EFFECT OF MONETARY POLICY ON DIVIDEND PAYOUT OF FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

I, the undersigned, hereby affirm that this research project report is my original work and has not been presented before for award for a degree in this or any other institution of higher learning.

Signed:…………………………………..Date:……………………………………

Ephantus Mwangi, D61/79422/2015

With my approval as the university supervisor, this research project report has been submitted for examination.

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DEDICATION

This research project report is dedicated to the highest God Almighty, who has been my strength and guide in my endeavors.

ACKNOWLEDGEMENT

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ABBREVIATIONS AND ACRONYMS

CBK   Central Bank of Kenya

CBR   Central Bank Rate

CRR   Cash Reserve Ratio

CSE   Casablanca Stock Exchange

EPS   Earnings per Share

GDP   Gross Domestic Product

IFC   International Finance Corporation

IPO   Initial Public Offer

MPC   Monetary Policy Committee

NSE   Nairobi Securities Exchange

OMO   Open Market Operations

SDGs   Sustainable Development Goals

SPSS   Statistical Package for Social Sciences

USA   United States of America

ABSTRACT

The main objective of this study was to determine to what extent the amount paid out as dividend by firms listed at the Nairobi securities exchange affected by changes in monetary policy variables. The research design was longitudinal census survey. The population of study comprised all listed firms at the Nairobi Securities Exchange. Secondary data about monetary policy and dividend payout was obtained from Central Bank of Kenya, published financial statements from local dailies and Nairobi Securities Exchange respectively. In this research annual data for the period 2006 to 2016 was used. The data was analyzed using regression on the dividend paid as the dependent variable against independent variables which were Repo rate, CBR and Treasury-bill rate. The correlation between Repo rate, CBR, and Treasury-bill and dividend pay-out was, -0.498, -0.022, and +0.787 respectively. The most significant correlation was noted to be between Treasury-bill and dividend payout, with an index of 0.787. In this regard, this pair of correlation was significant at 0.05 level of significance. To determine the influence of monetary policy on dividend payout, a regression analysis was carried out. The coefficient of determination was used to bring out the extent to which each of the three independent variables jointly explained dividend payout among the firms. The coefficient of determination represented by the adjusted R^2 was 0.477 representing 47.7%. This implies that the monetary policy dimensions (91-Day Treasury bill, CBR, and Repo rates) jointly explained up to 47.7% of dividend payout. This therefore means that 52.3% of dividend payout was explained by variables outside the model. From ANOVA analysis, the regression model had a fit with the data (F= 4.045, P<0.01). This indicates that monetary policy dimensions in the model had a significant influence on dividend payout. The study revealed that if Repo, CBR, and 91-Day Treasury-bill rates were each held constant, the dividend payout would increase by 0.081 representing 8.1%. However, a unit change in each of the three monetary policy dimensions: 91-Day Treasury bill, CBR, and Repo rates, would lead to change in dividend payout by factors of 0.772, -0.114, and 0.049 respectively. The study determined that Treasury bill is rate significantly related to dividend payout of firms listed at the NSE. The study affirmed strong positive association between the 91-Day Treasury-bill rate and dividend payout of firms listed at the NSE. The study therefore concluded that monetary policy is a critical antecedent of dividend payout of firms listed at the NSE. The means that institutions policy makers should pay attention to the dynamics around each of the variables as a capital market development mechanism. The study recommends further investigations focusing on various moderating and intervening attributes factors such as firm attributes since this was not within the scope of the current study.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Monetary policy has been defined by (Argy, 2013) as the undertakings by the central bank of a nation for purposes of moderating the availability, cost, and supply of money or interest rate so as to foster price stability, employment rate, economic growth, as well as currency stability for application in international trade. The monetary policies' objective is to maintain price stability in the economy which is characterized by low stable inflation. The concept of dividend payout has been defined as the proportion of residual income attributable to the equity holders of the firm (Libhane, 2015). The association between monetary policy and dividend payout is hence a critical subject, hence the rationale for the current study.

The study on relationship between monetary policy and dividend payout was anchored on pecking order theory, liquidity preference theory, and life cycle theory of corporate payout. Life cycle theory of corporate payout postulates that when interest rates are high, investors would prefer dividend to capital gains and during periods of decreasing interest rates investors prefer dividends (Pandey, 2004). Liquidity preference theory is based on the observation that, holding all other factors constant, investors prefer holding onto cash and would want premium compensation for investment in illiquid assets including real estate, bonds, stocks and. According to pecking order theory, firms prioritize finance based on the

principle of least resistance (Chowdhury, 2006). Expectation theory of interest rates postulates that security buyers are indifferent to the maturity period of security.

The study was motivated by the policy and management dilemma facing policy makers and corporate managers, respectively. This is in light of the relationship between monetary policy dimensions and dividend payout. For instance, high interest rates as a result of higher Central Bank Rate (CBR) are likely to curb business investments and innovation (Saunders, 2008). The most favored option is the internally generated funds, then borrowed funds and finally contributions by shareholders in form of equity as the last option. By limiting payouts a firm would have free cash flows in form of retained earnings and therefore no need for additional debt and equity capital (Kohn, 2003).

Retaining earnings saves the company from incurring floatation costs and dilution of ownership that results from issuing additional equity. Extraordinary interest rates have the likelihood of deterring innovation and commercial investments. Interest rate upsurge causes loan default and makes banking system susceptible to instabilities, drives cost push inflation as a result of mid-term price escalation attributable to superfluous commercial financing costs (Hafeez, 2009).

Even though previous studies on determinants of dividend payout have observed that financial performance, company size and ability to generate free cash flows as the key determining factors of dividend payout, little has been done from the perspective of macroeconomic variables on dividend paying firms listed at the Nairobi Securities Exchange (Ndungu, 2009; Muchiri, 2006; Karanja, 1987).

1.1.1 Monetary Policy

The concept of monetary policy has been defined as the aggregate of systems designed to moderate money supply, its value and cost in a given economy. It refers to the art of manipulating the movement and direction of credit facilities in a bid to pursue price stability and economic growth in the economy (Chowdhury et al., 2003). The concept has also been defined as the actions of the central bank of a nation to control the supply of money using monetary policy instruments which are discretionary in nature including operations in the open market, discount rates, reserve conditions, overt regulation of banking systems as well as interest rates (Loayza & Schmidt-hebbel, 2002).

According to Kahn (2010) the objectives of monetary policy are primarily the management of various predetermined monetary targets including price predictability, growth promotion, smoothening business cycle, averting financial crisis, achieving fully employment, stability of strategic interest rates as well as the actual rates of exchange. It entails the monetary component of the overall economic policy requiring enhanced coordination between monetary as well as other economic policy instruments of a nation (Faure, 2003). There are various monetary policy instruments. They include, operations relating to discount window, reserve stipulations, operations in light of open market, Central Bank Rate and foreign exchange market operations (Makori, 2015). Under reserve requirement, a fraction of commercial banks' deposit is retained by the central bank as a zero-interest bearing reserve to restrict commercial banks' ability to create credit. This fraction of the deposits is referred to as the Cash Reserve Ratio (CRR) and currently it is

set at 5.25 percent of the total of banks liabilities with respect to domestic as well as foreign currency deposits. This ratio is varied so as to achieve the desired results (Njoroge, 2011).

Discount window operations are an avenue for the provision of secured short-term overnight lending to commercial banks at deterrent rates. This is therefore a last resort source funding for commercial banks, hence the banks are restricted to seek financing from the market (Wanjiru, 2013). Where the central bank buys or sells securities in the secondary market so as to attain a specified amount of reserves, or injecting cash directly into the economy via purchase of securities in return for money stock to manipulate availability of money in the economy, it is called open market operations. The Central Bank Rate (CBR) is the lowermost rate accepted by the law each time the Central Bank is injecting Reverse Repos and likewise the uppermost rate that the Central Bank would offer on any received bid whenever it wishes to withdraw liquidity through a vertical Repo exchange to withdraw or inject liquidity in the system (Saunders, 2008).

1.1.2 Dividend Payout

Ross, Westerfield and Jordan (2000) refers to dividend as money that is paid as a result of earning. Distributions are the payment made from other sources other than current accumulated retained earnings. Distribution from earning can therefore be referred to as dividend and distributions from capital as liquidating dividend. Payment in direct form by a concern to its shareholders can be deemed as dividend or a characteristic of dividend policy. According to Brearley et al. (2000) dividend policy is an attempt to strike an optimal

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balance between retained earnings, dividend payout, and rights issue. Baker et al. (1999) noted that industry differences and expected future returns are the dominant determinants of dividend policy. Dividend payout policy determines how much out of current earnings are paid out to shareholders and how much is retained for reinvestment. Some investors prefer firms reinvesting their earnings to fuel future growth while others prefer cash payout. Prevailing macroeconomic conditions in an economy allows managers to plan in advance on whether to payout dividends or to reinvest. Dividend policy helps firm managers determine in advance how much of current earnings should be paid out as dividend and how much should be retained. Other key matters relating to a concern's aggregate dividend policy include requirements of the law, liquidity and regulatory issues; administrative considerations; dividend stability; stock splits; market responses and stock repurchases (Brearley & Myers, 2000).

Dividend payout ratio is normally expressed by the dividend payout of a concern. It is the portion of amount declared as dividend payable to shareholders divided by the firms earning per share (EPS). Dividend payout ratio signifies the portion net profits the organization decides to retain and how much to payout to shareholders (Ogilo, 2015). The payout ratio is determined by firm's performance, future plans and dividend policy. A firm with high current and future earnings is expected to have a high payout ratio compared to a firm with low current and expected future earnings. Firms with future huge capital requirements would also payout less dividends.

1.1.3 Monetary Policy and Dividend Payout

Banks upscale the rate that they charge their customers who borrow money each time the CBR goes up. When the central bank increases its base rate, customers whose interest rates are variable get affected due to the increase in mortgage and credit card interest rates. Consequently, the amount of money that individuals and organizations can spend is reduced as well, invest or save. Bills become more expensive as this leaves households with less disposable income and therefore spend less.

As a result investments become less profitable due to increased cost of funds. This affects the overall business revenues and profits available for distribution to shareholders (Musa, 2011). Monetary policy works through the restrictions that affect the cost and availability of external sources of finance in relation to internal sources (Pandey & Bhat, 2007). Under conditions of monetary policy restriction, dividend payout varies and payout reduces. Firm opt to reduce or forgo payouts and use the internally generated fund for expansion and investment. This would also apply when the monetary policies are relaxed whereby external funds become cheaper and more available thus leaving firm with extra cash from which they can make payouts.

During periods of high inflation, the value of a country's currency is low, goods are very expensive and these negativities in the market discourage investments. High costs of inputs erode firms' earnings and thus amounts distributable as dividend to shareholders. Rising interest rates affect stock valuation. According to Musa (2011) increase in the stock value leads to increase in the market players' expectancy who consequently require premium returns in compensation for the increased bonds return.

1.1.4 Firms Listed at the Nairobi Securities Exchange

Shares and stocks dealing in Kenya started in the 1920's. In 1951 a professional stock broking firm was established. Formerly called Nairobi Stock Exchange, the Nairobi Securities Exchange was developed as an association of stock brokers on a voluntary basis courtesy of the Societies Act. The groundbreaking privatization through the NSE was that of the Kenya Commercial Bank, done in 1988. In light of this, NSE was ranked the best performing market by the International Finance Corporation (IFC) in 1994. In the past, the NSE has been characterized by dynamics including automation of trading activities that took place in September 2006 as well as the facilitation of remote trading by stockbrokers. These developments have led to the phasing out of the need for physical presence of dealers on the trading floor thereby leading to widening of trading period from two to six hours each day (NSE, 2017). The NSE stock was formerly listed with the approval of the Capital Market Authority by way of an Initial Public Offering (IPO) that took place on 27th June 2014. Subsequently the shares were listed at the main investment segment after self-listing. The NSE became the second bourse in Africa to self-list after Johannesburg Stock Exchange. As at 31st June 2017, 67 companies have been listed in the NSE divided into the following sectors; banking, construction and allied, agriculture, manufacturing and allied, automobiles and accessories, energy and petroleum, investment services, commercial and services, and insurance.

The other sectors of the concerns are investment, real estate investment trust and exchange traded fund, as well as telecommunication and technology, (NSE, 2017). Economic growth

and stock market returns have been an important issue in the global market and investors seek to invest in countries that yield best returns (Wachira, 2013). Previous studies on determinants of dividend policy such as (Ndungu, 2009) have observed that profitability, company size and liquidity as the key determinants of dividend policy.

1.2 Research Problem

A firms ability to pay dividend is one of the most important atribute that investors scrutinize in making investment decision on listed companies. Economic dynamics and variability of returns coupled with shifting government policy changes affect cost and availability of funds to invest in projects with investors' projected returns on investment. As the market interses rates upsurge, the cost of capital rises and firm managers have to weight and balance between paying dividend and ploughing back profit for capital investment. At the same time investors have other investment options to invest their excess liquidity such at treasury bills and bonds which will offer higher returns. Retaining earnings saves the company from incuring floatation costs and dilution of ownership that results from issuing addational equity. Organizations are, therefore, faced with critical decision making with respect to whether, how, and when to pay dividend. Corporations managers are therefore under obligation to continuosly monitor their environment since it has a potential to impact their decisions, including those relating to dividend payout.

Many companies at the Nairobi Securities Exchange are increasingly becoming reluctant to declare dividends or issue bonuses. Against this backdrop, many investors have openly expressed displeasure (Rao, 2016). In this regard, various reasons have been advanced for

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this variability, including prevalence of systematic risks, basically the macroeconomic factors including monetary policy. Moreover, with governments worldwide using fiscal and monetary policies to configure economic health of their nations, it certainly is a critical macroeconomic factor worth investigation by the academia.

A study by Rao (2016) focused on the extent to which macroeconomic factors influence profitability of the five firms listed at the NSE. However, the study had a narrower contextual focus by looking at only the listed firms in the energy and petroleum sector. Monetary policy variable were not included in the study in both the conceptual and analytical models. Focusing on the determinants of dividend payout ratio in the context of Indian companies, Labhane (2015) established that dividend payout varied across firms. Monetary policy was, however, not included in the analytical model and the study context was Indian hence conclusion may not be induced to the Kenyan situation. A study by Makori (2015) focused on the influence of macroeconomic forces on performance of construction and allied companies listed at the NSE between periods 2004 to 2013. However, the study did not focus monetary policy, did not focus on the financial performance in particular, and narrowed down to only the construction and allied companies' context.

A study by Wanjiru (2013) focused on the association between macroeconomic parameters and dividend payout, considering inflation, exchange rates, money supply and interest rate as the macroeconomic variables influencing dividend payout. However, the study did not consider the REPO, CBR, and 91-Day Treasury bill rates as critical dimensions of monetary policy. With emphasis on the impact of macroeconomic variables on financial

performance of Malaysian firms, Noh (2009) determined that, share price can may only be predicted by information on past interest rate but in the second sample it was revealed that, share price cannot be predicted by information from any of the macroeconomic variables. However, because it focused on a foreign context, the findings may not apply to the Kenyan setting due to unique contextual attributes of the latter. The study also focused on share price rather than dividend policy.

A study by Pandey (2004) focused on the behavior of Indian concerns in regard to dividend payout under restricted monetary policy. The study extended Linter framework to examine balanced panel data of 571 companies for a duration of 10 years. However, because the Kenyan context is unique, the findings by Pandey (2004) may not directly apply. From the foregoing, it is apparent that various knowledge gaps still exist. Some of the gaps are conceptual in nature, some are contextual, and others are methodological. The current study was therefore an attempt to address the gaps by answering the research question: How does the monetary policy influence dividend payout of firms listed at the Nairobi Securities Exchange?

1.3 Research Objective

The objective of this study was to determine the effect of monetary policy on dividend payout of firms listed at the Nairobi Securities Exchange.

1.4 Value of the Study

Managers of firms listed at the Nairobi Securities Exchange would gain invaluable insight capable of guiding them in making dividend decisions in light of the macroeconomic dynamics, and particularly the monetary policy changes. Accordingly, the study provided draw key lessons for success and best practices for the management of the firms, with an overall view to maximizing stakeholder interests, including the shareholders, staff, customers, suppliers, and the government.

The monetary policy committee (MPC) of the Central Bank of Kenya would find the study findings a significant input in policy development as a way of developing sound economic environment. Other key policy organs of Kenya, the East African region, and the entire world would also find the study findings important for the achievement of various policy aspirations. The study will the requisite information for the achievement of various policy aspirations, including the Vision 2030's economic pillar, and the Big four agenda of the Republic of Kenya.

The study findings have contributed to the existing stream of knowledge on monetary policy and dividend payout. The findings of the study would also guide researchers on possible areas of study priority in a bid to enrich the macroeconomic research stream. The theoretical postulations of liquidity preference theory, the expectation theory of interest rates, corporate payout life cycle theory and pecking order theory have each been subjected to empirical test.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section entails a review of literature on the related topical areas as documented by various theorists as well as researchers. The chapter also entails examination empirical literature, mainly on previous studies by various researchers whose focus and findings have significant bearing on the current investigation. The section concludes by the identification of gaps in knowledge motivating the current study.

2.2 Theoretical Review

Underpinning the study is liquidity preference theory based on the observation that, holding all other factors constant, investors prefer holding onto cash and tend to prefer compensation for investment in real estate, stocks, and bonds due to their illiquidity attributes. Expectation theory of interest rates argues that individual investors are bottom-line maximizers, and have access to perfect knowledge on the future short term rates of interest. The pecking order theory postulates that a firm would forgo paying dividends and utilize retained earnings for financing rather than borrowing when costs of external sources of funds are high. Life cycle theory of corporate pay-out argues that based on prevailing macroeconomic conditions such as interest rate, inflation, and regulations, firm would be compelled to change their dividend payout policies and financing options (Bindra, 2013; Berk, 2009; Chowdhury, 2006).

2.2.1 Liquidity Preference Theory

Initially developed by Keynes (1936) liquidity preference theory seeks to explain how the interest rates are determined and influenced by demand and supply of money. Although holding liquid cash refrains one from consuming all his current income, Keynes (1936) argued that interest cannot inspire saving. According to this school of thought, interest is more of a motivation for investors to part with liquidity. Therefore, liquidity is a characteristic of asset, with the level of asset liquidity increasing as it tends to cash.

The theory is based on the observation that, holding all other factors constant, investors prefer holding onto cash and tend to prefer compensation for investment in real estate, stocks, and bonds due to their illiquidity attributes. According to the theory, the compensation required by investors in order to part with cash goes up as the time-span for redeeming the cash increases. Conversely, the increase in compensation rate goes down as the cash recovery time horizon decreases. Technically, this conjecture is denoted as "forward rates should exceed future spot rates" (Musa, 2011).

The interest forgone for not holding stocks, bonds, and other less liquid assets is explained by the demand for cash as an asset. The demand for liquidity is determined by transaction, precautionary and speculative motive. Investors demand more money to hold onto when interest rates decreases (Baker, 2016). The price of an existing bond is driven down for its yield to align with the interest rate. The speculative motive of holding cash stipulates that, demand for money increases with decrease in interest rates, and vice versa. Investor's

preferences affect listed firms dividend policies and are compelled to change it to reflect prevailing interest rates in the economy (Berk, 2009).

2.2.2 Expectation Theory of Interest Rates

The theory postulates that buyers of securities are maturity period indifferent, hence the time to maturity is a constant. The buyers would hence not consider maturity period as a determinant for security preference, there are therefore no perfect security substitutes. This therefore means that perfect substitute's securities with different maturity have equal expected returns (Bindra, 2013). The average short-term and long-term security interest rates would be hence be equal in the long run. The theory is underpinned by the assumption that individual investors are bottom-line maximizers, and have access to perfect knowledge on the future short term rates of interest. Based on the foregoing assumptions it can be concluded that interest rates in the long term are basically the mean anticipated short term rates on bonds maturing in the future. This is however a simple average since the compound interest factor is not taken into account.

According to the theory, long term interest rates are a simple average of short term interest rates, an upward trend in short term interest rate automatically implies an upsurge in the mean interest rate, hence an equivalent increase in long term rates of interest. It follows therefore that both short and long term interest rates move concurrently (Chowdhury, 2006). However, long term rates would tend to experience less standard deviation, hence less volatile. Investors expect return on their investments that commensurate the risk

undertaken (Argy, 2013). In order to invest in shares, investors must be enticed by promise of higher reward in form of dividends. Since interests are controlled through monetary policy, changes in interest rates would affect investors expected return. They would therefore prefer the security that promises higher expected future return (Khon, 2003).

2.2.3 Pecking Order Theory

The theory postulates that while sourcing funding, firms prioritize financing based on the principle of least resistance (Donaldson, 1961; Myers et al., 1984). Internal sources of fund are the most attractive option then debt and finally equity as the last option. By limiting payouts a firm would have free cash flows in form of retained earnings and therefore no need for additional debt and equity capital. Retaining earnings saves the company from incurring floatation costs and dilution of ownership that results from issuing additional equity. Retaining earnings can help a company accumulate funds to fund future projects and generate more returns for shareholders.

Equity and debt issue also depends on several macroeconomic factors such as level of market liquidity, prevailing interest rates on government bonds and how attractive the issuing company is perceived by the market where its shares are issued (Hafeez, 2009). Dividends comprise a substantial cash outflow and a company must put in place proper plans and policies to guide in making dividend decision. The cost of external funds is an important determinant in determining whether a concern should borrow or utilize internal sources of funds. A firm would forgo paying dividends and utilize retained earnings for financing rather than borrowing at high external costs (Musa, 2011).

2.2.4 Life Cycle Theory of Corporate Payout

Payout behavior can best be explained by time-dependent cost, advantages of payout, as the benefits of retention (Inagambear, 2012). Additional considerations ought to be taken into account apart from focusing on free cash flow as a way to impress shareholders. An optimal payout policy should be hinged on the managerial motivation for payout as well as capital requirements for investment.

Overtime earnings and investment opportunities are set to change and therefore tradeoff between retention and payout evolve and change (Grullon, Michaely & Swaminathan, 2002). Firms operate in a constantly changing environment and therefore their dividend payouts opt to be flexible to adapt to these changes. Macroeconomic changes present opportunities and challenges to a firm and therefore a firm should adopt its policies to these changes among them being the dividend policy. Based on prevailing macroeconomic conditions such as interest rate, inflation, and regulations, firm would be compelled to change their dividend payout policies and financing options (Baker, 1999).

2.3 Determinants of Dividend Payout

A firms' dividend payout is primarily determined by profitability, company size, liquidity, investment opportunity sets, taxation, and leverage (Nuhu, Musah & Senyo, 2014)**.** Company' capacity to pay dividends have for long been primarily indicated by profits. A survey by Lintner (1956) focusing on chief finance officers and corporate executive officers established that dividend are determined by both current and past profits. Current

and previous year's profit are of significant influence in formulation of firms' dividend policy. Dividends are a function of past and current earnings, future earnings and future expected earnings.

A study by Karanja (1987) on the NSE listed firms concluded that profits were a determinant of the dividend policy. Fama and French (2000) study on dividend payers from 1926 to 1999 showed sharp decrease in the percentage of concerns that pay dividends after 1978. He further noted differences among the dividend payers with respect to their size, investment opportunities, as well as the level of bottom-line.

The three overriding determinants of dividend payout policy are size, investment opportunities, as well as the level of bottom-line reported in the accounting period. Former payers' tend to be distressed, have low earnings and few investments. Non-dividend payers reported better bottom-line, with more prospects for growth. Non-dividend payers tend to spend more on research and development, invest at a higher rate, and report superior market value ratio of assets to their net book value compared to their dividend-payer counterparts. Liquidity is a firm's ability to convert assets to cash in emergency situation. This means that with liquidity money is not tied up in assets that cannot be easily converted to cash in relatively short time. An illiquid firm would have to reduce the amounts payable as dividend to its shareholders so as to maintain free cash flow to cater for emergencies (Brearly, 2000).

Availability of viable investment opportunities is an important constituent of a firm market value. Availability of a set of investment opportunities represent a firm investment growth options, (De Angelo et al. 2006). According to Myers (1977), the value is predetermined by managers' discretions on expenditures. As explained further by Myers (1977) investment prospects are a yet to be actualized economically viable ventures that a firm can take to its advantage for economic rents. Investment prospects therefore denote a firm's element of expected value resulting from selection of future investment options (Smith and Watts, 1992). In order to finance their expansions, firms with high growth prospects need to retain more of their earnings (Chang and Rhee, 1990). The observation collaborated Myers and Majluf (1984) conclusions where it was observed that firms with future high prospects for growth tend to have relatively low payout ratios.

Various writers have used various ways to measure investment opportunities. Among the methods commonly used include book to market value of assets (Smith and Watts, 1992) and market to book value of equity (Collins and Kothari). With differential in ordinary dividends and tax on capital gains, Farrar and Selwyn (1967) showed that zero dividends policy maximizes share value. This was noted also by King (1974) who argued that financing investments internally minimizes payout. Firm that are unable to offset advance corporation tax from their tax obligation are particularly observed to have low payouts. Contrary to notional inverse correlation between dividends payout and taxes, Abor and Amidu (2006), found positive link between corporate tax and dividend payout ratio in Ghana. This observation signified that increasing tax lead to increase in dividend payout.

By financing their activities on debt, firms put pressure on their overall liquidity. The demand by debt financiers for principal repayment and periodic interest payments reduce their residual income to assure payment of dividend to shareholders. As a result, the amount of dividend payable in a period is impacted negatively. Kowalski *et al.* (2007) argued that highly levered firms have lower payout ratios. This was affirmed by Al- Kuwari (2009) where it was observed that dividend payout is inversely related to gearing ratio. By using debt in firm capital mix, firms are able to lower the associated agency cost and therefore enhance profitability with tendency of improving dividend payment. A study by Agrawal and Narayanan (1994), stated that non-geared firms' payouts are relatively larger than those for geared firms. Negative relationship has been reported between dividend payments and leverage in past studies by, Gugler (2003), Aivazian et al. (2003) and Abor and Bokpin, 2010.

2.4 Empirical Review

Academic interest on the relationship between macroeconomic factors and various microeconomic factors such as dividend policy continues to develop. A study by Baker and Jabbouri (2016) focused on a survey of executives of concerns listed on the Cassablanca Stock Exchange (CSE). The objective was to discern their opinion on the factors affecting dividend issues, dividend policy, as well as reasons for dividend payout. The study revealed that dividend payouts were explained by the how stable the earnings are, current shareholders preferences, and amount of current earnings.

A study by Makori (2015) focused on the influence of macroeconomic forces on performance of companies listed at the NSE under the construction and allied segment between the years 2004 to 2013. The study findings suggested a weak positive none statistically significant relationship between performance measured by firm's Tobin's Q ratio and the GDP growth rate, confirming that when there is economic growth in a country, firm performance is equally boosted with good returns to the capital owners. However, the study did not focus monetary policy, did not focus on the financial performance in particular, and narrowed down to only the construction and allied companies' context.

Others such as Wanjiru (2013) did a study on the effect of macroeconomic factors and dividend payout of firms listed at the NSE. The study revealed that the selected macroeconomic factors has significant effect on dividend payout. The macroeconomic variables studied were exchange rate, interest rates, inflation and money supply. The study sort to establish how these variable influence dividend payout. Secondary data from NSE and Central bank of Kenya for the period 2002 to 2012 was analyzed using regression. The study concluded that macroeconomics variables are very significant in determination of dividend payout by firms listed at the NSE.

Hellström and Inagambaev (2012) conducted a two-fold study investigating the link between a number of company specific attributes and dividend payout ratios, with specific focus on the moderating role of size of the concern on that association. The variables included in the model were leverage, growth, free cash flow, size, profit, and risk factors.

The research employed longitudinal design with secondary data spanning 2006 and 2010. Both Tobit regression and ordinary least square method to investigate this association.

A study by Elly and Oriwo (2012) sought to investigate the association between macroeconomic factors and the NSE-All Share Index. The specific objective was to examine if changes in the macroeconomic parameters could predict the future the NSE-All Share Index. The study used secondary data over the period-March 2008 to March 2012 and used regression as the analytical method. Because off its multicollinearity with the 91-Day T bill rate, lending rate variable was excluded from the model. The study concluded that 91-Day T-bill rate had a negative correlation with the NSE-All Share Index while inflation had an insignificant positive correlation with the NSE-All Share Index.

A study by Mwanza (2012) focused on a sample of listed companies that consistently paid dividend during the time span-year 2002 and 2011. The study established that inflation rate had insignificant effect on dividend payout. In spite of this, variables such as volume of money supply, 91 day T-bill rate and Dollar exchange rate reported mixed findings.

Olweny et al. (2012) conducted a study to establish association between of monetary policy and interest rates in Kenya. A census of all banking institutions operating in Kenya were included in the population for study. The study focused on 91-Day Treasury bill rate, central bank rate and REPO rate as the major monetary policy instruments. Multiple

regression analysis was conducted to determine the effect of monetary policy on interest rate in Kenya.

Pandey (2004) conducted a study on the behavior of Indian concerns in regard to dividend under restricted monetary policy. The study established that the concerns had lower target ratios and higher adjustment parameters. The survey concluded that some explanatory variables had significant impact on the criterion variable and that firm size played a significant moderating role in this respect. Accordingly, it was determined that large firms' dividend payout ratios were more significantly affected by risk, free cash flow and growth.

2.5 Summary of Literature Review

From the foregoing empirical analysis, it can be argued that a company's dividend payout is influenced by the company size, profitability, liquidity among other factors, with majority of previous studies converging on this conclusion. For instance, Wanjiru (2013) study on the effect of macroeconomic factors on dividend payout by firms listed at the NSE showed that macroeconomic factors are significant in determination of dividend payout.

Nevertheless, no study has focused on the REPO, CBR, and 91-Day Treasury bill dimensions of monetary policy in Kenya. The current study therefore sought to determine the effect of REPO, CBR, and 91-Day Treasury bill dimensions of monetary policy.

2.6 Conceptual Framework

The conceptual framework in Figure 2.1 anticipated the influence of monetary policy on dividend payout. This was especially because previous studies had reported mixed findings in that respect. Monetary policy was operationalized using the repo-rate, central bank rate, and the 91-day T-bill. Dividend pay-out was operationalized using annual dividend pay-out ratio.

Figure 2.1 Conceptual Framework

Monetary Policy	Dividend Payout
• REPO rate • Central bank rate • 91-Day T-bill rate	• Annual dividend pay-out ratio

Independent Variable   **Dependent Variable**
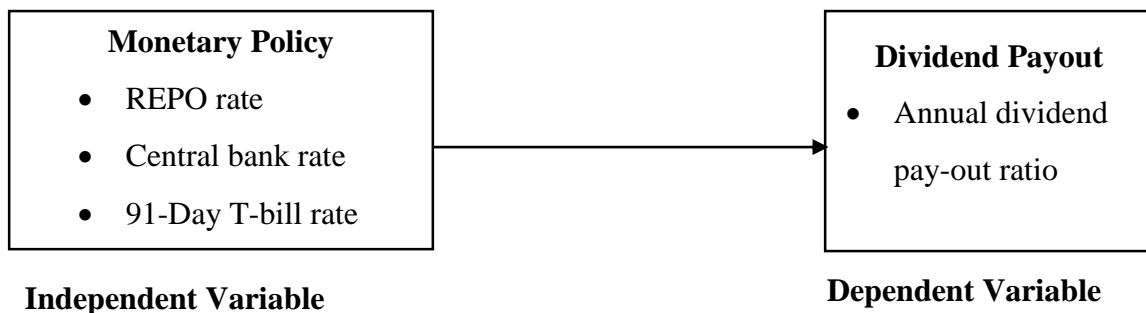
The conceptual framework in Figure 2.1 above envisaged an association between monetary policy and dividend payout. From the model, the independent variable was the monetary policyand dividend payout was the dependent variable. The study objective was to subject the above conceptual framework to an empirical test in the context of firms listed at the Nairobi Securities Exchange.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter details the study methodology. The research design, study population, as well as data collection method, analysis and presentation techniques have all been unveiled in this segment. From the outset, the research design was mainly longitudinal census survey (hence there was neither sampling design nor frame), and the target population was all firms listed at the Nairobi Securities Exchange.

3.2 Research Design

Research design has been defined by Kothari (2004) as the plan used to guide a research to ensure that it addresses the study problem. Three general forms of research are descriptive research design, causal research design, and exploratory research design. This study used descriptive longitudinal design. Cooper & Schindler (2006) describe a descriptive study as that which involves a phenomena description or of characteristics associated with a subject population. This design was selected because it was consistent with the study objectives, scope of the research, and the type of analyses to be undertaken.

3.3 Population of the Study

The study population consisted of all the sixty firms listed at the Nairobi Securities Exchange. The list was obtained from the Nairobi Securities Exchange, as at December, 2017 as shown in Appendix I. A census of the target population was hence be done. The

firms listed in Nairobi Securities Exchange had been identified as an appropriate study population because they are under obligation by the legal framework to publish their audited accounts with dividend payout ratio as a requisite component.

3.4 Operationalization of Study Variables

Table 3.1 Operationalization of Study Variables

Variable	Dimension	Scale Type	Source
Monetary Policy	Repo rate	Ratio	Ross, Westerfield & Jordan (2000)
	Central bank rate	Ratio	Ross, Westerfield & Jordan (2000)
	91-Day Treasury bill	Ratio	Ross, Westerfield & Jordan (2000)
Dividend Payout	Annual composite dividend payout rate	Ratio	Saunders & Cornett (2008)

3.5 Data Collection

Secondary data on dividend payout and monetary policy was obtained from the Nairobi Securities Exchange and Central Bank of Kenya respectively. Dividend payout data was obtained from published financial statements for the last 10 years from 2007 to 2016, from where an annual composite was calculated. Data on the monetary policy constructs were obtained the Central Bank of Kenya and affiliated institutions.

The dividend payout was mainly the annual dividend paid out by the listed firms during the study period. The 91 day treasury rates used mainly the average 91-Day Treasury bill rate that the government borrows from the public. The Repo rates were obtained from the

CBK records, same as the inter-bank rate for the period of study. These were used to reflect the monetary policy instruments applied by the CBK to control availability and use of money in the market.

3.6 Linear Regression Diagnostics

Various diagnostic tests were conducted to confirm that the various linear regression assumptions were met. The tests include normality, linearity, and degree of multicollinearity. The normal distribution assumption was tested by use of graphical, where the histograms for data distribution were examined for normal distribution of data. Linearity assumption was tested using scatter plots, where the distribution was checked for linear distribution. Multicollinearity occurs whenever more than one of the predictors in a regression model are temperately or highly correlated. One of the methods of testing for multicollinearity is by the examination of the variance inflation factors (VIF), being an indicator of the impact of collinearity among the variables in a regression model.

Values greater than 10 are usually considered as indicators of significant multicollinearity and unstable beta coefficients. The study hence used VIF to do multicollinearity diagnostics. The outcome of the VIF tests were also be counter-checked with the examination of correlation matrix; with correlation coefficient greater than 0.5 considered an indicator of significant multicollinearity between the variables concerned.

3.7 Data Analysis

The secondary data shown in raw data form attached in Appendix II was processed and subjected to both descriptive and regression analyses. Descriptive analysis involved measures of central tendency and dispersion, while regression analysis entailed correlation analysis. The criterion variable in this study was the dividend payout measured by the composite dividend payout ratio, while the predictor variable was the monetary policy measured by the composites of repo rate, CBK rate, and the 91-day T-bill rates.

3.7.1 Operations

To obtain the magnitude and direction of the effect of monetary policy on dividend payout of firms listed at the Nairobi Securities Exchange, multiple linear regression equation was used. The regression model used in the study was:

$$D = \beta_0 + \beta_1 R + \beta_2 C + \beta_3 T + \mu i$$

Where; β_0, β_1, β_2, β_3............β_n are regression model coefficients, D= Annual dividend payout ratio, R = Repo rate (US dollar), C= Central bank rate, T= 91 Day Treasury bill rate, and μi –refers to the expected error that is assumed to be associated with the variables.

3.7.2 Test of Significance

Two tests of statistical significance were done: t-test and F-test. The t-test was performed for validation of significance of the monetary policy in the model. On the other hand, F-test was used to assess overall robustness and significance of the regression model. The conclusions were drawn based on two tests of statistical significance.

CHAPTER FOUR

DATA ANALYSIS, RESULTS, AND FINDINGS

4.1 Introduction

This chapter presents the actual data analysis, the results of the analysis, as the findings. Consistent with the study objective, as well as the conceptual and analytical models, this chapter involves a detailed presentation on the descriptive statistics as well as regression output. Whereas the former entails measures of central tendency and dispersion, the latter involves a detailed presentation of the model summaries, the analyses of variance (ANOVA), as well as the model coefficients. It is based on the foregoing analytical output that the findings have been communicated.

4.2 Regression diagnostics

According to Sapsford (2007) linear regression is not robust to violation of four assumptions. Before conducting linear regression, therefore, diagnostic tests must be undertaken to verify that the data meets each of the four linear regression assumptions, namely: linearity, normality, and homoscedasticity. Various diagnostic tests were done to verify conformity of the data to the linear regression assumptions.

4.2.1 Multicollinearity Test

Linear regression assumes insignificant multicollinearity between pairs of variables. The data on Repo rate, CBR, and Treasury bill were tested for significant multicollinearity. Variance inflation factors (VIFs) were used in this diagnosis, with correlation matrix used for further test. Table 4.1 presents the results, on the VIF test.

Table 4.1 Variance Inflation Factors

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Repo	.658	**1.521**
CBR	.968	**1.033**
Tbill	.649	**1.541**

a. Dependent Variable: Dividend Payout

According to Sapsford (2007) multicollinearity is characteristic in data that cannot be eliminated completely but only ought to be as low as possible. According to Cooper and Schindler (2006) VIF values above 10.0 demonstrate significant multicollinearity between pairs of variables. Table 4.1 shows that the variance inflation factors were 1.521, 1.033, and 1.541 for Repo rate, CBR, and T-bill respectively. This shows that there was no significant multicollinearity between the variables since none of them was above 10.0. Correlation between two independent variables should be less than 0.5 (50%) for linear regression to be plausible. Otherwise, the pair of variables would be deemed to have significant multicollinearity (Cooper & Schindler, 2006; Sapsford, 2007).

4.2.2 Linearity Test

Linear regression assumes linear distribution of data and is not robust to violation of the same. This assumption was tested using scatter plots. The resulting scatter graphs were examined for linear distribution of data as shown below.
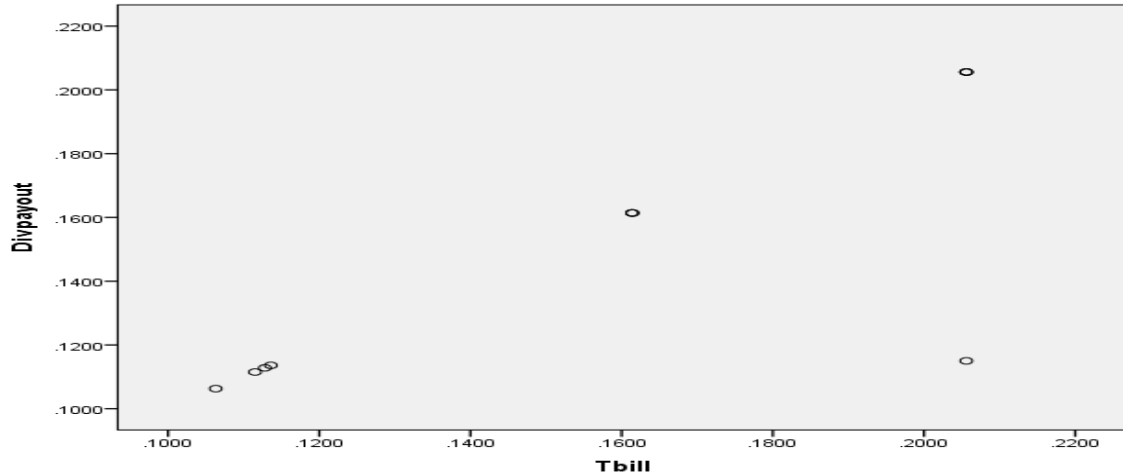
Figure 4.1: Scatter Graph on Treasury-bill and Dividend Payout

Figure 4.1 shows that Treasury bill and Dividend Payout are linearly distributed. This is demonstrable from the scatter plots which lie in a more or less straight line. It is therefore possible to linearly regress dividend payout on Treasury-bill.
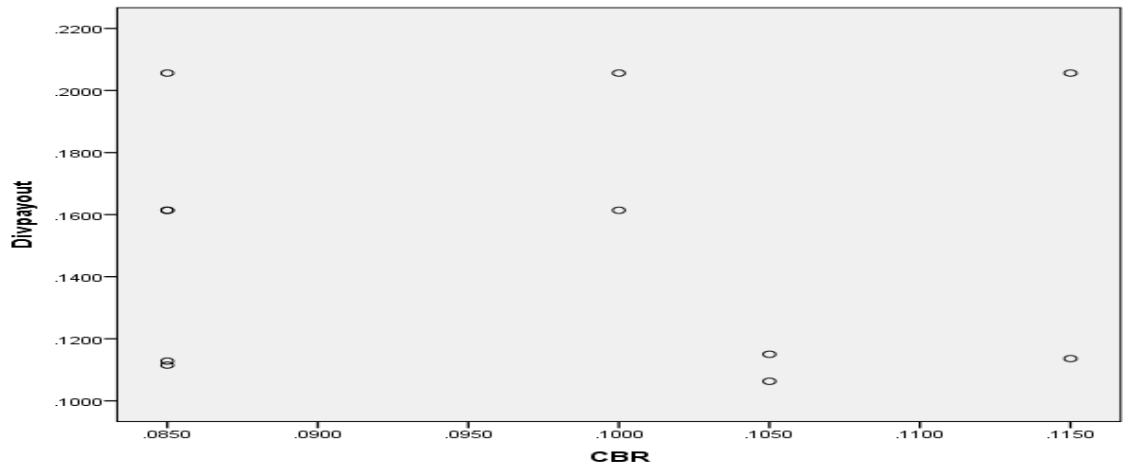
Figure 4.2: Scatter Graph on CBR and Dividend Payout

Figure 4.2 shows that Treasury CBR and Dividend Payout are not perfectly linearly distributed. This is demonstrable from the scatter plots which reveal an oval shape.
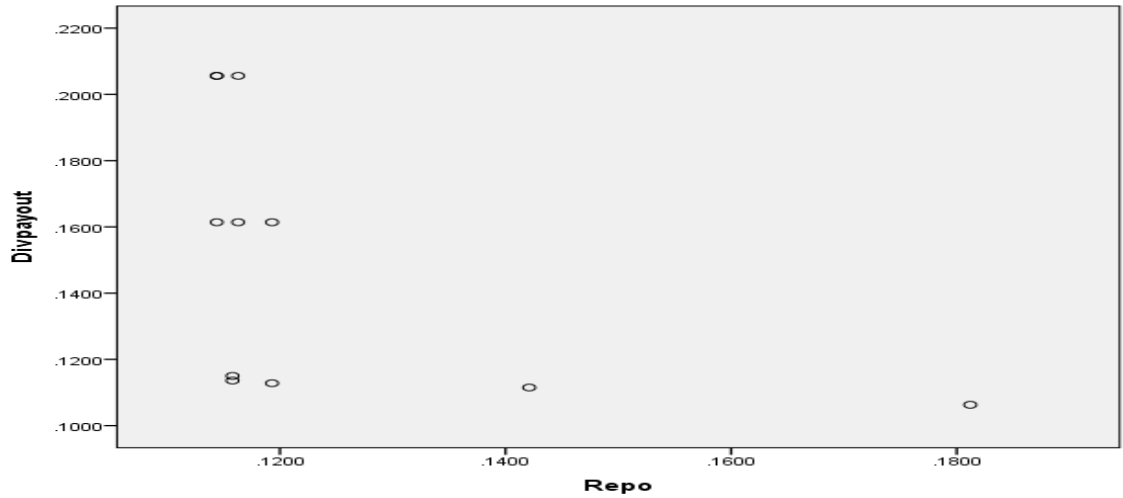
Figure 4.3: Scatter Graph on Repo rate and Dividend Payout

Figure 4.2 shows that Treasury Repo rate and Dividend Payout are not linearly distributed. This is demonstrable from the scatter plots.

4.2.3 Normality Test

Linear regression assumes normal distribution of data. The test was done using histogram as shown below.
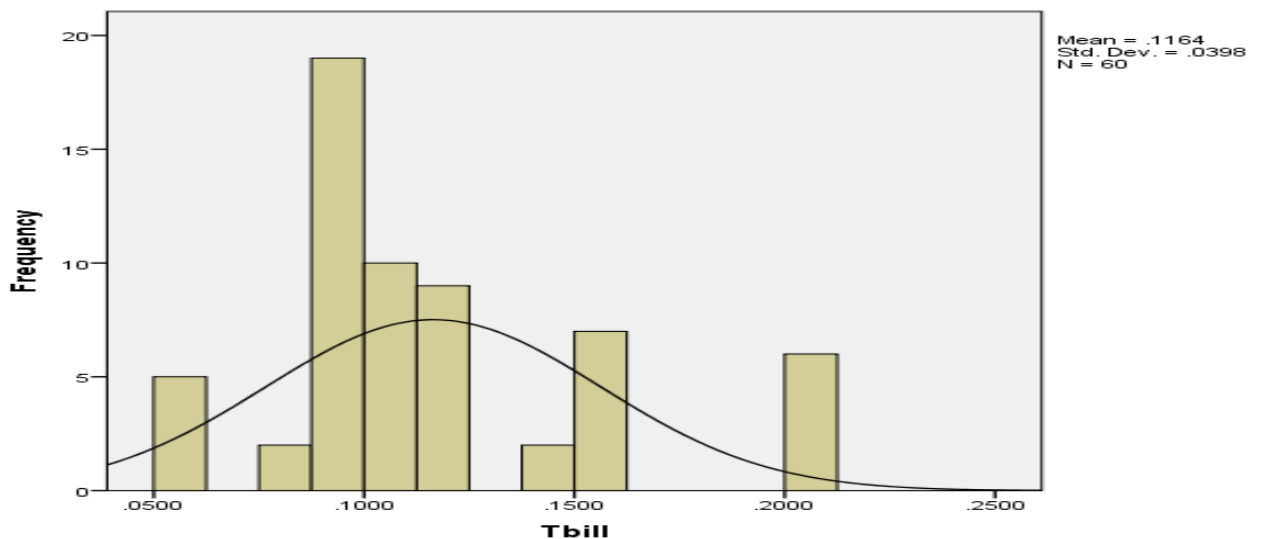
Figure 4.4 Treasury-bill Data Distribution

From figure 4.4, the data distribution forms a bell shaped curve meaning that the Treasury bill rate is normally distributed.
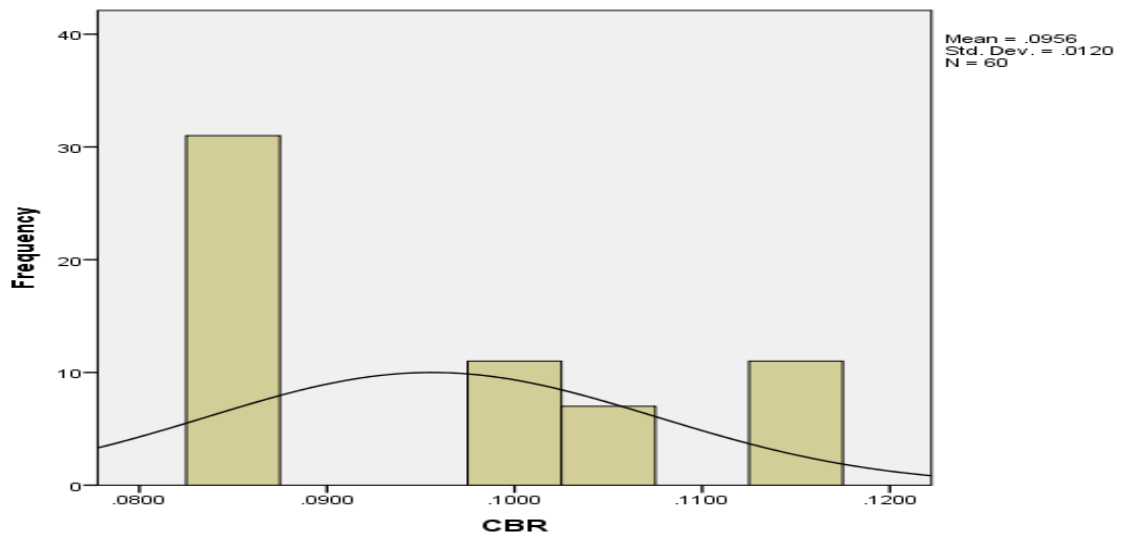
Figure 4.5 Central Bank Rate Data Distribution

From figure 4.5 above, the data obtained on central bank rate normal curve has no outliers and thus indicating normal distribution.
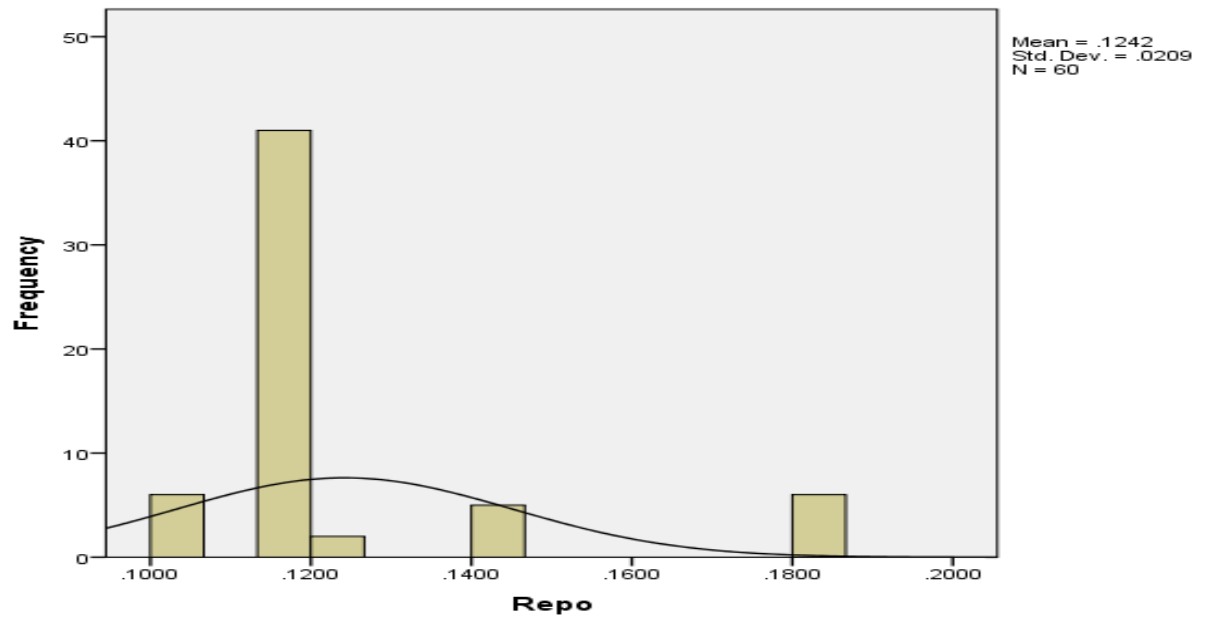
Figure 4.6 Repo Rate Data Distribution

From figure 4.6, the normal distribution curve is lightly tailed. The Repo rate is therefore normally distributed.
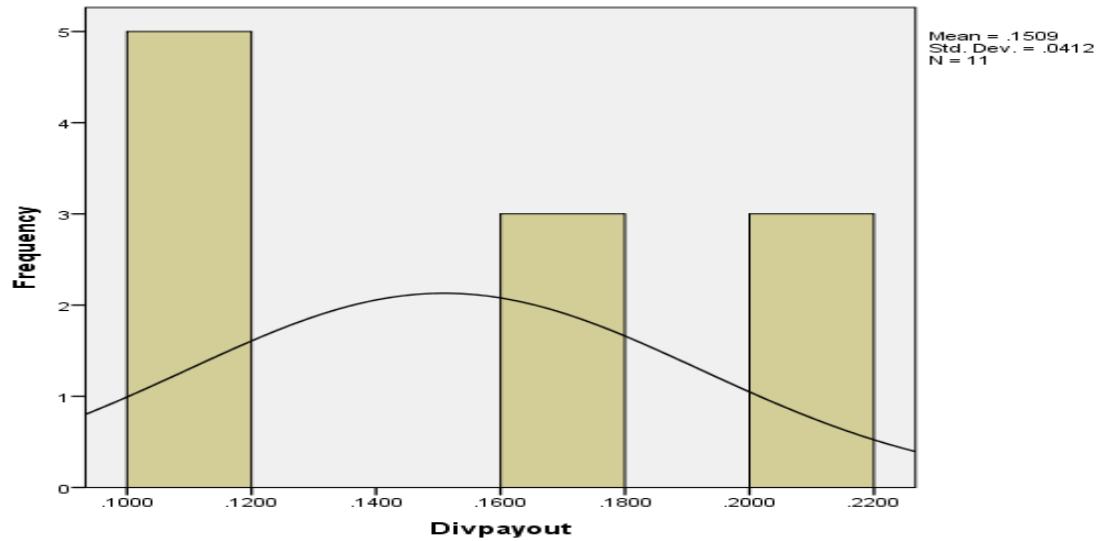
Figure 4.7 Dividend Payout Data Distribution

From Figures 4.7 the data on Dividend payout demonstrated normal distribution.

4.3 Descriptive Statistics

The central tendency and dispersion statistics were used. The central tendency measured the extent to which the data on each variable were concentrated at a central point while dispersion measured the degree to which the data were spread out from the convergent point. The central tendency was measured by the mean while dispersion was measured by the standard deviation. Table 4.3 presents the findings of the study with respect to the descriptive analytics.

Table 4.2 Descriptive Statistics

Variable	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Dividend Payout	60	.6620	.0000	.6620	.1774	.1959	.038
Repo	60	.0755	.1057	.1812	.1241	.0209	.000
Central Bank Rate	60	.0300	.0850	.1150	.0955	.0119	.000
91-Day T-bill	60	.1464	.0592	.2056	.1164	.0398	.002

From Table 4.2 dividend payout had a minimum of nil, implying that at least one firm did not pay dividend over the period. The highest dividend payout ratio was 0.662, implying that at least one firm did a dividend payout of 66.2% over a similar period. This represented a dividend payout range of 0.662. The mean of dividend payout was 0.1774, representing 17.74%. This implies that the dividend payout among the firms tended towards 17.74%. The variance of dividend payout was 0.038 while the standard deviation was 0.1959, representing 19.59% deviation about the mean.

As demonstrated by Table 4.2 repo rate had a minimum of 0.1057, meaning that the lowest repo rate over the period under review was 10.57%. The highest repo rate stood at 0.1812 representing 18.12% repo rate over the period 2006-2016. This represented a range of 0.0755, representing 7.55%. The mean for repo rate was 0.1241 representing 12.41%. This implies that the repo rate, although volatile, tended towards 12.41% mark over the period under examination. The repo rate variance was negligible, while the standard deviation was 0.0209, representing 2.09%.

Table 4.2 indicates that central bank rate (CBR) had a minimum of 0.0850, meaning that the lowest CBR was 8.5% during the ten year period. The highest CBR was 0.1150 over a similar period, representing 11.5%. The CBR range was therefore 0.0300, representing 3.0% difference between the highest and lowest CBRs. The CBR had a negligible variance, and a standard deviation of 0.0120 representing 1.2%. This standard deviation was about the mean of 0.0956, representing 9.56%.

From Table 4.2 the minimum 91-Day Treasury bill rate over the ten year period was 0.0592 representing 5.92% over the period. This was against a maximum of 0.0256 representing 20.56% during a similar period, and a range of 0.1464, being 14.64%. The 91-Day Treasury bill rate variance and standard deviation were 0.0398 and 0.002 respectively, with the former representing 3.98%. The variance and standard deviation were about the mean of 0.1164 representing 11.64% over the period under review.

4.4 Correlation Analysis

As a statistical measure, correlation signify the degree to which two or more variables fluctuate together. Positively correlated variables is an indication that a changes in one or more variable leads to change in the other variables in the same direction. Variable are said to be negatively correlated if changes in one of the variables leads to a change in the other variable in opposite direction. Table 4.3 shows the nature and degree of correlation between pairs of variables.

Table 4.3 Correlation Matrix

		Dividend payout	Repo	CBR	Treasury-bill
Dividend payout	Pearson Correlation	1	-.498	-.022	.787[**]
Repo	Pearson Correlation	-.498	1	-.250	-.315[*]
CBR	Pearson Correlation	-.022	-.250	1	.116
Treasury-bill	Pearson Correlation	.787[**]	-.315[*]	.116	1

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

The Repo rate, CBR, and Treasury-bill correlation each with dividend pay-out was -0.498, -0.022, and +0.787 respectively. From Table 4.4 above, the most significant correlation was noted between Treasury-bill and dividend payout, with a correlation coefficient of .0787 at a significant level 0.05.

4.5 Regression Analysis

The study sought to determine the influence of monetary policy on dividend payout of firms listed at the Nairobi Securities Exchange (NSE). The coefficients of determination were used to bring out the extent to which each of the three independent variables explained the dependent variable. The model summary was used to determine the degree to which the three independent variables jointly explained dividend payout among the firms. The

study sought to determine the joint influence of 91-Day Treasury bill, CBR, and Repo rates on dividend payout of the firms listed at the NSE. The objective was met by regressing dividend payout on Treasury-bill, CBR, and Repo rate.

Table 4.4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796[a]	.634	.477	.0297882

a. Predictors: (Constant), Tbill, CBR, Repo

b. Dependent Variable: Dividend payout

Table 4.4 demonstrates that the coefficient of determination, represented by the adjusted 'R square' was 0.477 representing 47.7%. This implies that the monetary policy dimensions (91-Day Treasury bill, CBR, and Repo rates) jointly explained up to 47.7% of dividend payout. This would mean that 52.3% of dividend payout was explained by variables outside the model.

Table 4.5 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.011	3	.004	4.045	.058[b]
	Residual	.006	7	.001		
	Total	.017	10			

a. Dependent Variable: Dividend payout

b. Predictors: (Constant), Tbill, CBR, Repo

From the ANOVA statistics in Table 4.5 the regression model had a fit with the data ($F=4.045$, $P < 0.01$). This is an indication that monetary policy dimensions (91-Day Treasury bill, CBR, and Repo rates) had a significant influence on dividend payout.

Table 4.6 Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.081	.117		.687	.514
	Repo	-.100	.569	-.049	-.175	.866
	CBR	-.380	.778	-.114	-.489	.640
	Tbill	.751	.276	.772	2.720	.030

a. Dependent Variable: Dividend payout

From Table 4.6 the established regression equation was

D = 0.081 - 0.049R - 0.114C + 0.772T

The regression equation above revealed that if Repo, CBR, and 91-Day Treasury Bill rates were each held constant, the dividend payout would increase by 0.081 representing 8.1%. However, a unit change in each of the three monetary policy dimensions: 91-Day Treasury bill, CBR, and Repo rates, would lead to change in dividend payout by factors of 0.772, -0.114, and 0.049 respectively.

4.6 Discussion of Research Findings

The study objective was to determine the influence of monetary policy on dividend payout of firms listed at the NSE. Descriptive and relationship analyses were done to achieve this objective. Descriptive statistics used include the mean, representing a measure of central tendency, and standard deviation, representing a measure of dispersion.

The most significant correlation was noted between Treasury-bill and dividend payout, with a correlation coefficient of 0.787 at 0.05 level of significance. This finding is in agreement with that of Wanjiru (2013) who did a study on the relationship between macroeconomic factors and dividend payout of firms listed at the NSE, and it established that dividend payout had a significant relationship with selected macroeconomic variables.

Coefficient of determination of the study, represented by the adjusted 'R square' was 0.477 representing 47.7%. This implies that the monetary policy dimensions (91-Day Treasury bill, CBR, and Repo rates) jointly explained up to 47.7% of dividend payout. The findings are in line with that of Pandey (2004) who conducted a study on the behavior of Indian concerns in regard to dividend under restricted monetary policy. Pandey (2004) established that monetary policy had semi-strong relationship with the dividend payout of firms in India.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary, draws conclusion and unveils recommendations from the study findings. The summary, conclusion, and recommendations have been made based on the theoretical predictions, as well as the findings of prior studies. Various recommendations have also been made according to the scope of the study.

5.2 Summary of Findings

The study sort to determine the effect of monetary policy on dividend payout. The joint effect of the three monetary policy constructs was investigated. The individual influence of each of the three constructs on dividend payout was also investigated. In this regard, summary of the study findings have been presented in this section based on the sets of relationships between and among variables.

From the study, Repo Rate, Central bank rate, and Treasury bill rate had a correlation coefficient of -0.498, -0.022 and 0.787 respectively. The Monetary policy variables, Repo Rate and Central Bank rate, don't have significant influence on dividend payout of firms listed at the NSE. From the study, it was revealed that Treasury bill rate have significant influence on dividend payout of firms listed at the NSE. This because monetary policy is actually a macroeconomic factor.

The findings are in tandem with those of Olweny et al. (2012) who sought to establish the association between of monetary policy and interest rates in Kenya. Albeit the dependent variables was different, one of the key monetary policy constructs in the study was CBR. It was determined that CBR indeed significantly influenced interest rates, which was another key antecedent of dividend payout among firms.

The study established that 91-Day Treasury-bill had significant influence on dividend payout of firms listed at the Nairobi Securities Exchange (NSE). The findings are however in contradiction with Mwanza (2012) who focused on a sample of listed companies that consistently paid dividend during the time span-year 2002 and 2011, and reported mixed findings. The current study has, therefore, affirmed a strong positive association between the 91-Day Treasury-bill rate and dividend payout of firms listed at the NSE.

5.3 Conclusion

From the study findings it can be deduced that monetary policy generally is a critical antecedent of dividend payout of firms listed at the NSE. The study further concludes that monetary policy variable, Treasury-Bill rate, is significantly related to dividend payout. This means that policy making institutions ought to pay keen attention to the dynamics around Treasury bill rate as a mechanism for capital market development.

5.4 Recommendations

In order to have a proper policy-practice nexus, the study recomends practitioners in the field of Finance to develop systems and processes that would trigger capital market

development. This could be through robust collaboration between the policy makers and the practitioners. Specifically, the study recommends that the academics should develop models that can be used by management practitioners to enhance the growth of their firms.

5.5 Limitations of the Study

The study was characterised by a few limitations that were largely as a result of its scope. Firstly, the study only modelled Repo rate, the Central Bank Rate, and 91-Day Treasury-bill rate as the input variables, with a lot of other macroeconomic factors falling outside the conceptual scope of the study. This is more so because of the multiplicity of the macroeconomic factors. The study also focused exclusively on the firms listed at the Nairobi Securities Exchange (NSE), yet majority of firms in Kenya are actually not listed but contribute significantly to the gross domestic product (GDP) of the Kenyan economy.

The study also relied exclusively on historical data, and yet future trends could be significantly different from the past scenario. The study did not model non-economic factors such as legal, cultural, and political despite elaborate literature emphasizing their influences on the performance of organizations, and hence dividend pay-out. This would, however, require skilful development of measurement criteria, given that most of the non-economic factors are qualitative in nature.

5.6 Suggestions for Further Research

The study recommends further investigation focusing on various moderating and intervening factors such as firms attributes since this was not within the scope of the current investigation. Some of the attributes that the study suggests for examination include size, age, and corporate governance. This is because some prior studies have reported mixed findings, with a few inconsistencies with the findings of the current investigation. In this regard, a few scholars have tentatively attributed the inconsistencies to possible moderating and intervening influences.

The study also suggests further research focusing on other macroeconomic factors not modelled in the current investigation. This is because of the multiplicity of these factors, and hence the impracticality of exhausting them in one study. A study is also suggested focusing on unlisted companies, since they comprise a significant portion of the GDP, and yet little is known about their dividend payout dynamics. The study also recommends that the academics and researchers in the field of Finance and Economics should work in collaboration with policy makers and practitioners in an effort to steer growth of organizations.

Further research is also recommended focusing on non-economic macro factors such as legal, political, and cultural to determine their influences on the dividend payout of various firms, listed or otherwise. This is because literature stream has been quite emphatic on their influences in the performance of various organizations, yet research in the field of Finance has not given them significant attention.

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Appendix I: List of Firms Listed at the Nairobi Securities Exchange

SECURITIES	ISIN CODE	TRADING SYMBOL
AGRICULTURAL		
Eaagads Ltd	KE0000000208	EGAD
Kakuzi Ltd	KE0000000281	KUKZ
Kapchorua Tea Co. Ltd	KE4000001760	KAPC
The Limuru Tea Co. Ltd	KE0000000356	LIMT
Sasini Ltd	KE0000000430	SASN
Williamson Tea Kenya Ltd	KE0000000505	WTK
AUTOMOBILES & ACCESSORIES		
Car & General (K) Ltd	KE0000000109	C&G
Marshalls (E.A.) Ltd	KE0000000364	MASH
Sameer Africa Ltd	KE0000000232	FIRE
BANKING		
Barclays Bank of Kenya Ltd	KE0000000067	BBK
CFC Stanbic of Kenya Holdings Ltd	KE0000000091	CFC
Diamond Trust Bank Kenya Ltd	KE0000000158	DTK
Equity Group Holdings Ltd	KE0000000554	EQTY
Housing Finance Group Ltd	KE0000000240	HFCK
I&M Holdings Ltd	KE0000000125	I&M
KCB Group Ltd Ord	KE0000000315	KCB
National Bank of Kenya Ltd	KE0000000398	NBK
NIC Group PLC	KE0000000406	NIC
Standard Chartered Bank Kenya Ltd	KE0000000448	SCBK
The Co-operative Bank of Kenya Ltd	KE1000001568	COOP
COMMERCIAL AND SERVICES		
Atlas African Industries Ltd	KE4000004095	ADSS
Express Kenya Ltd	KE0000000224	XPRS
Hutchings Biemer Ltd	KE0000000257	HBER
Kenya Airways Ltd	KE0000000307	KQ
Longhorn Publishers Ltd	KE2000002275	LKL
Nairobi Business Ventures Ltd	KE5000000090	NBV
Nation Media Group Ltd	KE0000000380	NMG
Standard Group Ltd	KE0000000455	SGL
TPS Eastern Africa Ltd	KE0000000539	TPSE
Uchumi Supermarket Ltd	KE0000000489	UCHM

WPP Scangroup Ltd	KE0000000562	SCAN
CONSTRUCTION & ALLIED		
ARM Cement Ltd	KE0000000034	ARM
Bamburi Cement Ltd	KE0000000059	BAMB
Crown Paints Kenya Ltd	KE0000000141	BERG
E.A.Cables Ltd	KE0000000174	CABL
E.A.Portland Cement Co. Ltd	KE0000000190	PORT
ENERGY & PETROLEUM		
KenGen Co. Ltd	KE0000000547	KEGN
KenolKobil Ltd	KE0000000323	KENO
Kenya Power & Lighting Co Ltd	KE0000000349	KPLC
Kenya Power & Lighting Ltd 4% Pref 20.00	KE4000001877	KPLC.P0004
Kenya Power & Lighting Ltd 7% Pref 20.00	KE4000002982	KPLC.P0007
Total Kenya Ltd	KE0000000463	TOTL
Umeme Ltd	KE2000005815	UMME
INSURANCE		
Britam Holdings Ltd	KE2000002192	BRIT
CIC Insurance Group Ltd	KE2000002317	CIC
Jubilee Holdings Ltd	KE0000000273	JUB
Kenya Re Insurance Corporation Ltd	KE0000000604	KNRE
Liberty Kenya Holdings Ltd	KE2000002168	CFCI
Pan Africa Insurance Holdings Ltd	KE0000000414	PAFR
INVESTMENT		
Centum Investment Co Ltd	KE0000000265	ICDC
Home Afrika Ltd	KE2000007258	HAFR
Kurwitu Ventures Ltd	KE4000001216	KURV
Olympia Capital Holdings Ltd	KE0000000166	OCH
Trans-Century Ltd	KE2000002184	TCL
INVESTMENT SERVICES		
Nairobi Securities Exchange Ltd Ord 4.00	KE3000009674	NSE
MANUFACTURING & ALLIED		
A.Baumann & Co Ltd	KE0000000018	BAUM
B.O.C Kenya Ltd	KE0000000042	BOC
British American Tobacco Kenya Ltd	KE0000000075	BAT
Carbacid Investments Ltd	KE0000000117	CARB

East African Breweries Ltd	KE0000000216	EABL
Eveready East Africa Ltd	KE0000000588	EVRD
Flame Tree Group Holdings Ltd	KE4000001323	FTGH
Kenya Orchards Ltd	KE0000000331	ORCH
Mumias Sugar Co. Ltd	KE0000000372	MSC
Unga Group Ltd	KE0000000497	UNGA
TELECOMMUNICATION & TECHNOLOGY		
Safaricom Ltd	KE1000001402	SCOM
REAL ESTATE INVESTMENT TRUST		
STANLIB FAHARI I-REIT. Ord.20.00	KE5000003656	FAHR

Source: NSE (2017)

Appendix II: Raw Data

YEAR	AVERAGE ANNUAL DIVIDEND	AVERAGE ANNUAL T-BILL RATE	AVERAGE ANNUAL REPO RATE	CENTRAL BANK RATE
2016	.1128	.1144	.1150	.1614
2015	.1115	.1193	.1000	.1468
2014	.1063	.1057	.0850	.1193
2013	.1136	.1163	.0850	.1128
2012	.2056	.1163	.0850	.1115
2011	.1614	.1158	.1050	.1063
2010	.2056	.1144	.1150	.1136
2009	.1614	.1193	.1000	.2056
2008	.2056	.1057	.0850	.1614
2007	.1614	.1155	.0850	.1468