THE EFFECT OF EARNINGS ON DIVIDEND POLICY OF CYCLICAL FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

I declare that this research project is my original work and has not been submitted to any other Institution by me or any other person for examination.

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

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DEDICATION

I dedicate this project to the Almighty God for the protection and help He has accorded me throughout the entire program, as difficult and challenging as it was.

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LIST OF ABBREVIATIONS

ANOVA Analysis of Variance

CDSC Central Depository and Settlement Corporation

CE Cyclical Earnings

CF Cash flow

DA Discretionary Accruals

DPO Dividend Payout

DPS Dividend per Share

DW Durbin Watson test

EBIT Earnings before Interest and tax

EPS Earnings per Share

LEV Leverage

NSE Nairobi Securities Exchange

ROE Return on Equity

SFR Self Finance Ratio

SG Sales Growth

ABSTRACT

One of the central issues in corporate finance has been the dividend decision of a firm, which has always been studied in relation to a firm's financing and investment decisions. Many studies have been done in an attempt to provide answers to the many questions arising from dividend policy but mystery still surrounds the dividend decision. Earnings are one of the key determinants of dividend policy of firms since they determine the level of payout and whether to pay or not. When earnings swing due to economic downturn, this turbulence is felt in dividend policy, hence economic cycles cannot be divorced from the dividend decisions of firms. It therefore becomes more difficult when earnings are not stable; hence managers are in a dilemma on how to handle dividend policy in cyclical conditions. The objective of this study was to find out the effect of earnings on dividend policy of cyclical firms listed at the NSE. The study employed cross-sectional research design with a quantitative research approach to give accurate results. Regression analysis was used to analyse the relationship the Dividend payout ratio and earnings. Sales growth, Liquidity and leverage were taken as control variables. To test for possible auto correlation, Durbin Watson t- test was used. From the correlation result of the study, Earnings and Sales growth strongly influence dividend payout of cyclical firms; Leverage influences payout to a moderate extent whereas Liquidity has an insignificant influence on payout of cyclical firms. Regression result of the study identifies Earnings, Sales growth, Liquidity and Leverage as critical factors influencing dividend payout of cyclical firms. Therefore this study finds earnings cycles as a critical factor that influences dividends, hence it recommends that firms should continuously manage their accounting practices to ensure that earnings variables i.e. sales growth, liquidity and leverage are properly handled to improve the payout of cyclical firms, since the results show that they critically influence dividend payout.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A business cycle can be defined as a recurrence of periods of expansion (recovery) and contraction (recession) in economic activity with effects on inflation, growth and employment (Tremolizo, 2009). One cycle extends from a Gross Domestic Product base line through one rise and one decline, and back to the baseline, a period typically averaging about two and a half years. A business cycle affects profitability and cashflow, making it a key consideration in corporate dividend policy.

Dividend decision of the firm is a crucial area of financial management. The important aspect of dividend policy is to determine the amount of earnings to be distributed to shareholders and the amount to be retained in the firm. If dividends are paid in cash, a firm in need of financing investment opportunities will have to source external financing. Dividend policy of the firm, thus, has an effect on both the long term financing and the wealth of shareholders (Pandey, 2010). Earnings of firms are one of the key determinants of dividend policies of firms since they determine the level of pay-out and whether to pay or not. It becomes more difficult when the earnings are not stable due to economic swings, hence managers are in a dilemma on how to handle dividend policy in cyclical conditions.

1.1.1 Earnings

Cyclical earnings are earnings of firms whose fortunes rest in large part on how the economy is doing. Cyclical firms are those whose financial performance moves up and down with the

economy. Economic trends normally affect industry performance by identifying and monitoring key assumptions. An economy is monitored and gauged through economic outlook and industry analysis. Economic trends take two basic forms, One, cyclical changes that arise from the ups and downs of the business operations and two, structural changes that occur when the economy is undergoing a major change in how it functions (Reilly and Brown, 2007).

Industry performance is related to the stage of the business cycle. Industry analysis is challenging in that every business cycle is different and that determines future market performance trends (Reilly and Brown, 2007). Business cycles are in place often in industrialized democracies, but also in the developing world. Cyclical industries whose sales rise and fall along with general economic activity are attractive investments during the early stages of an economic recovery which is attributed to high degree of operating leverage. There is benefit from sales increases during an economic expansion. Industries with high financial leverage likewise benefit from rising sales volume (Nyamache et al., 2013).

1.1.2 Dividend Policy

The objective of dividend policy should be to maximize shareholders' return so that the value of their investment is maximized (Pandey, 2010). Shareholders' return consist of two components i.e. dividend or capital gain, and dividend policy has an influence on both. A low payout policy may produce a higher share price because it accelerates earnings growth. A high payout policy means more current dividends and less retained earnings, which may result in slower growth and perhaps lower market price per share. Firms generally adopt dividend policies that suit the stage of the life cycle they are in. For instance high growth firms with larger cash flows and fewer projects tend to pay more of their earnings as

dividends (Kapoor, 2009). Stability or regularity of dividends is considered a desirable policy by management of most companies in practice. Shareholders generally seem to favour this policy and value stable dividends higher than fluctuating ones.

Dividend policies of firms may follow several interesting patterns, adding further to the complexity of such decisions. First, dividends tend to lag behind earnings, that is, increases in earnings are followed by increases in dividends and decreases in earnings sometimes by dividend cuts (Kapoor, 2009). Second, dividends are "sticky" because firms are typically reluctant to change dividends; in particular, firms avoid cutting dividends even when earnings drop. Third, dividends tend to follow a much smoother path than do earnings (Abala, 2013). Finally, there are distinct differences in dividend policy over the life cycle of the firm, especially the companies that are vulnerable to macroeconomic vicissitudes, such as those in the cyclical industries.

1.1.3 Effect of Earnings on Dividend Policy

While it is true that good management and the right strategic and business choices can make some cyclical firms less exposed to movements in the economy, the odds are high that all cyclical companies will see revenues decrease in the face of a significant economic downturn. Cyclical companies are therefore at the mercy of the economic cycle (Damodaran, 2009). The volatility in revenues at cyclical companies will be magnified at the operating income level because these companies tend to have high operating leverage (high fixed costs), and this therefore manifests itself in even greater swing in net income. Building on the theme that cyclical companies are exposed to cyclical risk over which they have little control and that this risk can be magnified as we move down the income statement, resulting in high volatility in net income, even for the healthiest and most mature firms in the sector, it is easy to see

why we have to be more concerned about distress and survival with cyclical firms (Damodaran, 2009).

An extended economic downturn or a lengthy phase of low commodity prices can put most of these companies at risk. This means that cyclical companies must critically decide on the decisions they would take on their dividend policy in that uncertain economic environment. It is generally expected that the swings in earnings would lead to unstable dividend policy, particularly since the firms are not aware what the economy has in store. At the same time investors would prefer firms with stable dividend policies. Therefore earnings clearly have an effect on future dividend policy of cyclical firms. This has been emphasized by Lintner, (1956), whose study shows that traditionally, earnings are the key driver of dividend payouts.

1.1.4 Nairobi Securities Exchange

This market was started in the 1920's by the British as an informal market for Europeans only. In 1963, Africans were allowed to join and trade in the market. For many years, the market operated through the telephone with a weekly meeting at the Stanley Hotel. In 1991, this market moved to IPS building and was opened to the public. In 1994, the market moved to its current location, on the 1st Floor of the Nation Centre. With the introduction of the Central Depository and Settlement Corporation (CDSC) investors will open share and bond accounts, in electronic accounts similar to their bank accounts. Two indices are popularly used to measure performance. The NSE 20-Share Index has been in use since 1964 and measures the performance of 20 blue-chip companies with strong fundamentals and which have consistently returned positive financial results**. (Source: www.nse.co.ke)**

Studies have been done on earnings and dividend policies of firms at the NSE. According to Menge et al., (2014), the stock market performance is influenced mainly by activities of governments and the general performance of the economy. Fluctuations in prices are a natural process of changing expectations, thereby leading to cyclical patterns. Thus, their study acknowledges the existence of business cycles, which have an influence on corporate financial performance of firms. Nyamache et al., (2013) also looked at business cycles on firms in Kenya. Kenyoru et al., (2013) conducted a study to find out the impact of dividend policy on share price volatility in Kenya. They found out that dividend is a major determinant of share price volatility. Olweny, (2012) in his study of dividend announcement and firm value at the NSE investigated whether dividend announcement has information content. The results showed that dividends do convey useful information about the future value of a firm.

1.2 Research Problem

One of the central issues in corporate finance has been the dividend decision of a firm, which has always been studied in relation to a firm's financing and investment decisions. The association amongst these two decisions has posed various questions. How much should a firm pay as dividend? How does a dividend payout policy influence valuation of a firm? Does a firm's decision to distribute cash correspond to its financing and investing decisions? Should cash be paid by repurchasing stocks or by raising dividends to shareholders? What is the outcome of changes in dividend policy assuming steady financing and investment decisions of a firm? Many studies have been done in an attempt to provide answers to these questions but mystery still surrounds the dividend decision.

When earnings swing due to economic downturn, this turbulence is felt in dividend policies. Hence economic cycles cannot be divorced from the dividend decisions of firms. One issue of controversy in the micro field is whether corporate dividends are increased in response to past, present, future normal, or future abnormal earnings; if these earnings ought to be temporary, recurrent, or permanent; and if they should be taken in levels or in first-differences (Benartzi et al.,1997). Some industries are very sensitive to economic shocks and hence they will record cyclical earnings during the business cycle. Many studies done on cyclicality mostly relate to the wider economic environment from a Macro point of view. Even though these studies relate how those economic cycles affect micro activities in the economy, they do not closely look at how crucial management decisions are affected when the changes occur.

One such decision is the dividend decision which is affected when a firm's earnings are not stable. There is a significant relationship between cyclical business conditions and firm performance, and this performance is reflected in earnings. There has not been an agreed way of handling dividend decisions in cyclical companies in practice. Studies done on dividend policy have not touched on the issue of business cycles on earnings and how this affects dividend policy. Locally, there is no research done on dividend policy in relation to cyclical earnings.

Therefore this research was on how cyclical firms at the Nairobi Securities Exchange handle their dividend decisions in the midst of this economic turbulence. Do they peg their dividends on those earnings or do they maintain stable dividend policies? The study therefore was seeking to answer the question: What is the effect of earnings on dividend policies of cyclical firms listed at the Nairobi Securities Exchange?

1.3 Research Objective

To establish the effect of earnings on dividend policies of cyclical firms listed at the Nairobi Securities Exchange.

1.4 Value of the Study

This research will be beneficial to managers, investors, and to scholars. Managers will pay close attention to policy making by understanding critically how cyclical firms' earnings could impact on dividend policy hence make prudent decisions. Secondly, management can enhance the impact if found positive, by efficiently managing the cyclical earnings. Investors would benefit by clearly understanding how cyclical companies' dividend policies are dependent on the cyclical earnings hence make decisions that suit them with regard to their investments.

Potential investors would also benefit by gaining valuable information that is crucial when choosing where to invest. This study will also benefit scholars who want to gain more understanding of the dividend decisions of firms, and also add to the existing knowledge and findings on dividend policy. In addition to that, further research can be done by studying other cyclical sectors to find out if the results agree, or to conduct studies of the same topic in other countries.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section provided an overview of the main theories about business cycles and corporate dividend policy. The first section reported a short overview of all main theories related to business cycles literature; then the following section on main theories of dividend policy; and the last section looked at works done by other people in the topic area.

2.2 Theoretical Review

In this section the study gave a short overview of the main theories related to business cycles and dividend policy.

2.2.1 Keynesian Theory

The Keynesian Theory by Keynes (1936) explains demand cyclicality as caused by the unstable behavior of market participants. Cyclicality is mainly driven by investors' psychology on the demand side. The economic fluctuations come from expectations volatility that changes planned investment spending. In some cases expectations become self-fulfilling since aggregate demand seems to be led by the effect that consumer spending indicators have on the demand itself. This phenomenon was called by Keynes as animal spirits and more recently by Shiller (2001) as irrational exuberance. This theory implies that business cycles are caused by economic fluctuations coming from expectations volatility, and this has an effect on earnings of firms.

2.2.2 Monetarist View

The Monetarist View by Hayek (1950) and Friedman (1982) assumes that cyclicality is caused by fluctuations in money supply. Public authorities can increase money supply which leads to a fall of interest rates, therefore real money balances increase and the exchange rate loses value. The exchange rate loss in value leads to an increase in investments and exports, consumers spend more on durable goods, and these initial changes in expenditures have a multiplier effect and an expansion begins. Decreases in money supply have similar effects in the opposite direction – i.e. starts a contraction. Monetarists believe that cycles result from errors made by monetary authorities when answering to economic conditions. When a central bank acts by modifying interests rates with wrong monetary policies, it sends an incorrect signal to the market that leads to a wrong answer by market players, that in turn causes instability and potential cyclicality. The theory implies that fluctuations in money supply send signals that trigger potential cyclicality, which in turn affects earnings of firms.

2.2.3 Real Business cycle Theory

An Aggregated Supply based theory, is supported by Prescott (1983), and is named Real Business Cycle Theory. This theory affirms that cycles are caused by random shocks that impact productivity. For example the event of the 11th September 2001 can be considered as a negative shock, while the internet boom can be considered as a positive shock. Shocks to be considered under the RBC theory should be exogenous, technology-oriented and should affect productivity. In the view of this theory, output affects consumption, and not the other way round as stated in previous theories of Espinosa, Vega and Guo, (2001). Also, in the view of this theory, neither consumer psychology nor government actions can influence cyclicality, based on random shocks. According to this theory, business cycles are caused by random shocks that impact productivity, and this affects earnings of firms.

2.2.4 Walter's Dividend Relevance Model

Walter, (1963) argues that the choice of dividend policies almost always affect the value of the firm. His model shows the importance of the relationship between the firm's rate of return (r) and the cost of capital (k), in determining the dividend policy that will maximise the shareholders' wealth. Walter's model is based on the following assumptions: Internal financing i.e. the firm finances all investment through retained earnings hence no debt or new equity is issued; constant return and cost of capital; all earnings are either distributed as dividends or reinvested internally immediately i.e. 100 percent payout or retention; beginning earnings or dividends never change i.e. constant EPS and DPS; the firm has a very long time or infinite time. Thus, according to this model, the value of a share is the present value of all dividends plus the present value of all capital gains.

Walter's model shows that the optimum dividend policy depends on the relationship between the firm's rate of return and its cost of capital. This is summarised as follows: growth firms that are expanding rapidly due to investment opportunities yielding higher returns than the opportunity cost of capital (r >k) will maximise the value per share if they follow a policy of retaining all earnings for internal investment. The optimum payout ratio for a growth firm is zero since the market price per share increases as payout ratio decreases. Normal firms are those which have exhausted all profitable investment opportunities and so their (r = k). For these firms, dividend policy has no effect on the market price per share in this model. Thus, there is no unique optimum payout ratio for these firms. Declining firms are those which do not have any profitable investment opportunities to invest their earnings. Such firms earn a return on investment which is less than the minimum required by investors (r < k). The market price per share of a declining firm will be maximum when it does not retain its earnings at all, hence the optimum payout ratio for a declining firm is 100 percent.

Thus, in Walter's model, the dividend policy of the firm depends on the availability of investment opportunities and the relationship between the firm's internal rate of return and its cost of capital. However, its simplified nature has been found to possibly lead to untrue conclusions in general. Some of the criticisms of this model are: The idea of no external financing. When such a situation exists, either the firm's investment or dividend policy will be sub-optimal. This is because when a firm allows outside financing, the firm should raise new funds to finance investments, and this maximises shareholders' wealth. The model also assumes a constant rate of return which reflects the assumption that the most profitable investments are made first and then the poorer investments are made. This is clearly erroneous. The other criticism of this model is the constant cost of capital. It's true in practice that a firm's cost of capital does not remain constant since it changes directly with the firm's risk.

2.2.5 Gordon Dividend Model

Gordon (1962) model also relates the market value of the firm to dividend policy. This model is based on the following assumptions: The firm is an all equity firm with no debt; no external financing; constant return; constant cost of capital; perpetual earnings i.e. the firm and it's stream of earnings are perpetual; no corporation taxes exist; constant retention ratio hence growth rate is constant forever; cost of capital is greater than growth rate ($k_e > g$). According to Gordon's dividend capitalisation model, the market value of a share is equal to the present value of an infinite stream of dividends to be received by shareholders. However the dividend per share is expected to grow when earnings are retained. The dividend per share is equal to the payout ratio times earnings (1 – b)EPS, where b is the fraction of retained

earnings. The retained earnings are assumed to be re-invested within the all equity firm at a rate of return of (r). This allows earnings to grow at a rate of (g = br) per period.

According to the Gordon model, a normal firm where (r = k), the firm's value is not affected by dividend policy regardless of earnings or riskiness i.e. when r = k, dividend policy is irrelevant. When r < k, (that is a declining firm) the model profit retention clearly becomes undesirable from shareholders' standpoint, because each additional shilling retained reduces the amount of funds that shareholders could invest at a higher rate elsewhere. In the case of a growth firm where r > k, the value of a share will increase as the retention ratio, b, increases. Gordon model's conclusions about dividend policy are similar to those of Walter's model. This similarity is due to the similarities of assumptions which underlie both models. Thus the Gordon model suffers from the same limitations as the Walter's model.

According to Walter and Gordon theories above, the dividend decision adopted by the firm affects the value of that firm, hence firms that let their dividend policies change with earnings swings will also have their firm values swing.

2.2.6 Modigliani and Miller Proposition

According to Modigliani and Miller (1961), under a perfect market situation, the dividend policy of a firm is irrelevant as it does not affect the value of a firm. They argue that the value of the firm depends on the firm's earnings which result from its investment policy. Thus, when investment decision of the firm is given, dividend decision-the split of earnings between dividends and retained earnings-is of no significance in determining the value of a firm. A firm operating in perfect market conditions may face one of the following three situations regarding the payment of dividends: the firm has sufficient cash to pay dividends;

the firm does not have sufficient cash to pay dividends and therefore it issues new shares to finance payment of dividends; the third, the firm does not pay dividends but a shareholder needs cash.

In the first situation, when the firm pays dividends, shareholders get cash in their hands but the firm's assets reduce. What shareholders gain in the form of cash dividends, they lose in the form of their wealth claims on the (reduced) assets. Thus, there is a transfer of wealth from the shareholders' one pocket to their other pocket (no gain no loss). Since it's a fair transaction under perfect capital market conditions, the value of the firm remain unaffected. In the second situation, when the firm issues new shares to finance payment of dividends, two transactions take place. First, the existing shareholders get cash in form of dividends but they suffer an equal amount of capital loss since the value of their claim on assets reduces. Second, the new shareholders part with their cash in exchange for shares. In these transactions, there is no gain or loss for both the existing and new shareholders, and so the value of the firm remains unaltered. In the third situation, if the firm does not pay any dividend, a shareholder can create a 'home made dividend' by selling part of his shares at the market for cash. The shareholder has gained nor lost and the situation is the same as in the second.

The crux of Modigliani and Miller dividend proposition as explained above is that shareholders do not necessarily depend on dividends for obtaining cash. In the absence of taxes, floatation costs and difficulties in selling shares, they can get cash by devising a homemade dividend without any dilution in their wealth. This M-M proposition of irrelevance is based on the following assumptions: perfect capital markets; no taxes; firm has a fixed dividend policy; risk of uncertainty doesn't exist. Under these simplified assumptions,

the conclusion derived by them is consistent and intuitively appealing. But they may not be always found valid in practice, for example we may not find capital markets to be perfect in reality; there may exist issue costs; dividends may be taxed differently from the capital gains; investors may encounter difficulties in selling their shares. It's also not correct as the hypothesis assumes that when a shareholder sells shares, no transaction costs are incurred. The truth is, fees such as brokerage fees are normally incurred to sell shares.

Information asymmetry created by the information not shared to shareholders may be bridged by paying dividends, and as such, companies that pay dividends reduce the conflicts arising from information asymmetry. At the same time, even under conditions of certainty, it's not correct to assume that the discount rate (k) should be the same whether the firm uses internal or external financing. Another issue here is the claim of no taxes. This is far from reality since countries have different treatment for both dividends and capital gains, and therefore taxes have an influence on dividend decisions.

This theory implies that since value of the firm depends on earnings which result from its investment policy, fluctuating earnings in a way will affect value of the firm and future dividend payout.

2.3 Determinants of Dividend Policy of Listed Companies

There are different factors that affect dividend policy and that may determine the dividend choice. Gill et al., (2010) in their study found out that dividend payout ratio is the function of profit margin, sales growth, debt-equity ratio and tax. Musiega et al., (2013) examined the determinants among dividend payout of non-financial firms listed on the Nairobi Securities Exchange. Dividend payout was taken as the dependent variable while independent variables

were profitability, growth, current earnings, and liquidity. Current earnings and growth were found to be positively correlated to dividend payout. Bulla, (2013) examined how firms' dividend decisions are influenced by current earnings, dividend yield and firm size. Results indicated that accounting earnings were the single most significant variable explaining about 87% of the changes in dividend decisions of firms listed at the Nairobi Securities Exchange.

Among the factors, the most cited and which will be discussed are: Growth, Profitability (Earnings), Leverage, Liquidity, Ownership structure.

2.3.1 Earnings

Corporate profitability has long been regarded as the primary indicator of a firm's capacity to pay dividends. Lintner (1956) indicates that the dividend payment pattern of a firm is influenced by the current year's earnings and previous year's dividends. Baker et al., (2001) found that the anticipated level of future earnings is the determinant of dividend payment. Pruitt and Gitman (1991) report that current and past years' profits are important factors in influencing dividend payments. Baker and Powell (2000) concluded from their survey of New York Securities Exchange-listed firms that dividend determinants are industry specific and anticipated level of future earnings is the major determinant. Consistent with the survey evidence of Lintner, firms with more persistent earnings series smooth less, while those with more cyclical earnings smooth more (Abala, 2013). This means cyclical earnings majorly determine and influence the dividend decision.

2.3.2 Growth

Growth in sales and profit is an important determinant for the payment of dividends. Gupta et al., (2010) results support the findings of Myers (2004), who suggests that firms with high

growth rate distribute high dividends in order to keep their shareholders happy. Sales growth may impact on dividend payout ratios, since dividend payout levels are not totally decided after a firm's investment and financing decisions have been made. Rapidly growing firms require external financing because working capital needs normally exceed the incremental cash flows from new sales**.**

2.3.3 Liquidity

A firm with high external financing would require availability of cash flows i.e. strong liquidity position to meet its financial obligations. Therefore, in order to increase liquidity, the firm shall lower its dividend payout. On the other hand, the larger the size of the firm, the greater the availability of free cash flows and the greater will be the dividend payout. A firm with large number of shareholders is expected to pay higher dividends in order to keep their shareholders happy. It has been found that high retained earnings to equity ratio (indicating propensity to pay dividend) would ensure availability of free cash flows or residual cash flows within the firm (Benito et al., 2001). One would, therefore, expect a direct relation between liquidity and dividend payout.

2.3.4 Leverage

Many studies have suggested that firms would like to pay high dividends if they are utilizing their retained earnings because they are least risk-attached as compared to external financing (equity and debt). In other words, high interest payments (fixed charge) will result in lower dividend payment (Alli et al., 1993) and (Rozeff, 1982). Therefore, results indicate that there exists an inverse relationship between dividend rate and leverage.

2.3.5 Ownership Structure

Gupta et al., (2010) found out that institutional shareholding and foreign institutional investors' shareholding are positively correlated whereas promoters' shareholding is negatively correlated to the first factor i.e. ownership structure. The dividend payout tends to bring a decline in the stock value, thus, a conflict of interest for the insiders. A company with high insider ownership proposes for a low cash dividend payout. Whereas, institutional owners are keen to influence high payouts in order to enhance control over the management for monitoring their external financing matters. However, one point worth noting is that the individual shareholdings of promoters, institutions and foreign institutional investors in relation to the total shareholdings of a firm have not been taken into consideration (Gupta et al., 2010).

2.4 Review of Empirical Studies

Several studies have been done on dividend policy, beginning with the earliest works of Lintner (1956), who did a study comprising 28 companies and strongly found that most managements believe stockholders prefer a reasonably stable rate and that the market puts a premium on stability or gradual growth in rate. This made most managements avoid making changes in their dividend rates that might have to be reversed within a year or so. Lintner found out that current earnings were almost invariably the starting point in management's consideration of whether dividends should be changed. They also found out that the relationship between current earnings and the existing dividend rate was generally much the important single factor determining the amount of any change in dividends decided upon.

Farsio et al., (2004) examined the relation between dividends and earnings. The quarterly data of S&P 500 was used from the period of 1988 to 2002. Regression analysis, granger

causality test and dickey-fuller test were used. In this research two variables were used: dividend per share as dependent variable and earnings per share as independent variable. Previous studies explored higher earnings are the result of dividend payout but this research revealed that there is no significant relation between dividend policy and earnings in long run. They recommended that different possibilities of relationship between future earnings and dividend should be analyzed.

Ahmed et al., (2009) analyzed the relationship between earnings and dividends. Sample was made by taking 320 non-financial firms which were listed on Karachi stock exchange from 2001 to 2006. They used (Lintner, 1956) dividend model and dynamic panel regression analysis. Variables used in research were earning per share, leverage and investment policy, firms' size and market capitalization. Results explored that dependency of dividend payment depends on current earnings and past dividends. It was examined that firms with high earnings tend to pay higher dividends because these firms can afford higher cash flows. leverage and investment opportunity have negative impact, while market liquidity, ownership concentration have positive impact on dividend policy.

Gupta et al., (2010) in their study of the determinants of corporate dividend policy re-examined various factors that have a bearing on the dividend decision of a firm by using a two-step multivariate procedure. The sample companies were drawn from the broad based Bombay Stock Exchange 500 index in a period of seven years from 2001-2007. First, factor analysis was performed on the data to extract prominent factors from various variables and then multiple regression was conducted on such factors. Results of factor analysis indicate that Leverage, Liquidity, Profitability, Growth and ownership structure are the major factors.

Shah et al., (2010) analyzed what impact dividend policy has on earnings management by taking the data of Pakistani and Chinese listed companies from 2003 to 2007 and from 2002 to 2007 respectively. Cross sectional Jones model, regression analysis, and common effect model were used. Basically there were two variables in this research dividend payout and earning management, the other three variables return on equity (ROE), size of the firm (SOF) and self finance ratio (SFR) were used as controlled variables. Results explored that no relation exist between earning management and dividend payout policy for both countries. It was suggested that it should be found out weather dividend payout play any role to encourage the firm to manage earnings.

Khan, (2011) in his paper attempted to explain the effect of dividend policy on the stock prices by taking a sample of 131 companies listed on the Karachi stock exchange for a period of 10 years from 2001 -2010. Panel data approach was used to explain the relationship between dividends and stock prices after controlling variables like profit after tax, earnings per share, and return on equity. The results indicated that stock dividend, profit after tax, earnings per share and return on equity have a positive relationship with stock prices and significantly explain the variations in the market prices of shares, while retention ratio has negative, insignificant relation with stock prices.

Ebrahimi et al., (2011) in their study of the relationship between earnings, dividends, stock price and stock return used cross section, pooled data and panel data regression models for testing the effects of the above variables on stock returns. The study was conducted from Iranian companies and their results showed that in some years, shareholders pay special attention to dividends and also the variable prior dividend divided by stock price at the beginning of the stock market period affects return. They also found that there is a significant

relationship between current period earnings divided by stock price at the beginning of the stock market period and stock return. The study attempted to investigate the information content of earnings in explaining stock returns for companies listed on Tehran stock exchange by using samples of companies listed on the exchange from 2001 to 2010.

Azar (2012) undertook to find the determinants of cyclical real aggregate dividends. The contribution of this paper was six-fold: To filter the variables in order to remove the common trend in them; to identify an additional determinant of dividends besides market stock prices, which is the time variable real interest rate; to adjust for conditional heteroscedasticity; to find whether there is a significant impact of current earnings on dividends; to test for symmetry in response; and finally to assess whether dividend behaviour is stable over time. The total sample was made up of 140 observations and the data are yearly from 1871 to 2010. The main conclusions are that lagged permanent earnings, current and lagged transitory earnings, and the level if real interest rates are important determinants that typical managers take into consideration in their decision to pay dividends.

Lee et al., (2012) used a total of 2396 dividend changes of companies listed on Bursa Malaysia over the period 1998-2007 to investigate the relationship between dividend changes and future profitability of firms. They found that dividend changes are strongly related with contemporaneous earnings changes, weakly related with one year ahead of earnings changes and largely unrelated with earnings changes beyond one year. They also found weak evidence that the size of the dividend changes is related to future profitability.

Aurangzeb et al., (2012) did a study to analyse the impact of earnings management on dividend payout policy. The research was conducted by taking the data of the textile industry from the year 1966-2008, using all companies listed on the Karachi stock exchange as the sample. The dividend payout ratio was taken as a dependent variable and the earnings management taken as independent variable, discretionary accruals were taken as proxy for earnings management. Three variables are treated as control variables i.e. Return on Equity, Size of the Firm, and Self Finance ratio. Regression results explored that earnings management has a negative impact on dividend payout policy in the textile sector, and this supported the results of (Ling et al., 2008) and (Savov, 2006).

Haider et al., (2012) examined the impact of earnings on dividend policy and analysis was done on Pakistani listed companies. Data was taken from Karachi stock exchange from the period of 2005 to 2009. Regression analysis, descriptive analysis and modified cross sectional methods were used. In this study five variables have been used one is dividend payout used as dependent variable and other four were ; discretionary accrual, self finance ratio, return on equity and size of the firm as control variable and these variables represent an independent variable which is earnings management. It was explored that the relationship exist between both of the variable but coefficient shows weak relation in such manners that is equal to no relationship, reason is the worst situation of the economy.

Vandana (2013) attempted to identify the dividend earning patterns across the top 5 companies in India in 2011 to find out the difference in practices. The study was on the relationship between dividends and earnings, and selected variables for fulfilling the desired objectives were four i.e. EPS; DPS; DPO; DY. To fulfill the desired objectives of the study completely randomized design (one-way ANOVA) technique was employed to test

significance of mean difference between with the help of null hypothesis. It was found that 3 of the 5 companies followed a constant Dividend per Share policy as their DPS depends on their earnings. The remaining two firms only follow a stable dividend policy, which means that they do not follow their earnings. Therefore it was concluded that companies in the sector do not follow similar pattern in giving dividends to shareholders in relation to earnings.

Musiega et al., (2013) conducted a study to find out the determinants of dividend payout policy among non-financial firms at the NSE from 2007-2011. Purposive sampling technique was used and a sample of 30 non-financial firms was selected. Dividend payout ratio was the dependent variable, while independent variables were profitability, growth, current earnings and liquidity. Descriptive statistics and multiple regression were used. ROE, current earnings and firm's growth were found to be positively correlated to dividend payout.

2.5 Summary of Literature Review

The chapter looked at various studies and theories relating to dividend policy. This study was about identifying the effect of earnings on dividend policy of cyclical firms. Studies have been done locally on the subject of dividend policy. Abala (2013) studied the determinants of dividend smoothing at the NSE and found that size of firm, firm's earnings, agency conflict, ownership structure, taxes, growth stage are some of the determinants of dividend smoothing. Murekefu et al., (2012) sought to determine the relationship between dividend payout and firm performance among firms at the NSE. The findings indicated that dividend payout was a major factor affecting firm performance. Yegon et al., (2014) conducted a study to establish effects of dividend policy on firm performance among listed firms at the NSE. The findings

indicated that there is a significant positive relationship between dividend policies of firms and profitability, earnings per share and investments.

Musiega et al., (2013) conducted a study to find out the determinants of dividend payout policy among non-financial firms. It was found out that business risk, size, ROE, current earnings and growth are some of the major determinants of dividend payout. Bulla (2013) conducted an empirical analysis of selected factors affecting dividend policies of listed firms at the NSE from 2000 to 2010. The study was to examine how firms dividend decisions are influenced by current earnings, dividend yield and dividend per share. Regression results indicated that the three variables predicted 17% of the variation in div payout, and accounting earnings was the single most significant variable explaining 87% of changes in dividend decisions of firms. From the studies done, it's evident that there is ground for further probing of the aspect of dividend policy with respect to cyclical firms, since there is no particular study that has handled the effect of earnings on dividend policy of cyclical firms locally.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter designed the arrangement of conditions for collection and analysis in a manner aimed at combining relevance to the research purpose with economy in procedure. This is the blueprint for the collection, measurement and analysis of data. It designed decisions to happen in respect of: Where the study was to be carried out, What type of data was required, Where the data would be found, periods of time the study will cover, techniques of data collection to be used, How the data will be analyzed.

3.2 Research Design

This was a descriptive study concerned with specific predictions of whether cyclical earnings and dividend policy are related in any way or whether there is a causal relationship between the two variables. The study therefore, employed cross sectional research design to gather data because this design offers the most reliable set of data. Cross sectional research involves observation of a representative subset at a defined time. Quantitative research approach was used because it plays with numbers to give accurate results.

3.3 Population

Cooper and Schindler (2000) describe a population as the total collection of elements about which the researcher wishes to make inference. The population of this study comprised of all the cyclical firms listed on the Nairobi Securities Exchange as at 31 December 2012. The total number of firms listed at the NSE by that date was 62 (Appendix I).

3.4 Sample Design

Kothari and Garg (2014) define sampling design as a method of selecting items to be observed for the given study. The sample was deduced by conducting a correlation between industrial production growth rate of the industry to the aggregate industrial production growth rate so as to find out the degree of correlation between the two elements. Cyclical firms were identified as those with high degree of correlation. In this case, 16 firms were identified as cyclical. Boudoukh et al., (1994) assess the cyclicality of each sector by linking the industrial production growth rate of the industry to the aggregate industrial production growth rate. Their study found out that industrial production growth rates of non- cyclical sectors have low correlation with the aggregate industrial production growth rate, while for cyclical sectors, industrial production growth rates have high correlation with the aggregate industrial production growth rates.

3.5 Data Collection

The study used secondary data from the NSE data base on cyclical companies that paid dividends and made profits in the last five years to December 2012. The study was about the effect of earnings on dividend policy of cyclical firms, and therefore data collected was on earnings of cyclical firms and their dividend payout as the variables of study. Dividend Payout was measured by dividend per share divided by earnings per share. Data was therefore sought on dividend per share and earnings per share of cyclical firms. The proxy used for earnings was the ratio of the cyclical companies' earnings before interest and tax (EBIT) to total assets. Data sought in this case was the earnings before interest and tax and total assets for those cyclical firms.

Dividend payout (DPO) = (Dividend Per Share ÷ Earnings Per Share) ×100

Earnings = (EBIT ÷ Total Assets) × 100

3.6 Data Analysis

Aurangzeb et al., (2012) in their study of effects of earnings management on dividend policy, used regression model and Durbin-Watson (DW) test to analyze and draw findings for their study. This study therefore used regression analysis to measure the effect of earnings on dividend payout so as to analyze the relationship between the dependent and independent variables. To minimize the effect of independent variables not related to the study but which may affect the dependent variable (DPO), three control variables were used i.e. Sales growth, Liquidity and leverage.

3.6.1 Analytical Model

The following regression model was used:

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where:

α is constant coefficient

Y is Dividend Payout

$\mathbf{X_1}$ is Earnings

$\mathbf{X_2}$ is Sales Growth

$\mathbf{X_3}$ is Liquidity

$\mathbf{X_4}$ is Leverage

ε is the Error term

β_1 β_2 β_3 β_4 are the coefficients of the independent and control variables (Earnings, Sales Growth, Liquidity, Leverage). Financial Leverage was measured by using the ratio of total debt to total assets.

$$\text{Leverage} = \frac{\textbf{Total Debt}}{\textbf{Total Assets}}$$

Sales Growth was measured by:

$$\text{Sales Growth} = \frac{\textbf{Current sales} - \textbf{Previous sales}}{\textbf{Previous sales}}$$

Liquidity was measured by current assets to current liabilities.

$$\text{Liquidity} = \frac{\textbf{Current Assets}}{\textbf{Current Liabilities}}$$

3.6.2 Test of Significance

To investigate the independence of the errors of the regression model, Durbin-Watson (DW) was used to test for possible auto-correlation. To accept or reject the main hypothesis of the research, the t-student statistic was used. The hypothesis was tested on a pre-determined significance level of 5%. The hypothesis was formulated as follows:

H_0: There is no significant relationship between earnings and dividend policy of cyclical firms.

H_1: There is a significant relationship between earnings and dividend policy of cyclical firms.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The current chapter presents the outcome of data analysis and findings in line with the objectives of the Study. The data were analyzed using the Statistical Program for Social Sciences (SPSS) version 18, by use of both descriptive and inferential statistics. Descriptive statistics such as minimum, maximum, mean, standard deviation kurtosis and skewness were used. Tests on the data for the assumptions of linear regression were conducted and results were within the limits necessary for further statistical tests. Correlations and regression were also conducted between various study variables. Data is also presented using tables, graphs and charts. Cronbach alpha coefficients of reliability and validity, tests of normality, multicollinearity and homogeneity of variances were also tested.

4.2 Determination Cyclical Firms

As a first step to the analysis, the cyclical firms were identified. The cyclicality of the firms was done by linking the firms' dividend payout policy and ROA to the aggregate sectoral growth rate. From the correlation analysis in the table (Appendix II), 16 firms that were identified as cyclical. While the industrial profitability and dividend payout rates of non-cyclical firms had low correlation with that of the aggregate industrial production, the cyclical ones had high correlation. Correlation result with single asterisk implies that the correlation between the variables is statistically significant at 5% level of significance while correlation result with double asterisk implies that the association between the variables is statistically significant at 10% level of significance.

4.3 Descriptive Statistics

Descriptive measures involved mean, maximum, minimum, standard error of estimate, skewness and kurtosis. Mean is a measure of central tendency used to describe the most typical value in a set of values. The standard error is a statistical term that measures the accuracy within a set of values. Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the center point. Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution.

Table 4.1: Descriptive Statistics Results

	Dividend Payout	**Earnings**	**Sales Growth**	**Liquidity**	**Leverage**
Mean	0.11	1.53	8.00	0.4994	2.043
Median	0.12	1.22	9.00	0.913	0.646
Maximum	0.38	7.35	12.00	0.312	4.831
Minimum	-0.47	0.43	7.00	0.191	0.000
Std. Dev.	0.12	1.07	2.62	0.331	0.078
Skewness	0.453	0.651	0.045	0.829	0.9979
Kurtosis	2.045	3.004	2.034	3.223	3.567
Jarque-Bera	6.754	5.523	4.582	13.311	20.416
Observations	16	16	16	16	16

Source: Research findings

The results showed that dividend payout had a mean of 8.00 with a minimum of 7.00, a maximum of 12.00, skewness of 0.045 and kurtosis of +2.034. Comparatively, earnings had a mean of 0.4994, minimum of 0.312, maximum of 0.191, skewness of 0.829 and kurtosis of +3.223. sales growth had a mean of 2.043, minimum of 0.000, maximum of 4.831, skewness of 0.698 and kurtosis of +3.567. Liquidity had a mean of 3.319, minimum of 1.224, maximum of 4.183, skewness of 0.698 and kurtosis of +2.314.

Analysis of skewness shows that all the variables are asymmetrical to the right around its mean. Additionally, earnings and liquidity are highly peaked compared to other regressors. Jarque-Bera is a test statistic for testing whether the series is normally distributed. It measures the difference of the skewness and kurtosis of the series with those from the normal distribution using the null hypothesis of a normal distribution. A small probability value leads to the rejection of the null hypothesis of a normal distribution. Jarque-Bera test for normality shows that all variables are normally distributed.

4.4 Tests of Statistical Assumptions

The study further performed the tests on statistical assumptions i.e. test of regression assumption and statistic used. This included test of normality, linearity, independence, homogeneity and collinearity. Normality was tested using the Shapiro-Wilk test which has power to detect departure from normality due to either skewness or kurtosis or both. Its statistic ranges from zero to one and figures higher than 0.05 indicate the data is normal (Razali and Wah, 2011).

Linearity was tested by use of ANOVA test of linearity which computes both the linear and nonlinear components of a pair of variables whereby nonlinearity is significant if the F significance value for the nonlinear component is below 0.05 (Zhang *et al*., 2011). Independence of error terms, which implies that observations are independent, was assessed through the Durbin-Watson test whose statistic ranges from zero to four. Scores between 1.5 and 2.5 indicate independent observations (Garson, 2012).

Homoscedasticity was tested by use of Levene's test of homogeneity of variances. If the Levene statistic is significant at $\alpha = 0.05$ then the data groups lack equal variances (Gastwirth *et al.*, 2009). Levene's test measures whether or not the variance between the dependent and independent variables is the same. Thus it is a check of whether the spread of the scores (reflected in the variance) in the variables are approximately similar (Bryk and Raudenbush, 1988). Multicollinearity was tested by computing the Variance Inflation Factors (VIF) and its reciprocal, the tolerance. It is a situation in which the predictor variables in a multiple regression analysis are themselves highly correlated making it difficult to determine the actual contribution of respective predictors to the variance in the dependent variable. The multicollinearity assumption has a VIF threshold value of 10 maximum (Robinson and Schumacker, 2009).

Five assumptions of regression were tested and their results together with those of the test for reliability are summarized in Table 4.1. The threshold levels for the respective test statistics are listed below each assumption. For multicollinearity, both the variance inflation factor (VIF) and its reciprocal (Tolerance) values are listed, the latter in parentheses. The results showed that the assumptions of regression were met and subsequently the data were subjected to further statistical analysis including tests of hypotheses as discussed in the following subsections.

Table 4.2: Results of Tests of Statistical Assumptions (Test of regression assumption and statistic used)

	N	**Normality *(Shapiro-Wilk test)***	**Linearity *(ANOVA test)***	**Independence *(Durbin Watson***	**Homogeneity *(Levene test)***	**Collinearity *VIF (Tolerance test)***
Threshold: Assumption is met if		p > 0.05	p > 0.05	1.5- 2.5	p > 0.05	VIF 10 max
Earnings	16	0.39	0.42	2.02	0.32	1.25 (0.80)
Sales Growth	16	0.66	0.37	1.64	0.47	1.59 (0.63)
Liquidity	16	0.10	0.16	1.73	0.78	1.51 (0.66)
Leverage	16	0.10	0.31	2.03	0.75	1.47 (0.71)

Source: Research findings

Normality was tested using the Shapiro-Wilk test which has power to detect departure from normality due to either skewness or kurtosis or both. All the readings in this study were above 0.05 confirming normality. Normality assumes that the sampling distribution of the mean is normal. Further Linearity was tested by use of ANOVA test of linearity which computes both the linear and nonlinear components of a pair of variables whereby nonlinearity is significant if the F significance value for the nonlinear component is below 0.05 (Zhang *et al.*, 2011). All the computed readings were above 0.05 confirming linear relationships (constant slope) between the predictor variables and the dependent variable. The study further assessed Independence of error terms, which implies that observations are independent through the Durbin-Watson test whose statistic ranges from zero to four. In the

current study the test results ranged between 1.81 and 2.21 supporting independence of error terms.

Homoscedasticity was tested by use of Levene's test of homogeneity of variances. The test was not significant at $\alpha = 0.05$ confirming homogeneity. Multicollinearity was tested by computing the Variance Inflation Factors (VIF) and its reciprocal, the tolerance. It is a situation in which the predictor variables in a multiple regression analysis are themselves highly correlated making it difficult to determine the actual contribution of respective predictors to the variance in the dependent variable. The multicollinearity assumption has a VIF threshold value of 10 maximum (Robinson and Schumacker, 2009). In the current study tolerance ranged from 0.60 to 0.80 and therefore its reciprocal, the VIF was between one and two, way below the threshold.

4.5 Correlation Analysis

Correlation analysis was used to measure the degree of association between different variables under consideration. In this section, the study measured the degree of association between the earnings variables and dividend policy i.e. the earnings proxies (Earnings, Sales Growth, Liquidity and Leverage) and dividend policy of cyclical firms. From the a priori stated in the previous chapter, a positive relationship is expected between the measures of earnings and dividend policy of cyclical firms. Table 4.3 and 4.4 presents the correlation coefficients for all the variables considered in this study.

Table 4.3: Correlation Analysis Results

		Earnings	Sales Growth	Liquidity	Leverage	Dividend Payout
Sales Growth	Pearson Correlation	.791**	1			
	Sig. (2-tailed)	.002				
Liquidity	Pearson Correlation	.787**	.131	1		
	Sig. (2-tailed)	.013	.094			
Leverage	Pearson Correlation	.649**	.136	.289	1	
	Sig. (2-tailed)	.004	0.104	0.203		
Dividend Payout	Pearson Correlation	.586**	.281	.111	.387	1
	Sig. (2-tailed)	.011	0.115	0.071	0.231	
	N	42	42	42	42	42

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

Source: Research findings

From the correlation result for the study model in table 4.3, earnings has a strong positive correlation with dividend payout (0.669, p = 0.000), the study further indicated that sales growth has also a strong and positive relationship with dividend payout (0.654, p = 0.000). The study also indicated that liquidity has a weak insignificant relationship with dividend payout (0.132, p = 0.32). Further the results indicates that leverage has a moderate and significant relationship with dividend payout (0.453, p=0.21). This implies that earnings and sales growth influences dividend payout of cyclical firms strongly, leverage influences payout of cyclical firms to a moderate extent whereas liquidity has insignificant influence on payout of cyclical firms.

4.6 Regression Analysis

4.6.1 Regression Model Summary

Table 4.4: Regression Model Summary

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	0.8566	0.7338	0.7011	0.7638

Source: Research findings

Determination coefficients (R^2) were also carried out to determine the strength of the relationship between independent and dependent variables. The study established R^2 of 0.7338, which indicates that 73.38% of the variation in dividend policy of cyclical firms is attributed to the changes in earnings, sales growth, liquidity and leverage. Regression analysis was used to determine the impact of earnings variables on payout of cyclical firms.

4.6.2 Regression coefficient

Table 4.5: Regression coefficients

	Unstandardized Coefficients		**Standardized Coefficients**		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	7.13	0.443		2.311	0.034
Earnings	0.444	0.254	0.021	0.352	0.092
Sales growth	0.738	0.262	0.022	2.511	0.042
Liquidity	0.612	0.372	0.038	2.324	0.031
Leverage	0.223	0.242	-0.032	2.034	0.024

Source: Research findings

The estimated regression model becomes:

ROA = 7.13 + 0.01 EN + 0.022 SG + 0.038 LQ - 0.032 LV

4.7 Interpretation of the Findings

All the variables are statistically significant at 5% level of significance in explaining the variation in dividend payment. Other factors held constant, the average dividend payment for the 16 cyclical firms will realize 7.13 units. Firm's earnings are statistically significant at 5% level of significance in causing a variation in dividend policy. The study has established a positive relationship between dividend policy and earnings. A unit increase in earnings will lead to 0.01 units increase in dividend payment of the sixteen cyclical firms. Sales growth of the firms is positively and statistically significant at 5% level of significance in explaining dividend policy.

A unit increase in sales growth will result to 0.22 units increase in dividend payments for the 16 cyclical firms under study. Liquidity is established to be significant factor in causing changes in firm's dividend policy. A unit increase in liquidity of the firm will lead to 0.038 units increase in dividend payment. The finding is in line with Benito et al (2001) who found that high retained earnings to equity ratio (indicating propensity to pay dividend) would ensure availability of free cash flows or residual cash flows within the firm which gives direct relation between liquidity and dividend payout However, the study established a negative relationship between leverage ratio and dividend payment. A unit increase in leverage ratio will lead to 0.032 units decrease in dividend payments. The study is therefore consistent with Rozeff, (1982) who argues that there exist an inverse relationship between dividend rate and leverage.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study and makes conclusion based on the results. The implications from the findings and areas for further research are also presented. This section presents the findings from the study in comparison to what other scholars have said as noted under literature review.

5.2 Summary

The main objective of the study was to establish the effect of earnings on dividend policy of cyclical firms on the NSE. Descriptive measures involved mean, maximum, minimum, standard error of estimate, skewness and kurtosis. Mean is a measure of central tendency used to describe the most typical value in a set of values. The standard error is a statistical term that measures the accuracy within a set of values. Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the center point. Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution.

The results showed that dividend payout had a mean of 8.00 with a minimum of 7.00, a maximum of 12.00, skewness 0.045 and kurtosis of +2.034. Comparatively, earnings had a mean of 0.4994, minimum of 0.312, maximum of 0.191, skewness of 0.829 and kurtosis of +3.223. sales growth had a mean of 2.043, minimum of 0.000, maximum of 4.831, skewness of 0.698 and kurtosis of +3.567. Liquidity had a mean of 3.319, minimum of 1.224, maximum of 4.183, skewness of 0.698 and kurtosis of +2.314.

Analysis of skewness shows that all the variables are asymmetrical to the right around its mean. Additionally, earnings and liquidity are highly peaked compared to other regressors. Jarque-Bera is a test statistic for testing whether the series is normally distributed. It measures the difference of the skewness and kurtosis of the series with those from the normal distribution using the null hypothesis of a normal distribution. A small probability value leads to the rejection of the null hypothesis of a normal distribution. Jarque-Bera test for normality shows that all variables are normally distributed.

Correlation analysis was used to measure the degree of association between different variables under consideration. In this section, the study measured the degree of association between the earnings variables and dividend policy i.e. if the earnings proxies (Earnings, Sales Growth, Liquidity and Leverage) and dividend policy of cyclical firms. From the priori stated in the previous chapter, a positive relationship is expected between the measures of earnings and dividend policy of cyclical firms. Regression analysis was used to determine the impact of earnings variables on payout of cyclical firms.

5.3 Conclusion

The analysis of the correlations results seemed to support the hypothesis that each independent variable in earnings variables has its own particular informative value in the ability to explain payout of cyclical firms. The significance of the coefficients was calculated at the level of 95%. The study findings indicate that earnings variables i.e. Earnings, Sales Growth, Liquidity and Leverage are statistically significant to payout of cyclical firms as indicated by the positive and strong Pearson correlation coefficients whereas liquidity is statistically insignificant with payout of cyclical firms as indicated by their weak Pearson correlation coefficients.

According to the regression equation established, taking all factors into account (Earnings, Sales Growth, Liquidity and Leverage, payout of cyclical firms will be 7.13. A Pearson coefficient measure showed a strong, significant, positive relationship between earnings and payout of cyclical firms. Therefore basing on these findings the study rejected the null hypothesis that there is no relationship between earnings and payout of cyclical firms and accepted the alternative hypothesis that there exists a relationship between earnings and payout of cyclical firms.

5.4 Recommendations for Policy and Practice

The study recommends that managers in cyclical companies should take into account the earnings variables i.e. Earnings, Sales Growth, Liquidity and Leverage when determining payout. The study further recommends that managers should continuously manage the accounting practices to ensure that earnings variables are managed properly to improve the payout of cyclical firms

5.5 Limitations of the Study

The findings of this study may not be generalized to all cyclical listed firms but can be used as a reference to listed firms in developing countries since they face almost the same challenges due to the same prevailing economic situations as opposed to cyclical firms in developed countries. The results thus cannot be generalized to all listed companies in NSE. This is because different companies may have different strategies for managing earnings and payout.

Since the main purpose of this study is to identify the relationship between earnings and payout of cyclical firms, NSE considered some information sensitive and confidential and thus the researcher had to convince them that the purpose of information is for academic research only and may not be used for any other intentions.

Earnings and payout keep on changing from period to period depending on prevailing economic situations and demand on the capital market. The findings therefore may not reflect the true effect of earnings on payout of cyclical firms across the companies listed for a period covered since some companies are delisted and listed again depending on their performance on NSE.

5.6 Suggestions for Further Research

The study suggests that more studies to be carried out taking in to account the prevailing macroeconomic variables as the control variables since they play major roles in decision making among the managers. More studies should also be carried out taking in to account other performance variables like Return on equity as opposed to the current study which only considered payout. A similar study should also be carried out on the effect of earnings on payout of cyclical firms in Kenya incorporating more earnings variables as opposed to the current study which took into consideration only four earnings variables.

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APPENDICES

APPENDIX I:

FIRMS LISTED AT NSE AS AT 31 DEC 2012 BY SEGMENTATION

AGRICULTURAL	COMMERCIAL & SERVICES
Eaagads Ltd	Express Ltd
KapchoruaTtea Co. Ltd	Kenya Airways
Kakuzi	Nation Media Group
Limuru Tea Co. Ltd	Standard Group Ltd
Rea Vipingo Plantations Ltd	TPS Eastern Africa (Serena) Ltd
Sasini Ltd	Scangroup Ltd
Williamson Tea Kenya Ltd	Uchumi Supermarket
	Hutchings Biemer Ltd
	Longhorn Kenya Ltd
TELECOMUNICATION & TECHNOLOGY	**AUTOMOBILES & ACCESSORIES**
Access Kenya Group Ltd	Car & General (K) Ltd
Safaricom Ltd	CMC Holdings Ltd
	Sameer Africa Ltd
	Marshall (E.A) Ltd
BANKING	**INSURANCE**
Barclays Bank Ltd	Jubilee Holdings Ltd
CFC Stanbic Holdings Ltd	Pan Africa Insurance Holdings Ltd
I&M Holdings Ltd	Kenya Re-insurance Corporation Ltd
Diamond Trust Bank Kenya Ltd	Liberty Kenya Holdings Ltd
Housing Finance Co. Ltd	British American Investments Co. (K) Ltd
Kenya Commercial Bank Ltd	CIC Insurance Group Ltd
National Bank of Kenya Ltd	
NIC Bank Ltd	
Standard Chartered Bank Ltd	
Equity Bank Ltd	
Co-operative Bank of Kenya Ltd	

INVESTMENTS	**MANUFACTURING & ALLIED**
Olympia Capital Holdings Ltd	B.O.C Kenya Ltd
Centum Investments Co. Ltd	British American Tobacco Kenya Ltd
Trans-Century Ltd	Carbacid Investments Ltd
	East African Breweries Ltd
	Mumias Sugar Co. Ltd
	Unga Group Ltd
	Eveready East Africa Ltd
	Kenya Orchards Ltd
	A.Baumann Co. Ltd
CONSTRUCTION & ALLIED	**ENERGY & PETROLEUM**
Athi River Mining	KenolKobil Ltd
Bamburi Cement Ltd	Total Kenya Ltd
Crown Berger Ltd	KenGen Ltd
E.A Cables Ltd	Kenya Power & Lighting Co. Ltd
E.A Portland Cement	Umeme Ltd
GROWTH ENTERPRISE MARKET SEGMENT	
Home Afrika Ltd	

Source: (www. nse.co.ke)

APPENDIX II:

CORRELATION BETWEEN INDUSTRIAL AND FIRMS' GROWTH RATES

Firm	Test	Correlation	Sector
Sasini Ltd	Pearson Correlation	.698**	Agriculture
	Sig. (2-tailed)	0.009	
Rea Vipingo Plantations Ltd	Pearson Correlation	.703*	
	Sig. (2-tailed)	.031	
Equity Bank Ltd	Pearson Correlation	0.758	Banking
	Sig. (2-tailed)	0.099	
NIC Bank Ltd	Pearson Correlation	.881*	
	Sig. (2-tailed)	0.013	
Barclays Bank Ltd	Pearson Correlation	.716**	
	Sig. (2-tailed)	0.006	
Nation Media Group	Pearson Correlation	.877**	Commercial and Services
	Sig. (2-tailed)	.009	
TPS Eastern Africa (Serena) Ltd	Pearson Correlation	.736*	
	Sig. (2-tailed)	0.042	
Car and General (K) Ltd	Pearson Correlation	.865**	Automobile and Accessories
	Sig. (2-tailed)	0.002	
Jubilee Holdings Ltd	Pearson Correlation	.919**	Insurance Manufacturing and Allied
	Sig. (2-tailed)	0.006	
British American Investments Co. (K) Ltd	Pearson Correlation	.865**	
	Sig. (2-tailed)	0.002	
Pan Africa Insurance Holdings Ltd	Pearson Correlation	.806*	
	Sig. (2-tailed)	0.049	
East African Breweries Ltd	Pearson Correlation	.735**	
	Sig. (2-tailed)	.004	
B.O.C Kenya Ltd	Pearson Correlation	0.824*	
	Sig. (2-tailed)	0.015	
Total Kenya Ltd	Pearson Correlation	.723**	Energy and Petroleum
	Sig. (2-tailed)	.000	
Kenya Power & Lighting Co. Ltd	Pearson Correlation	.783*	
	Sig. (2-tailed)	0.012	
KenGen Ltd	Pearson Correlation	.861**	
	Sig. (2-tailed)	0.086	

Source: Research Findings

APPENDIX III: DATA SHEET SHOWING DETAILS OF SELECTED COMPANIES 'FINANCIAL INFORMATION FROM 2008-2012

2008

p	**Name of the Firm**	**Dividend Payout**	**Leverage ratio**	**Liquidity ratio**	**Sales growth**	**Earnings Ratio**
Agricultural Sector	Kakuzi	0.39	0.11	1.1	0.13	2.49
	Sasini	0.76	0.14	1.77	0.11	-4.2
	Rea Vipingo	1.65	0.07	1.43	0.19	6.07
Automobile and Accessories	Cmc holdings	0.59	0.28	1.4	0.19	11.94
	Marshalls ltd	1.8	0	1.29	0.7	-1.6
	Car&General	0.78	0	1.3	0.07	11.07
Banking Sector	NIC Bank	1.02	0.19	2.1	0.186	22.81
	Barclays Bank	0.74	0.38	1.29	0.04	24.56
	Equity Bank	1.09	0.51	0.4	0.2	11.8
commercial and Services						
	Nation Media	1.66	0	0.36	-0.1	-10.65
	TPS Serena	2	0.39	2.13	0.15	14.94
	Standard group	2.9	0.126	1.37	0.39	12.8
Construction and Allied						
.	East African Cables	3.77	0.44	1.66	0.4	11.49
.	Crown Paints	0.57	1.09	1.54	0.04	20.75
.	Athi River Mining	2.9	0.25	1.02	0.24	17.81
Energy & Petroleum	KP&LC	2.3	0.45	1.3	0.13	8.41
	Kengen	0.71	0.34	1.34	0.09	9.13
	Total Kenya	3	0.63	1.24	0.14	7.96
Investment	Centum	1.7	0.29	4.57	0.11	15.83
	Olympia	0.8	0	1.29	0.11	7.8
	Transcentury	0.9	0.04	1.7	0.2	10
Manufacturing	BOC Kenya	1.02	0.66	0.6	0.14	15.59
	East African Breweries	2.2	0.5	1.35	0.05	16
	Unga group	0.5	0	1.9	0.126	3.75
Telecommunication	Safaricom	3.5	0.144	0.51	0.3	10..39
Insurance	Pan African Insurance	0.49	0	1.2	-0.08	-3.2
	British American Investments	0.6	0.16	1.34	0.24	4.5
	Jubilee Holdings	1.01	0.25	1.29	0.11	6.27
Growth Enterprise Market Segment	Home Afrika	1	0.2	1.3	0.5	10.1

2009

p	**Name of the Firm**	**Dividend Payout**	**Leverage Ratio**	**Liquidity Ratio**	**Sales growth**	**Earnings Ratio**
Agricultural Sector	Kakuzi	0.4	0.14	1.5	0.21	1.84
	Sasini	0.77	0.36	1.68	0.1	3.81
	Rea Vipingo	0.93	0.02	2.24	0.15	4.47
Automobile and Accessories	Cmc holdings	0.6	0.38	1.4	0.1	10.8
	Marshalls ltd	1.6	0	0.89	0.25	-2.94
	Car&General	0.6	0.88	1.2	0.07	8.81
Banking Sector	NIC Bank	1.05	0.182	1.9	0.16	11.36
	Barclays Bank	0.78	0.49	1.4	0.06	17.65
	Equity Bank	1.1	0.54	0.6	0.18	11.28
Commercial and Services						
	Nation Media	1.47	0	0.31	0.03	18.91
	TPS Serena	1.83	0.28	2.07	0.17	14.09
	Standard group	2.1	0.14	1.27	0.27	10.57
Construction and Allied						
.	East African Cables	2.6	0.68	1.36	0.19	13.85
.	Crown Paints	0.55	1	1.46	0.1	6.87
.	Athi River Mining	2.2	0.23	1	0.16	17.03
Energy & Petroleum	KP&LC	2.6	0.37	1.3	0.14	5.68
	Kengen	0.75	0.53	2.17	0.03	15.45
	Total Kenya	2.14	0.36	1.12	0.05	10.67
Investment	Centum	1.1	0	0.31	0.05	18
	Olympia	1	0	1.3	0.05	24
	Transcentury	0.6	0.15	1.8	0.07	15
Manufacturing	BOC Kenya	1.05	0.86	0.5	0.1	19.03
	East African Breweries	1.2	0.39	1.36	0.12	5.7
	Unga group	0.6	0	1.8	0.6	6.45
Telecommunication	Safaricom	2.8	0.37	0.4	0.21	11.39
Insurance	Pan African Insurance	1.28	0.69	1.02	0.1	15.57
	British American Investments	0.5	0.14	2.1	0.24	15
	Jubilee Holdings	1.03	0.26	0.68	0.07	5.19
Growth Enterprise Market Segment	Home Afirka	1.19	0.17	3.5	0.4	9.6

2010

Agricultural Sector	Kakuzi	0.5	0.16	2.1	0.18	5.1
	Sasini	0.15	0.18	1.64	0.17	4.1
	Rea Vipingo	1.4	0.71	1.34	0.07	15.95
Automobile and Accessories	Cmc holdings	0.63	0.29	1.39	0.07	18.63
	Marshalls ltd	1.52	0	0.5	2.6	0.79
	Car&General	1	0	1.5	0.03	7.34
Banking Sector	NIC Bank	1.14	0.109	1.6	0.226	10
	Barclays Bank	0.85	0.42	2	0.09	16.06
	Equity Bank	1.09	0.45	1	0.18	7.79
Commercial and Services						
	Nation Media	1.6	0	0.32	-0.07	-9.83
	TPS Serena	2.38	0.33	1.7	0.16	28.89
	Standard group	2.26	0.13	1.32	0.23	12.04
Construction and Allied						
.	East African Cables	1.78	1.1	1.28	0.1	17.9
.	Crown Paints	0.54	1	1.5	0.1	9.34
.	Athi River Mining	2.23	0.16	1.32	0.22	16.86
Energy & Petroleum	KP&LC	2.9	0.37	1.38	0.17	7.69
	Kengen	0.82	0.34	4.71	0.05	11.44
	Total Kenya	1.9	0.2	1.18	0.1	5.48
Investment	Centum	1.14	0	1.29	0.14	7.84
	Olympia	0.6	0.26	0.6	0.02	10
	Transcentury	0.8	0.16	1.6	0.09	8
Manufacturing	BOC Kenya	1.05	2.31	0.5	0.05	32.49
	East African Breweries	1.82	0.39	2	0.15	12.5
	Unga group	0.5	0.25	2.5	0.72	6.76
Telecommunication	Safaricom	3.75	0.52	0.67	0.24	14.66
Insurance	Pan Africa Insurance	0.86	0.49	1.3	0.32	10.75
	British American Investments	0.71	0.19	1.3	0.19	10.7
	Jubilee Holdings	0.97	0.17	1.39	0.24	4.6
Growth Enterprise Market Segment	Home Afrika	1.08	0.14	2.4	0.5	8.4

2011

Agricultural Sector	Kakuzi	0.5	0.13	3.3	0.23	2.48
	Sasini	0.81	0.16	2.1	0.19	2.41
	Rea Vipingo	0.9	0.14	2.1	0.3	1.89
Automobile and Accessories	Cmc holdings	0.65	0	1.37	0.04	-39.08
	Marshalls ltd	2.2	0	0.27	0.45	1.12
	Car&General	0.55	0.57	2	0.04	12.63
Banking Sector	NIC Bank	0.99	0.09	1.8	0.257	4.33
	Barclays Bank	0.85	1	0.5	0.13	4.58
	Equity Bank	1	0.5	0.5	0.25	4.35
Commercial and Services						
	Nation Media	2.1	0	0.34	-0.6	-1.48
	TPS Serena	1.88	0.27	2.05	0.17	16.27
	Standard group	1.6	0	1.08	0.1	12.59
Construction and Allied						
	East African Cables	1.85	0.4	1.16	0.17	8.48
	Crown Paints	0.53	0.72	1.4	0.12	2.71
	Athi River Mining	1.87	0.17	0.84	0.2	13.6
Energy& Petroleum	KP&LC	3.7	0.45	1.22	0.28	4.47
	Kengen	0.8	0.53	1.74	0.03	14.32
	Total Kenya	2.34	0.25	1.1	-0.008	-36.14
Investment	Centum	1.65	0	1.39	0.24	5.67
	Olympia	0.97	0	0.4	0.03	5.75
	Transcentury	1.03	0.19	1.2	0.09	21
Manufacturing	BOC Kenya	1.02	0.88	0.5	0.11	12.96
	East African Breweries	0.98	0.4	2.2	0.13	5.7
	Unga group	0.48	0.21	2.5	0.12	2.8
Telecommunication	Safaricom	2.4	0.61	0.64	0.19	11.55
Insurance	Pan Africa Insurance	0.99	0.43	1.01	0.21	4.5
	British American Investments	0.6	0.17	1.2	0.14	9.5
	Jubilee Holdings	1.67	0.12	0.5	0.09	4.9
Growth Enterprise Market Segment	Home Afrika	1.09	0.16	3.6	0.6	10.1

2012

p	Name of the Firm	Dividend Payout	Leverage Ratio	Liquidity Ratio	Sales growth	Earnings Ratio
Agricultural Sector	Kakuzi	0.7	0.19	8.5	0.15	3.7
	Sasini	0.87	0.37	1.65	0.07	6.07
	Rea Vipingo	0.79	0.17	3.41	0.2	2.68
Automobile and Accessories	Cmc holdings	0.56	0	1.54	0.02	67.2
	Marshalls ltd	0.89	0	1.13	0.4	-1.05
	Car&General	0.5	0.37	1.2	0.08	6.09
Banking Sector	NIC Bank	1.05	0.166	2	0.196	6.34
	Barclays Bank	0.87	0.6	0.3	0.14	4.8
	Equity Bank	1.1	0.46	0.6	0.25	7.24
Commercial and Services						
	Nation Media	1.26	0	0.4	0.06	9.51
	TPS Serena	2.69	0.27	2.28	0.15	31
	Standard group	1.4	0	1.12	0.41	9.7
Construction and Allied						
.	East African Cables	1.69	0.48	1.2	0.2	5.67
.	Crown Paints	0.48	0.94	1.3	0.11	7.07
.	Athi River Mining	2	0.2	1.22	0.18	17.69
Energy & Petroleum	KP&LC	6.29	0	0.97	-0.97	-3.17
	Kengen	0.76	0.47	1.49	0.04	6.7
	Total Kenya	1.41	0.17	1.3	-0.014	-11.99
Investment	Centum	0.93	0	0.68	0.12	7.3
	Olympia	0.67	0.09	0.5	0.01	3.64
	Transcentury	0.95	0.24	1.28	0.01	14
Manufacturing	BOC Kenya	1	0.5	0.55	0.14	9.84
	East African Breweries	0.97	0.3	1.25	0.13	4.6
	Unga group	0.53	0.27	2.4	0.087	4.5
Telecommunication	Safaricom	2.1	0.7	0.56	0.17	10.14
Insurance	Pan African Insurance	1.07	0.41	0.9	0.27	5.5
	British American Insurance	0.9	0.23	1	0.25	5.55
	Jubilee Holdings	0.93	0.16	0.31	0.01	7.44
Growth Enterprise Market Segment	Home Afrika	2.2	0.3	2.5	0.43	14.1

Source: NSE data base

APPENDIX IV: DATA COLLECTION LETTER

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MSC FINANCE PROGRAMME

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE 2/9/2014

TO WHOM IT MAY CONCERN

The bearer of this letter ..... GEORGE MWKANZI .....

Registration No..... D63/64688/2013 .....

is a bona fide continuing student in the Master of Science (Finance) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a finance problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
02 SEP 2014
P.O. Box 30197 - 00100, NAIROBI

PATRICK NYABUTO
FOR: MSC FINANCE CO-ORDINATOR
SCHOOL OF BUSINESS