the dividend payout of listed energy and petroleum firms.

## 5.4Recommendations for Policy and Practice

The research revealed that firm size possesses a significant positive impact on dividend payout of listed energy and petroleum firms. The research recommended the necessity for listed energy and petroleum firms to enhance their asset base by allocating more funds in investing activities as this will lead to a higher dividend

payout in the long run. Policy makers ought to develop policies on how listed energy and petroleum firms can enhance their asset base in the most effective way.

From the study findings, profitability was found to increase dividend payout of listed energy and petroleum firms, this research recommending that listed energy and petroleum firms should focus on maximizing their profitability to sustain their obligations when they fall due whereas simultaneously time enjoying short term investment chances which may arise. The policy makers ought to develop strategies that can aid the firms maximize on profitability.

The study's results indicate that leverage significantly and negatively affected dividend payout. Hence, the research commends that listed energy and petroleum firms ought to come up with an optimal debt level as too much debt can be detrimental to dividend payout. This can be accomplished by having policies and guidelines on the amount of debt that a firm can accumulate for a given period of time.

## 5.5 Limitations of the Study

The focus was on various factors which are thought to influence dividend payout of Kenyan listed energy and petroleum firms. The study specifically examined six explanatory factors. Though, in certainty, there is presence of other variables probable to influence dividend payout of firmsincluding internal likeliquidity and managerial efficiency whereas others are beyond the control of the firm like interest rates as well as political stability.

In this research, a 10-year duration from 2012 to 2021 was selected. There is lackevidence that comparable outcomes will hold across a longer time frame. Moreover, it is impossible to predict if the same outcomes would persist until 2021.

Given that additional time contains instances of big economic transitions like recessions and booms, it is more dependable.

The data quality was the main restriction for this research. It is not possible to conclusively conclude that the study's findings accurately reflect the current reality. It has been presumed that the data utilized in the research are precise. Due to the current conditions, there has also been a great deal of incoherence in the data measurement. The research utilized secondary data rather than primary data. Owing to the constraineddata availability, only some of the growth drivers have been considered.

The data analysis was performed using regression models. Owing to the limitations associated with using the model, like inaccurate or erroneous findings emanating from aaltering variable value, the researchers would not be able to generalize the conclusions precisely. A regression model cannot be performed using the prior model after data is added to it.

## 5.6 Suggestions for Further Research

It has been suggested that several areas for advanced future research to be done on the basis of the tangible information gathered and the clarifying comprehension established in this research. First, other WCM aspects influence firm dividend payout apart from the three selected for this study. Moreresearch can be conducted to determine and evaluate them. Additionally, other factors moderate, intervene, or mediate the relationship between WCM and firm dividend payout apart from firm size, profitability and leverage. It is possible to locate and examine them with additional research.

The current research scope was restricted to ten years; more research can be performed past five years to determine whether the results might persist. Thus,

inherent future studies may use a wider time span, which can either support or criticize the current research conclusions. The scope of the study was additionally constrained in terms of context where listed energy and petroleum firms were examined. Further studies can be extended to other firms in Kenya to establish if they complement or contradict the current study findings. Researchers in the East African region, the rest of Africa, and other global jurisdictions can too perform the research in these jurisdictions to ascertain if the current research conclusions would persist.

The research only used secondary data; alternate research may use primary data sources such in-depth questionnaires and structured interviews given to practitioners and stakeholders. These can then affirm or criticize the results of the current research. This research used multiple linear regression as well as correlation analysis; future research could use other analytic techniques such factor analysis, cluster analysis, granger causality, discriminant analysis, and descriptive statistics, among others.

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# APPENDICES

## Appendix I: Research Data

| Company | Year | DPR | DIO | DSO | DPO | Profitability | Firm size | Financial leverage |
|---------|------|------|------|------|------|------|------|------|
| KENGEN | 2012 | 0.1000 | 137 | 118 | 56 | 0.0902 | 9.7994 | 0.2478 |
| | 2013 | 0.1100 | 132 | 116 | 53 | 0.0621 | 9.7445 | 0.2405 |
| | 2014 | 0.1200 | 139 | 102 | 31 | 0.0630 | 9.5207 | 0.3577 |
| | 2015 | 0.0400 | 119 | 120 | 49 | 0.0293 | 9.6263 | 0.2284 |
| | 2016 | 0.0500 | 155 | 94 | 46 | 0.0273 | 9.6103 | 0.2211 |
| | 2017 | 0.0200 | 70 | 54 | 206 | 0.0254 | 11.6166 | 0.5144 |
| | 2018 | 0.0200 | 101 | 54 | 195 | 0.0159 | 11.6050 | 0.5296 |
| | 2019 | 0.1900 | 70 | 57 | 217 | 0.0057 | 11.5747 | 0.5866 |
| | 2020 | 0.0200 | 66 | 52 | 189 | -0.1535 | 11.4383 | 0.6934 |
| | 2021 | 0.0300 | 148 | 44 | 193 | -0.0578 | 11.3157 | 0.6071 |
| KPLC | 2012 | 0.0900 | 50 | 79 | 93 | 0.0254 | 10.4220 | 0.5346 |
| | 2013 | 0.0900 | 55 | 108 | 97 | -0.0148 | 10.4238 | 0.5924 |
| | 2014 | 0.1000 | 42 | 89 | 71 | 0.7202 | 10.2800 | 0.5076 |
| | 2015 | 0.0400 | 33 | 78 | 88 | -0.0046 | 10.4187 | 0.6935 |
| | 2016 | 0.0200 | 34 | 101 | 109 | 0.0621 | 10.4890 | 0.7629 |
| | 2017 | 0.0200 | 197 | 56 | 73 | 0.0630 | 11.5736 | 0.7952 |
| | 2018 | 0.0200 | 204 | 47 | 81 | -0.1528 | 11.5135 | 0.7848 |
| | 2019 | 0.0300 | 168 | 50 | 71 | -0.0988 | 11.4801 | 0.6970 |
| | 2020 | 0.0400 | 202 | 54 | 67 | 0.0865 | 11.3842 | 0.6677 |
| | 2021 | 0.0300 | 153 | 50 | 50 | 0.0420 | 11.2884 | 0.6829 |
| KETRACO | 2012 | 0.0000 | 151 | 156 | 197 | 0.1039 | 11.2048 | 1.3073 |
| | 2013 | 0.0000 | 120 | 144 | 163 | 0.1207 | 11.2322 | 1.2291 |
| | 2014 | 0.0000 | 174 | 130 | 207 | -0.2479 | 11.3002 | 1.0328 |
| | 2015 | 0.0000 | 226 | 168 | 322 | -0.1490 | 11.2122 | 0.8101 |
| | 2016 | 0.0000 | 253 | 211 | 424 | 0.1207 | 11.1288 | 0.7456 |
| | 2017 | 0.5688 | 112 | 64 | 111 | -0.0135 | 11.2487 | 0.1556 |
| | 2018 | 0.9460 | 148 | 62 | 114 | -0.0988 | 11.2419 | 0.1738 |
| | 2019 | 0.7737 | 93 | 83 | 125 | 0.0865 | 11.2358 | 0.3356 |
| | 2020 | 0.8656 | 96 | 71 | 90 | -0.1528 | 11.1690 | 0.3222 |
| | 2021 | 0.8229 | 109 | 81 | 101 | -0.0988 | 11.1501 | 0.3771 |
| TOTAL KENYA | 2012 | 0.3888 | 76 | 17 | 70 | 0.0865 | 9.5127 | 0.3930 |
| | 2013 | 0.4301 | 74 | 17 | 82 | -0.0475 | 9.5573 | 0.4443 |
| | 2014 | 0.4566 | 61 | 15 | 57 | 0.0359 | 9.6142 | 0.3845 |
| | 2015 | 0.4000 | 70 | 22 | 103 | -0.0586 | 9.6263 | 0.3275 |
| | 2016 | 0.3810 | 83 | 24 | 76 | -0.0988 | 9.6045 | 0.2696 |
| | 2017 | 0.0200 | 96 | 62 | 82 | 0.0865 | 10.1604 | 0.1425 |

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| Company | Year | DPR | DIO | DSO | DPO | Profitability | Firm size | Financial leverage |
|---------|------|--------|-----|-----|-----|---------|-----------|-----------|
| | 2018 | 0.0300 | 85 | 58 | 76 | -0.0071 | 10.2658 | 0.1037 |
| | 2019 | 0.1300 | 100 | 60 | 78 | 0.0972 | 10.2453 | 0.0904 |
| | 2020 | 0.3800 | 86 | 66 | 76 | -0.2502 | 10.2140 | 0.1881 |
| | 2021 | 0.0100 | 117 | 69 | 94 | 0.0250 | 9.9969 | 0.2950 |

**Appendix II: Energy and Petroleum Firms Listed at the NSE**

1. KenGen Ltd

2. Kenya Power & Lighting Co. Ltd

3. Total Kenya Ltd

4. Umeme Ltd

**Source: NSE (2022)**