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THE IMPACT OF DIVIDEND POLICY ON SHARE PRICES: EVIDENCE FROM THE GHANA STOCK EXCHANGE.

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Business Administration (Banking and Finance Option) Degree and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

This study seeks to examine the impact of dividend policy on share prices of listed companies in Ghana. The analyses are performed using data derived from the financial statements of 20 listed companies on the Ghana stock Exchange (GSE) over a ten-year period from 2004 to 2013. A pooled panel regression model is used to estimate the regression equation. The results show that both dividend payout ratio and dividend yield have positive and significant impact on share prices. The results further show that market capitalization, profit after tax and return on equity have significant effect on share prices of the listed firms. However, long term debt shows insignificant effect on share prices. The study, therefore, concludes that dividend policy is relevant in the valuation of a company's share price. The study recommends, among other things, that Ghanaian firms should adopt an optimal trade-off policy between dividend payment and retained earnings that would increase the shareholders' wealth through share price appreciation and investors seeking to invest in Ghanaian listed firms should consider their dividend policies before making investment decisions. The study also recommends that future studies should examine the relationship between dividend policy and share prices using data from specific industries, for example, manufacturing, financial, trading, mining and so on to determine whether variations exist among different sectors of the economy as far as dividend policy is concerned.

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DEDICATION

This thesis is dedicated my beloved wife, Christiana and children, Frederick and Jeffrey.

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LIST OF ABBRAVIATIONS

CAPM	Capital Asset Pricing Model
DY	Divided Yield
FE	Fixed Effect Model
GSE	Ghana Stock Exchange
LM	Breusch-Pagan Lagrange Multiplier Test
NYSE	New York Stock Exchange
OLS	Ordinary Least Squares
PAT	Profit After Tax
PR	Payout Ratio
RE	Random Effect Model
ROE	Return on Equity
SP	Share Price
SPSS	Statistical Package for Social Sciences
UK	United Kingdom

CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND TO THE STUDY

Dividend policies are crucial aspect of organisation management and it serves as a mechanism for rewarding owners of a company for their investment. According to Nissim & Ziv (2001) divided policies provide a guideline for deciding divided payments to shareholders. Dividend represents the return accruing to a shareholder for investing in an organization in order to acquire stocks (Eriki & Okafor, 2002). Dividend policy on the other hand deals with the division of profit (net) between shareholders.

The phenomenon of divided policy has been a thorny issue in corporate finance. It has become one of the most debated concepts in core theory of corporate finance (Imran, 2011). Researchers are divided as to whether a firm needs to have a policy to pay dividend to its shareholders or not. This absurdity is commonly referred to as “Dividend puzzle”. About four decades ago, Black (1976) argued: “The harder we look at dividend picture, the more it seems like a puzzle, with pieces that just don’t fit together”. Brealey & Myers (2002) have enlisted dividend policy as one of the top ten puzzles in corporate finance. The questions of "Why do corporations pay dividends?" and "Why do investors pay attention to dividends?" have puzzled both academicians and corporate managers for many years.

According to Imran (2011), the concept of dividend policy is crucial for businesses for a number of reasons. First, organizations can use dividends as an instrument for financial signalling to the outsider vis-à-vis the stability and growth prospects of the firm. In other words, firms that are regularly paying dividend can send the signal to the outside world and prospective investors that

it is doing well. This is because a firm that is not doing well cannot pay dividend in a regular and consistent manner. Secondly, dividend plays a critical role in an organization's capital structure. The residual dividend theory has it that a firm pays dividend only if it does not have many investment vestures to undertake. Put differently, a firm's investment policies have a significant impact on its payout policy. Firms with less investment opportunities have greater amount to distribute as dividends. Thus, increase in investment opportunities has a negative effect on dividend payout policies of firms and vice-versa. Finally, a firm's stock price can be affected by dividend patterns; more dividend payments can increase the stock price of the firm (Allen & Rachim, 1996).

The importance of dividend policy for managers, investors, and other stakeholders cannot be underestimated. In the opening lines their seminal paper, Miller & Modigliani (1961) wrote:

> *"The effect of a firm's dividend policy on the current price of its shares is a matter of considerable importance, not only to the corporate officials, who must set the policy, but to investors planning portfolios and to economists seeking to understand and appraise the functioning of the capital markets". Miller & Modigliani (1961, p.411)*

It is particularly important for investors because investors consider dividends not only the source of income but also a way to assess the firm from investment points of view. Dividend policy allows investors to assess the capability of firms to generate cash. In most cases, investors keep a close eye on the dividend yield, which is estimated as the annual dividend income per share dividend by the current share price. The dividend yield is used to measure the amount of income received in proportion to the share price. A company having a dividend yield lower than its peers in the same industry could mean that the company in unable to afford dividend payment.

The pecking order theory postulate that firms prefer to use internal sources of finance first, followed by debt and finally equity finance obtained from stock issue. According to Imran (2011), if firms are more profitable, they will have more internal finance and hence larger

dividends. As a result, some researchers view dividend payment as less important compared to capital gains. Such researchers believe that if the firm grows, the earnings stream of shareholders also grow; hence it is difficult for management to adopt and optimal policy. Practically, however, every firm adopts a dividend policy aimed at retaining a portion of the net earnings in such a way that dividend payment is not threatened. The key question is this; does dividend policy affect the value of the firm? Proponents of dividend policy argue that dividend can affect the value of the firm and thus managers should formulate dividend policy decisions. They argue that dividend policies can help improve the financial/stock performance of companies. Dividend represents the return to the investor who puts his money at risk in the corporation. Thus, corporations pay dividends to reward existing shareholders, and to encourage others to buy new issues of common stock at high prices. Also, some investors pay attention to dividends because it is only through dividends or the prospect of dividends investors receive a return on their investment or the chance to sell their shares at a higher price in the future. The "Bird in Hand" theory by Gordon (1962) provides another classical reason why firms may have to pay dividend. According to the theory, shareholders prefer a divided today to a supposed higher uncertain capital gain in the future.

Traditionally, it has been argued vehemently that organisations can influence their share prices through changes in their dividend policies. A common argument usually used to support this proposition is that increasing payout ratio can improve share prices. The feeling is that investors prefer a dollar of dividends to a dollar of capital gains, because 'a bird in the hand is worth more than two in the bush'. This has given birth to a theory known as the "bird in hand theory". Others also posit that since dividend is considered as less risky compared to capital gains, companies

should put in place high dividend payout ratio and offer higher dividend yield in other to maximize share prices.

Opponents of the dividend policy think otherwise. They argue that dividend policy is irrelevant because whether a firm pays dividend or not, such a decision has no effect on the value of the firm and its share prices. The dividend irrelevance theory, propounded by Miller & Modigliani (1969) posits that if a firm's investment policy (and hence cash flows) don't change its value dividend policy cannot change it in any way. According to them, if personal taxes are ignored, investors have to be indifferent to receiving either dividends or capital gains.

It is quite obvious that while some theoretical and empirical studies have established that dividend policies are irrelevant (Miller & Modigliani, 1969; Brennan, 1971; Black & Scholes, 1974 and Hakansson, 1982), others have proven otherwise (Gordon, 1959, 1961, 1962; Lintner, 1962; Pettit, 1972; Bhattacharya, 1979; Allen & Michaely, 2002; Pradhan, 2003 and Khan, 2012). It is clear, therefore, that the dividend puzzle is far from being solved. Black (1976) concluded his study with a question: "what should the corporation do about dividend policy? We don't know". Baker *et al*. (2002, p. 255) also concluded, "Despite a voluminous amount of research, we still do not have all the answers to the dividend puzzle" and almost a decade later, Baker *et al*. (2011, p. 305) noted, "Empirical evidence on whether dividend policy affects a firm's value offers contradictory advice to corporate managers". Opinions still vary as to whether dividend policy affects the performance of the firm. The current study provides further evidence on the subject of dividend policy by examining its impact on share prices of listed companies on the Ghana Stock Exchange. The study adopts the econometric model proposed by Deloof (2003) and subsequently Padachi (2006).

1.1 PROBLEM STATEMENT

The main focus and vision of every organisation is to enhance the wealth of its shareholders. Managers are therefore mandated to pursue policies that are expected to inure to the benefits of owners and thereby increase their wealth. Over the past few decades the relevance or otherwise of dividend policy has received a great deal of attention and it continues to be a controversial topic among financial scholars. In other parts of the world, dividend payment matters. Several studies have shown that an announcement of dividend affects share prices, either positively or negatively (Norhayati, 2005). In Ghana, though various studies have been conducted on dividend policies, these studies have been limited to the main determinants of dividend payout (Amidu & Abor, 2006). Therefore, it is important to have an understanding of whether dividend policy has any impact on share prices or the value of the firm. The main purpose of this study is to ascertain the effect of dividend policy on share prices of listed companies on the Ghana stock exchange.

1.2 OBJECTIVES OF THE STUDY

The general objective of the study is to empirically examine the impact of dividend policy on the share prices of listed companies on the Ghana Stock Exchange (GSE).

1.3 SPECIFIC OBJECTIVES

Based on the general objective, the following specific objectives are examined:

1. To examine the relationship between share price and the dividend policy of selected listed companies on the GSE.
2. To examine the other factors that affect the movement of share prices of selected companies on the Ghana stock exchange.

1.4 RESEARCH QUESTIONS

1. What is the relationship between dividend policy and share price of listed firms on the GSE?
2. What are the other factors that affect share price movement of the selected companies?

1.5 SIGNIFICANCE OF THE STUDY

The study is significant in various ways. First, the study contributes towards a very important aspect of corporate financial management known as dividend policy with reference to listed companies on the Ghana Stock Exchange. Second, understanding the interplay between dividend and share prices will help firms in framing their dividend policies. For instance, understanding this phenomenon will help firms to develop dividend policies that would enhance their market value.

Third, the study will provide additional data and information with respect to dividend policies and its impact on share prices of companies. Thus, the information gathered will provide a better understanding of this rather controversial phenomenon. This will aid in the formulation and implementation of appropriate dividend policies which will be beneficial to both managers and shareholders of listed companies on the Ghana Stock Exchange.

Fourth, it will also serve as a reference material for researchers in the area of dividend policy and its impact on share prices.

Finally, the findings of the study will contribute to the existing body of knowledge thereby extending the frontiers of knowledge in the field of dividend policies in listed companies

1.6 BRIEF RESEARCH METHODOLOGY

The study, which seeks to establish the impact of dividend policy on the share prices of Ghanaian companies, was conducted using selected companies on the Ghana Stock Exchange (GSE). A panel data constructed from the financial data of 20 listed companies on the Ghana Stock Exchange for a 10 year period, from 2004-2013. The financial records of these selected companies were derived from the Ghana Stock Exchange. The panel data analyses were conducted using STATA. The fixed effect, random effect and pooled OLS models were employed to ascertain their applicability to the data.

1.7 SCOPE OF THE STUDY

The study covers only selected companies on the Ghana Stock Exchange (GSE) from 2004-2013. Since most previous studies on the impact of dividend policy on share price have been done in developed stock markets, the Ghanaian stock market is selected as an emerging market in this study. Dividend yield and payout ratio are used as proxies for dividend policy. Return on Equity (ROE), Market Capitalization, Profit after Tax, and Debt are used as control variables in the study.

1.8 LIMITATIONS OF THE STUDY

The study had two main limitations. First, the study could not use all listed companies on the Ghana Stock Exchange (GSE). This is because financial data on some the companies were difficult to obtain. Also, the dividend payments of some of the companies were very irregular, making it extremely difficult to combine their data with those that pay regular dividend. However, these limitations could not significantly affect the validity of the data and the findings obtained.

1.9 ORGANISATION OF THE STUDY

The study is organized into five main chapters. Chapter One deals with the introduction of the study, which covers the background of the study, the problem statement of the study, the objectives and research questions, a brief methodology, significance of the study, limitations and organization of the study. Chapter Two provides a review of relevant theoretical and empirical literature on the subject of dividend policy and its impact share prices. Chapter Three covers the methodology used to undertake the study which includes the sources of data, research design, study sample and population as well as the process used in analysing the data. Chapter Four provides detailed presentation, analysis, interpretation and discussion of the results of the study. Chapter Five is devoted to the summary of the findings, conclusion as well as recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

The previous chapter introduced the study and its objectives. This chapter provides a review of relevant theoretical and empirical literature on the subject being examined. It begins by providing some conceptual definitions of the key concepts followed by theoretical and empirical literature review.

2.1 CONCEPTUAL DEFINITIONS

Stocks are among the main investment vehicles used by investors to invest their monies. It has become an important investment vehicle because it makes holders of the stocks part owners of the business. Gitman (2004) divides stocks into common and preferred. Holders of common stocks have ownership claim against the real or productive assets of the company. When the company is doing well stock holders are the main beneficiaries. On the other hand, if the company is not performing, they are the main losers. Investors purchase stocks for varying reasons: whiles some are interested in the long run growth of the firm; others expect to receive returns in the form of regular dividend on their investment. According to Johns (1998), dividend is usually a distribution in cash form to stock holders of a corporation approved by the board of directors.

The concept of dividend has been defined by many authors and researchers. According to Bierman (2001), dividend is an appropriation of profits to shareholders after deducting tax and fixed interest obligations on debt capital. It constitutes return to shareholders on their investment,

and the aim is to increase their confidence in the future of the company in which they have invested. Watson & Head (2010) define dividend as a cash payment made on a quarterly or semi-annual basis by a company to its shareholders. It is a distribution of after-tax profit. Jo & Pan (2009) assert that dividend payment could provide a signal to the investors that the company is complying with good corporate governance practices.

One of the primary elements of corporate finance is dividend policy decision (Uwuigbe *et al.,* 2012). According to Allen & Michaely (2003), the word "*policy* indicates that dividends do not develop in a random and arbitrary manner and that some consistency over time is present". A firm's dividend policy refers to the choices the firm makes about whether to pay shareholders a cash dividend, about how large the cash dividend should be, and about how frequently it should be distributed (Megginson & Smart, 2009: p.566). They extend this definition to include decisions such as whether to distribute cash to investors via share repurchases or specially designated dividends, rather than regular dividends, and whether to rely on stock or on cash distributions. In the view of Nissim & Ziv (2001), dividend policy is the regulations and guidelines that a company uses to decide to make dividend payments to shareholders.

The major concern of the dividend policy is, of course, the trade-off between dividend payout and retained earnings. In other words, dividend policy deals with the division of profit (net) between shareholders. Dividend policy can therefore be taken as one of the primary elements of the internal capital market considerations

2.2 THEORETICAL REVIEW

Dividend policy has been a debatable issue in the area of corporate finance. This is indicative of the various theories that have been propounded to either support or reject it. Notable among these theories are the dividend irrelevance theory, the bird-in-hand theory, signalling theory, tax

preference theory, agency theory, life cycle theory, dividend smoothing theory and Clientele effect. These theories are examined in detailed in the following sections.

2.2.1 Dividend irrelevance theory.

The mention and discussion of dividend irrelevant theory will not be complete without the mention of the seminal work of Miller & Modigliani (1961). Merton Miller and Franco Modigiliani (M&M) showed that under certain simplifying assumptions, a firms' dividend policy does not affect its value. The basic premise of their argument is that firm value is determined by choosing optimal investments. The net payout is the difference between earnings and investments, and simply a residual. Because the net payout comprises dividends and share repurchases, a firm can adjust its dividends to any level with an offsetting change in shares outstanding. From the perspective of investors, dividends policy is irrelevant, because any desired stream of payments can be replicated by appropriate purchases and sales of equity. According to the authors, dividend policy is irrelevant to the shareholder since it cannot alter the wealth of shareholders and thus, investors will not pay a premium for any particular dividend policy. This proposition comes with some strict assumptions. Some of the assumptions have been described by opponents of dividend irrelevant theory as quite "unrealistic". There are about five main assumptions underpinning the dividend irrelevance theory. First, the theory assumes that information is costless and available to everyone equally. Second, no distorting taxes exist. Third, floatation and transportation costs are non-existent. Also the theory assumes that there is no agency cost. Finally, individual investors and firms cannot exert enough power in the market to influence the price of a security. Some of these assumptions have been described as lacking practical applicability. For instance the assumption that managers are perfect agents for shareholders has been countered by many researchers. Opponents of this proposition argue that

owners of the firm are entirely different from managers of the same firm. According to Al-Malkawi (2007), because of this difference, managers are likely to pursue policies that will inure to their own benefits at the expense of shareholders who are the owners of the firm. The assumption of no taxes has also received a barrage of criticism since it is simply not practical. In spite of this criticism, the theory of dividend irrelevance has received some support from respectable number of authors. In a study conducted by Black & Scholes (1974), the researchers used the capital assets pricing model (CAPM) to investigate the association between dividend yield and expected stock return. They observed that there is no significant association between dividend yield and expected share price return. Thus, the study confirmed the irrelevance of dividend policy by Miller and Modigliani. Brennan (1971) also supports the dividend irrelevance theory of Miller and Modigliani by stating that any rejection of this theory must be based on the denial of the principle of symmetric market rationality and the assumption of independence of irrelevant information. He suggested that for rejection of the latter assumption, one of the following conditions must exist: firstly, Investors do not behave rationally. Secondly, Stock price must be subordinate of past events and expected future prospect. To him, since these assumptions cannot be rejected, it is difficult to downplay the significance of the dividend irrelevance theory.

Black & Scholes (1974) also support the dividend irrelevance theory by stating that there is no evidence that different dividend policies will lead to different stock prices. Their findings are consistent with dividend irrelevance hypothesis. Hakansson (1982) supported the irrelevance theory of Miller and Modigliani and claimed that dividends, whether informative or not, is irrelevant to firm's value when investors have homogeneous belief and time additive utility and the market is fully efficient. The most important insight of Miller and Modigliani's analysis is

that it identifies the situations in which dividend policy can affect the firm value; thus by identifying conditions under which dividend policy does not matter, invariably, the reverse conditions should also be true. It could matter, not because dividends are "safer" than capital gains, as was traditionally argued, but because the assumptions underlying their proposition could be easily relaxed.

2.2.2 The Bird in Hand Theory

The bird-in-hand argument suggests that investors need to realize wealth in order to consume and therefore have a preference for cash dividends over capital gains. This argument was first formally put forth by Gordon (1959) and Lintner (1962) but was theoretically contested by Miller & Modigliani (1961). Miller and Modigliani's seminal paper shows that capital gains and dividends substitute for each other. Also, investors could produce their "home-made dividends" by selling stock if they chose to do so.

Thaler & Shefrin (1981) and Shefrin & Statman (1984) propose that investors favour dividends as a self-control mechanism. Without dividends, investors would be tempted to sell stocks and use the proceeds for consumption, and they might sell more stock than they originally intended. In this explanation, dividends help investors to pace consumption and avoid later regret from their own overconsumption. Black (1990) subscribes to the view that investors like dividends because they like the idea of readily available wealth that spares them from consuming out of their capital.

Shefrin & Statman (1984) also suggest that investors may prefer dividends because they derive less utility from one big gain (e.g., a large capital gain) than from a series of small gains (e.g. a small capital gain and a dividend). They base their argument on prospect theory (Kahneman & Tversky, 1979). According to the theory, people evaluate profits in isolation of their overall

wealth (narrow framing), and their utility function is concave in the area of gains and convex in the area of losses. Further, the slope of the utility function is greater near the origin. Thus, a big gain that is divided into several small gains provides more pleasure to investors and fuels investors' demand for dividends.

The Bird in hand theory is usually used to justify the need for an organisation to have a dividend policy in place. The theory traditionally asserts that organisations can influence their share prices through changes in their dividend policies. It posits that investors prefer a dollar of dividends to a dollar of capital gains, because 'a bird in the hand is worth more than one in the bush'. In other words, dividend today is better than an uncertain capital gain in the future (Gordon, 1962). According to Amidu (2007) the key idea behind the bird in hand theory is that dividends are less risky than capital gains since they are more certain. As a result of the certainty, investors will prefer dividend to capital gains. Current dividend payments reduce investor's uncertainty, causing investors to discount the firm's earnings at lower rate of return while dividend reduction increases investors" uncertainty raising the required rate of return. This theory has received some criticisms from researchers and financial analysts. In spite of the criticism, the theory has received support from authors such as Gordon & Shapiro (1956), Lintner (1962) and Walter (1963). Three main assumptions underpin the bird in hand theory. First, it is assumed that investors do not have enough or perfect information about the prospects of a firm. Second, cash dividends are associated with higher taxes compared to capital gain which are taxed only when a share is sold. Finally, dividends function as a signal of expected cash flow. In spite of the high taxes paid on dividend, many organisations continue to pay dividend with the hope that it will send positive signal about the prospects of the firm.

2.2.3 Agency cost and the free cash flow theory

Agency cost theory explains the conflict of interest that is likely to emanate from the relationship between management and shareholders (Ross *et al*., 2008). This conflict arises when management acts in such a manner that their interests are maximized at the expense of shareholders who own the firm. This could be direct or indirect. This proposition contradicts the assumptions of Miller & Modigliani (1961) who assumed that managers are perfect agents for shareholders and no conflict of interest exists between them. This is somewhat questionable, as the owners of the firm are different from the management. Managers are sometimes likely to undertake activities that may be costly to shareholders, such as undertaking unprofitable investments that would yield excessive returns to them, and unnecessarily high management compensation (Al-Malkawi, 2007). These costs are eventually borne by shareholders. As a result of this conflict, the agency cost and free cash flow theory asserts that shareholders of firms with excess free cash flow would require high dividend payments instead. Agency cost may also arise between shareholders and bondholders: while shareholders require more dividends, bondholders require fewer dividends than shareholders by putting in place a debt covenant to ensure availability of cash for their debt repayment. Easterbrook (1984) also identified two agency costs: the cost of monitoring managers and the cost of risk aversion on the part of managers. Larger dividend payment forces the firm to seek external financing, which will subject it to the scrutiny of the capital market for new funds and reduces the possibility for suboptimal investments. Therefore, according to the agency theory this will reduce the monitoring costs to the firm. In short, if the costs involved in paying dividends are less than the benefit gained from the additional monitoring, then it makes sense for companies to have large dividend payouts. Rozeff (1982) postulates and finds evidence that firms establish higher dividend payouts when

insiders hold a lower fraction of the equity and or a greater number of stockholders own the outside equity. Rozeff (1982) found three common trends in corporate dividend policy. First, lower dividend payments levels are found in high growth firms. Investment requirements reduce the funds available for dividend payments. Second, corporations with higher firm specific risks or leverage ratios pay smaller dividends and finally, higher payouts are found in firms with little insider ownership and a large number of outside shareholders

These results imply that dividend policy mitigates agency costs because of the partial monitoring activity provided by dividend payments. This evidence supports the view that dividend payments are part of the firm's optimum monitoring and bonding package and serve to reduce agency costs.

2.2.4 The Signalling Theory

In a symmetrically informed market, all interested participants have the same information about a firm, including managers, bankers, shareholders, and others. However, if one group has superior information about the firm's current situation and future prospects, an information asymmetry exists. Most academicians and financial practitioners believe that managers possess superior information about their firms relative to other interested parties.

The signalling theory is one of the theories that believe that dividend is relevant in affecting the value of the firm. Even though Miller & Modigliani (1961) proposed that there exist a perfect knowledge about a firm by investors and management, this proposition has receive massive criticism by many researchers since they are of the view that management who see to the day-to - day running of the organization tend to have more precise and timely information about the firm than outside investors. This therefore creates a gap between managers and investors. According

to Al-Malkawi (2007), dividend is therefore used as a tool by management to convey private information to shareholders. This helps to bridge the information gap between shareholders and management. Pettit (1972) observed that the amount of dividend paid seem to carry great information about the prospects of a firm; this can be evidenced by the movement in the share price. An increase in dividend may be interpreted as good news and brighter prospects and vice versa. But Lintner (1956) observed that management is reluctant to reduce dividend even when there is the need to do so and only increase dividend when it is believed that earnings have permanently increased. A number of empirical studies have been conducted to support the signalling theory. Travlos *et al*. (2001) conducted a study by examining stock price response to dividend announcement in Cyprus. Their study revealed a strong evidence to support the signalling hypothesis. They reported prominent excess returns for both cash dividend announcement and cash dividend increase. It can therefore be interpreted that dividend payment sends a signal about the future profitability of a firm.

The study of John & Williams (1985) brought to the fore three important aspects of dividend policy. First, in the signalling equilibrium, firms expecting higher future operating cash flows optimally pay larger dividends. Second, the optimal dividend policy involves dividend smoothing relative to future operating cash flows so that dividend variability is lower than operating cash flow variability; and finally, the optimal dividend is higher for smaller tax disadvantage of dividends relative to capital gains.

The John & Williams (1985) model provide a compelling explanation for the generous dividend payout policies pursued by firms even when cash dividends have adverse tax consequences. It explains why firms pay cash dividends even when alternative methods of distributing cash exists, such as share repurchase, which do not have adverse tax consequences. The J&W model also

explains why a firm may find it optimal to pay cash dividends and raise new equity financing or repurchase stock in the same planning period. The argument for simultaneously paying dividends and obtaining new financing is that dividends are paid to reduce the under-pricing of the securities issued to raise new outside financing. When cash from operations is sufficient to meet the investment needs of the firm - and partially satisfy the liquidity needs faced by current shareholders- the firm may repurchase shares and pay dividends in the same planning period.

Bhattacharya (1979) developed a model in which managers signal the quality of an investment project by "committing" to a dividend policy. The project quality, measured, as the expected profitability of the project is the private information known only to managers. A crucial assumption of the model is that, if the payoffs from the project are not sufficient to cover the committed dividends, the firm will route to outside financing to cover the shortfall. However, outside financing involves transaction costs. A firm with genuinely high quality project would have lower expected transaction costs to meet the same level of pre-committed dividends than would a firm with low quality project. Accordingly, it would be unprofitable for the latter firm to mimic the dividend policy of the firm, having high - quality project.

This model is also subject to criticisms. For example, Bhattacharya did not clarify what he meant by firms committing to a certain level of dividends. Because an announced dividend is not a contractual obligation, but only a payment to the residual claimants, the firm is not obliged to maintain the dividend by issuing costly external financing if cash shortfalls occur.

2.2.5 Dividend Smoothing

John & Nachman (1986) have addressed the problem of dividend smoothing in their theoretical model. The firm's dividend policy may not change over a period of time, even though earnings

may change substantially and used a dynamic version of John and Williams (1985) Model. J & N model provided rationale for firms paying a smooth series of cash dividends even though such dividends have some tax disadvantage over alternative methods of distributing cash. A corporation's prospects can only be partially revealed using dividend policy because managers routinely smooth the payment stream; changes in dividend policy are only a rough signal of future expected earnings.

Constantinides & Grundy (1989) focused on interaction between investment decisions and repurchase and financing decisions in signalling equilibrium. With fixed investment, a straight bond issue cannot act as a signal, but a convertible bond issue can. When investment is chosen optimally rather than being fixed, this is no longer true; a straight bond issue can act as a signal.

Bernheim (1991) also provided a theory of dividends in which signalling occurs because dividends are taxed more heavily than repurchases. In his model, the firm controls the amount of taxes paid by varying the proportion of the total payout that is in the form of dividends, rather than repurchases. A good firm can choose the optimal amount of taxes to provide a good explanation of dividend smoothing.

Allen, Bernado & Welch (2000) took a different approach to dividend signalling. As in the previous models, dividends are a signal of good news (i.e., under valuation). However, in their model firms pay dividends because they are interested in attracting a better- informed clientele. Untaxed institutions such as pension funds and mutual funds are the primary holders of dividend-paying stocks because they are a tax-disadvantaged payout method for other potential stockholders. Another reason for institutions to hold dividend- paying stocks is the restriction in institutional charters, such as the "prudent man" rules that make it more difficult for many institutions to purchase stocks that pay either no dividends or low dividends.

According to Allen, Bernardo & Welch (2000), the reason good firms like institutions to hold their stock is that these stockholders are better informed and have relative advantage in detecting high firm quality. Low- quality firms do not have the incentive to mimic, since they do not wish their true worth to be revealed. Thus, taxable dividends are desirable because they allow firms' management to signal the good quality of their firms. Paying dividends increases the chance that institutions will detect the firm's quality. Another interesting feature of the Allen, Bernardo, and Welsh model is that it does accommodate dividend smoothing. Firms that pay dividends are unlikely to reduce the amount of the dividends, because their clientele (institutions) are precisely the kind of investors that will punish them for it. Thus, they keep dividends relatively smooth.

As in the John & Williams model, Allen, Bernardo, and Welch model involves a different role for dividends and repurchases. They are not substitutes. In fact, firms with more asymmetric information and firms with more severe agency problems will use dividends rather than repurchases.

Kumar (1988) modelled a rational expectations signalling equilibrium in that dividends convey only broad information of changes in a firm's prospects. The model implies that although dividend increases (decreases) signal important positive (negative) information about the firm's prospects, dividends are a poor predictor of corporate earnings because of the smoothing process applied by managers.

In a two- period model developed by Kale & Noe (1990), dividend increases signal increased future cash flows stability and decreased riskiness of the cash flows. In this model, dividends are positively correlated with share price returns and are inversely related to expected cash flows variance and underwriting costs.

2.2.6 Clientele effect

Every investor has his or her own expectations and needs. As a result, investors tend to prefer stocks of companies that satisfy a particular need. This is because investors face different tax treatment for dividends and capital gains and also face some transaction cost when they trade securities. Modigliani & Miller (1961) argue that for these cost to be minimized, investors tend towards firms that would give them those desired benefits. Likewise firms would attract different clientele based on their dividend policies. Though they argued that even though clientele effect may change a firms dividend policy, one clientele is as good as another, therefore dividend policy remains irrelevant. Al-Malkawi (2007) affirms that firms in their growth stage, which tend to pay lower dividend would attract clientele that desire capital appreciation, while those firms in their maturity stage which pay higher dividends attract clientele that require immediate income in the form of dividend. Al-Malkawi (2007), grouped the clientele effect in two, those that are driven by tax effects and those driven by transaction cost. He argued that investors that are in a high tax bracket would prefer firms that pay little or no dividends to get reward in the form of share price appreciation and vice versa. Transaction cost induced clientele on the other hand, arises when small investors depend on dividend payments for their needs prefer companies who satisfy this need because they cannot afford the high transaction cost in selling securities.

This line of thinking suggests that investors may have different reasons for favouring dividends as a result of institutional features such as regulatory requirements or tax differentials, or from behavioural preference. In particular, Shefrin & Thaler (1988) argue that investors' personal life-cycle considerations determine the predilection for dividends: older investors favour dividend-paying stocks because they substitute for a regular employment income.

Several studies find supporting evidence for dividend clientele among institutional investors. Allen *et al*. (2000) present a model in which dividends attract institutional investors because they are taxed less than retail investors, which in turn imposes a better governance structure. Brav & Heaton (1997) identify a preference to dividend payouts using the prudent man rules that require certain types of institutional investors to hold mature and thus dividend-paying firms. Dhaliwal, Erickson & Trezevant (1999) and Seida (2001) find empirical evidence that supports the existence of tax-based clientele for dividends. Perez-Gonzalez (2003) presents evidence that investors' tax status affects firm dividend policy. Hotchkiss & Lawrence (2002) find complementary evidence that firm returns are higher following dividends announcements for firms with institutional investors who favour dividends. Furthermore, based on a managerial survey, Brav, Graham, Harvey & Michaely (2005) report that managers consider their investor preferences toward dividends when making dividend-related decisions.

Other studies fail to find support for the clientele hypothesis among institutional investors. Grinstein & Michaely (2005) do not find supporting evidence for the clientele theory. They investigate whether institutional investors do indeed favour dividend-paying firms and find that institutions avoid investing in non-paying firms, but nevertheless favour firms that pay low dividends over high ones.

In a recent paper, Barclay, Holderness & Sheehan (2009) investigate whether corporations that have the lowest dividend tax bracket favour dividends. In a contradiction of previous findings, they find that corporate shareholders do not induce firms to pay dividends, but rather are concerned with improving the firms' operating business.

Brav *et al*. (2005) conduct a comprehensive survey of 384 managers and interview another 23 firms. Their goal is to reconcile managerial views with common academic theories of dividends.

According to their survey, managers are sceptical about the relation between dividends and investor clientele and believe that institutional investors are indifferent to dividend decisions.

Researchers also find evidence for dividend clientele's existence among retail investors. Using data about retail investors' portfolio holdings, Graham & Kumar (2006) find that older and low-income retail investors tend to hold a larger fraction of dividend-paying stocks than other investors do. The authors argue that older investors' preference for dividends results from their desire for income, and that low-income investors have an advantageous tax status that makes dividends preferable. The authors also find that these classes of investors purchase dividend-paying stocks after dividend announcements, in keeping with the behavioural attention hypothesis that news attracts investors' attention (Lee, 1992; Barber & Odean, 2008).

In addition, Rantapuska (2008) uses Finnish investor-level trading data to find that tax status is a major determinant in the holding and trading of dividend-paying stocks: investors with a preferable tax status with respect to dividends tend to buy dividend-paying stocks before the ex-day and to sell after the ex-day. Conversely, Michaely (1991), using aggregate data, finds no evidence for the effects of trading by long-term retail investors around ex-dates following the 1986 Tax Reform Act.

According to Becker, Ivkovic, & Weisbenner (2007), firms are more likely to distribute dividends if they are located in geographical areas where investors tend to hold shares of local firms and if the investor base is older. This evidence lends further support to the dividend clientele hypothesis and the relationship between investor preference and firm payout policy.

2.2.7 Firm Life Cycle theory

Another vein of the literature ties dividend payout to firms' life cycle. In particular, numerous papers observe that firms that pay dividends tend to be more mature and less volatile. According to Grullon *et al*. (2002), firms that increase (decrease) dividends experience a future decline (increase) in their profitability. According to these authors, firms that exhaust their investment opportunities increase their dividends, and thus dividends indicate firm maturity rather than signalling future profitability.

Several papers highlight the link between dividends and idiosyncratic risk. Venkatesh (1989) reports that idiosyncratic risk and the informational content of earnings decline following dividend initiation. Fink, Fink, Grullon & Weston (2006) document that dividend-paying firms have lower idiosyncratic volatility. Bradley, Capozza, & Seguin (1998) and Chay & Suh (2008) explain the link between dividends and volatility in selection: only firms with low cash-flow uncertainty feel comfortable in committing to paying dividends, an attitude consistent with the conservative managerial views in Lintner (1956) and Brav *et al*. (2005). Hoberg & Prabhala (2008) determine that the disappearance of dividends (Fama & French, 2001) is associated with an increase in idiosyncratic risk.

Supporting the view that the decline in idiosyncratic risk is related to firm maturity, studies find that idiosyncratic risk is negatively correlated with the firm governance index (Ferreira & Laux, 2007) and firm age (Fink *et al*., 2006). DeAngelo, DeAngelo & Stulz (2006) and Denis & Osobov (2008) also find supporting evidence for the life-cycle theory: Firms are more likely to payout dividends when their equity is earned through operations, rather than contributed by investors. Von Eije & Megginson (2007) perform similar tests for firms in the European Union

but without finding evidence that firms are more likely to pay dividends out of earned rather than contributed capital.

Among the theories surveyed in this chapter, researchers broadly agree on firm life-cycle theory. To some extent this theory negates the rational theories that attempt to explain dividends as mitigating information asymmetries because information asymmetry problems are actually weaker in mature firms. Despite the evidence in support of this theory, it is insufficient to resolve the fundamental question of why mature firms opt to distribute dividends rather than repurchase stocks.

2.3.8 Dividend versus Share Repurchase/Buy back

According to Atrill (2009), a share buyback occurs when a business purchases its own shares and then either cancels them or holds them in treasury for re-issue at a later date. To implement a buyback, a business may acquire its shares in the open market in much the same way as any other investor. It may, however, make a proportional offer, where a set proportion from each investor is purchased, or a universal tender offer, where a fixed number of shares is acquired at a particular price.

The law normally requires public companies to buy back shares from funds generated either from distributable profits or from the proceeds of a fresh issue of shares. (see for example Section 61 of the Ghana Companies Act, 1963, Act 179). Buybacks can be undertaken either on an intensive basis or over a period of time. For example Microsoft Corporation announced, in September 2008, its intention to buy back $40bn worth of its own shares over a five-year period. Share buybacks offer an alternative to dividend payments as a means of returning funds to investors. This raises the question as to which of the two methods investors prefer. If we assume perfect capital markets, they will be indifferent.

The J&W model provided rationale for using cash dividends rather than share repurchases. Firms do not repurchase shares to avoid taxes because it is precisely the tax costs that drive the signalling role of cash dividends. Ambarish, John & Williams (1987) developed a model whereby firms may use dividends or stock repurchases as signals. It indicated when firms would use cash dividends and when firms would use share repurchases for signalling. Other work, such as reported by Ofer & Thakor (1987), Barclay & Smith (1988) and Brennan & Thakor (1990), also addressed a firm's choice between cash dividends and share repurchases.

2.3 EMPIRICAL REVIEW

A number of empirical studies have been conducted to examine the relationship between dividend policy and share price (Hussainey, Mgbame, & Chijoke-Mgbame, 2011; Nishat & Irfan, 2004; Suleman, Asghar, Ali Shah & Hamid, 2011). However the findings by these researchers are not consistent. Baskin (1989) found a negative association between stock prices and dividend yield. His findings, however, was at variance with (Hussainey *et al*., 2011) who failed to established a negative association between the two variables. In the United Kingdom, Goddard *et al*. (2008) examined the long-run relationship between stock dividends and stock prices, using panel data. Using panel unit root and panel co-integration techniques, the authors found evidence of long-run association between stock prices and dividends. In other words, the study found that share prices and dividend move together in the long run.

Also, a study by Bitok (2004) on the effect of dividend policy on the value of the firms quoted at the NSE found that paying dividends reduces risk to the companies and thus influence stock price. The study also found that dividend yield and payout ratio serve as proxies for the amount of projected growth opportunities.

Sung & Urrutia (1995) also established that current stock prices are affected by dividend. According to the authors, as per the present value model, the current stock price is determined by future dividends, and that, as per the Lintner's model, future dividends are determined by current and past dividends. From this, they derived model of causality from dividends to stock prices and therefore concluded that current and past dividends affect current stock prices.

In an empirical study conducted among US firms by Sung & Urrutia (1995), the researchers tested a causal relationship between stock prices and dividend. They found that there is bi-directional causality between dividends and stock prices. They concluded that the present value model and the Lintner's dividend model are important theoretical frameworks for explaining the relation between stock prices and dividends.

Ball *et al.* (1979) also examined the relationship between stock prices and dividend of Australian companies in the 1960s. Their study established significant relationship between dividend yield and share price return. The study however failed to find any support for the dividend irrelevance theory proposed by Miller and Modigliani.

Baker *et al.* (2001) conducted a survey among 603 American firms listed on the New York Stock Exchange (NYSE). Survey was done among the chief financial officers of the selected firms. Their results indicated that majority of the respondents strongly agreed that stock prices will be affected by dividend policy.

Gordon (1962) studied dividend policy and market price of the shares and proposed that the dividend policies of firms affect the market value of stocks even in the perfect capital market. He stated that investors may prefer present dividend instead of future capital gains because the future situation is uncertain even if in perfect capital market. Indeed, he explained that many

investors may prefer dividend on hand in order to avoid risk related to future capital gain. He also proposed that there is a direct relationship between dividend policy and market value of share even if the internal rate of return and the required rate of return will be the same.

2.4 DIVIDEND POLICY AND SHARE PRICES

Dividend policy involves the organization's choice to either pay dividend or not. Aside this, dividend policy also examines the frequency of dividend payment (whether semi-annually, annually or quarterly). According to the signalling hypothesis, announcements concerning dividend change should correlate positively with share price movement and future changes in earnings. In recent years, a number of studies have attempted to examine the impact of dividend policy on the share price changes of companies. Al Masum (2014) conducted a study in Bangladesh to examine the impact of dividend policy on the share prices of listed banks on the Dhaka stock exchange. In the study, dividend yield and dividend per share were used as independent variables while controlling for earnings per share, return on equity and retention ratio. A panel data approach was employed to investigate the relationship between dividend and stock prices. The overall result of the study indicates that dividend policy has significant positive effect on stock prices.

In Malaysia, Zakaria *et al.* (2012) examined the impact of dividend policy on share price volatility of selected companies. The study employed least square regression method after controlling for investment growth and earnings volatility, firm size and debt. The study discovered that only 43.43 percent of the changes in the share prices are explained by dividend yield, dividend payout ratio, investment growth, size of the firm, leverage and earnings volatility. These companies recorded 94.41 percent share price volatility during 2005 until 2010. They find

that dividend payout ratio significantly influences the changes in share price. The greater the size of the company, the more significant impacts the volatility of share price would be. They also find dividend yield, investment growth and earnings volatility insignificantly influence the changes in the company's share prices. Leverage negatively influences the movement of the share price.

Waithakaet *et al.* (2012) investigated the impact of dividend policy on share prices of selected companies on the Nairobi Stock Exchange. The study used linear regression model to examine the relationship between dividend policy and share prices. They find that share prices are positively related with dividend announcement, implying that dividend policy has some level of impact on the share prices of listed companies. Also, Nazir *et al*. (2010) used panel data analysis to investigate the role of corporate dividend policy in determining stock price changes in the Karachi Stock Exchange. The study established that movement in share prices is significantly affected by dividend policy as measured by dividend yield and dividend payout ratio. According to a study conducted by Rashid & Anisur Rahman (2008), the authors established that there is an insignificant positive relationship between dividend policy (Dividend yield) and share price volatility of 104 non-financial firms listed on the Dhaka Stock exchange from 1999 - 2006

2.5 OTHER FACTORS AFFECTING STOCK PRICES

Apart from dividend policy (measured by dividend yield and payout ratio), other factors also affect the movement of stock prices. According to Allen & Rachim (1996), the relationship between dividend policy and share price volatility after the inclusion of growth as a control variable would be suggestive of either the arbitrage or information effect. Debt, dividend and ownership structure significantly affects firm value (Alonso *et al.*, 2005). Debt plays active role

to discipline managers in firms that do not have growth opportunities. In the absence of growth opportunities, dividend is significantly and positively related to firm's value. High retained earnings during period of no growth opportunities may result in an inefficient investment. Based on 361 non-financial Malaysian listed firms from 2002 to 2007, Abdul Rahim *et al*. (2010) detected a symptom of underinvestment when there was positive relationship between dividend policy and the firm's value. They find that increase in firm's value was contributed by the decreased investment, increased dividend and stagnant debt ratio. They suggested that underinvestment happens because the management cautiously chooses only secured investments and distributes the excess cash to shareholders as dividends.

The size of a firm, measured by its market capitalization has been identified as having an impact on its share price movement. Higher average return could be seen in smaller stocks. As the size of the firm increase, the company share price would likely to decline (Atiase, 1985). According to Allen & Rachim (1996), small firms are less involved in diversification activities, thus it will be less subjected to investor's scrutiny compared to large company. Return on Equity (ROE), has also been identified as one of the factors influencing the stock prices of firms. The ROE is calculated by dividing the company's profit after tax by its shareholders' equity. Liu & Hu (2005) as well as Ling *et al*. (2008) used the return on equity in their study and found a positive relationship between it and stock prices.

2.6 EMPIRICAL STUDIES IN GHANA

In Ghana, studies on dividend policy have been limited to the determinants of dividend payout ratios of listed firms (Amidu & Abor, 2006); how dividend policy affects performance of the firm on Ghana Stock Exchange (Amidu, 2007); dividend policy and share price volatility

(Asamoah, 2010) and the relationship between dividend policy and performance of banks in Ghana (Agyei & Marfo-Yiadom, 2011).

Amidu & Abor (2006) examined the determinants of dividend payout ratios of listed companies in Ghana. Their analyses were performed using data derived from the financial statements of firms listed on the Ghana Stock Exchange over a six year period. Ordinary Least Squares model was used to estimate the regression equation. Institutional holding was used as a proxy for agency cost. Growth in sales and market-to-book value were also used as proxies for investment opportunities. Their results show positive relationship between dividend payout ratios and profitability, cash flow, and tax. The results also show negative association between dividend payout and risk, institutional holding, growth and market-to-book value. However, the significant variables in the results were profitability, cash flow, sale growth and market-to-book.

Amidu (2007) examined whether dividend policy influences firm performance in Ghana. His analyses are performed using data derived from the financial statements of listed firms on the GSE for a period of eight years. Ordinary Least Squares model is used to estimate the regression equation. He finds a positive relationship between return on assets, dividend policy, and growth in sales. He also finds that bigger firms on the GSE perform less with respect to return on assets. His results also revealed negative association between return on assets and dividend payout ratio, and leverage. The results of the study generally support previous empirical studies.

Asamoah (2010) examined the relationship between dividend policy and stock price volatility. A sample of 10 Ghanaian listed companies is examined for a period from 1993 to 2005. In support of Baskin's (1989) US results, evidence is found that dividend yield influences stock price volatility. This suggests that dividend policy affects stock price volatility and it provides evidence supporting the arbitrage realization effect, duration effect and information effect in

Ghana. On the other hand, contrary to expectations, he found significant positive relationship between size and stock price volatility, and insignificant negative relationship with debt. He also discovered that a negative relationship exit between growth and stock price volatility as expected. His results support Baskin's suggestion that dividend policy per-se can influence stock price volatility.

Agyei & Marfo-Yiadom (2011) studied the relationship between dividend policy and performance of banks in Ghana. Their study uses panel data constructed from the financial statements of 16 commercial banks in Ghana for a period of 5 years, from 1999-2003. The financial statements were obtained from the Banking Supervision department of Bank of Ghana. They find evidence that the average dividend paid by banks over the study period is 24.65%. They also find that banks that pay dividends increase their performance. Their results reinforce earlier findings that leverage, size of a bank and bank growth enhance the performance of banks though the age factor presents mixed results. On the whole, their results are consistent with earlier studies that dividend policy has an effect on firm value and therefore relevant.

CHAPTER THEREE

METHODOLOGY

3.0 INTRODUCTION

The previous chapter reviewed theoretical and empirical literature on the subject of dividend policy. This chapter seeks to examine the methodology and data employed in the study. Specifically, the chapter examines the research design, study population, sample size, data collection procedure, econometric model adopted and the data analysis techniques used in the study.

3.1 RESEARCH DESIGN

Explanatory research design is employed in this study. This design approach is used because it enables the researcher to identify and assess causal relationships among the key study variables. A panel data study design is also utilized. As observed by Gujarati (2004) and subsequently emphasized by Umulkher & Muganda (2013), the advantage of panel data analysis is that a more reliable estimate of the parameters in the model can be obtained between the different variables under consideration. Accordingly, an obvious benefit of using panel data as stated by Baltagi (2005) is that it controls for individual heterogeneity, less colinearity in variables and tracks trends in the data, something which simple time-series and cross-sectional data cannot provide.

3.2 THE STUDY POPULATION

The population of the study comprise of all firms listed on the Ghana Stock exchange and have been operating actively since 2000. As at the end of 2013, the number of listed companies on the

Ghana Stock Exchange was 34 (GSE Market Report, 2013). This number constitutes the population of the study.

3.3 SAMPLE SELECTION

Out of the 34 listed companies on the GSE, 20 were selected for the purposes of this study, representing 58.8 percent of the population. The inclusion of the 20 companies was informed by two major factors. These are the year of enlistment on the GSE and the availability of data. For instance, the researcher only included companies that have been enlisted on the GSE on or before 2004. The companies selected are listed in Table 3.1

Table 3.1 List of companies included in the study

1	Standard Chartered Bank	11	Unilever Ghana Limited
2	Ghana Commercial Bank	12	Ghana Oil Company Limited
3	The Trust Bank	13	Benso Oil Palm Plantations Limited
4	CAL Bank Limited	14	Ayrton Drugs Manufacturing Co. Ltd
5	Societe Generale Ghana Limited	15	Enterpise Group Limited
6	PZ Cussons Industries Ghana Limited	16	Total Petroleum Ghana Limited
7	HFC Bank Limited	17	Camelot Ghana Limited
8	PBC Limited	18	Fanmilk Ghana Limited
9	Guinness Ghana Brewery Limited	19	SIC Insurance Company Limited
10	Aluworks Limited	20	Mechanical Lloyd Company. Limited

Source: Researcher's own construct, 2015

3.4 SOURCES OF DATA

The data for the study was obtained from secondary sources. These sources included audited and published financial statements of sampled firms on the GSE over a period of 10 years (2004-2013). The data was extracted from the annual financial reports of the sampled quoted companies. In addition, the share prices of the selected companies were obtained from the data repository of the GSE.

3.5 DATA DESCRIPTION

Panel data comprise of two main parts; the cross sectional dimension and time-series dimension. The cross sectional dimension includes individuals, firms, countries etc., while the years, months minutes (different periods). Panel data provide information on individual behaviour, both across individuals and over time – they have both cross-sectional and time-series dimensions. The times series component of the data is the financial records and share prices from 2004 to 2013. The cross sectional dimension comprises of the selected firms listed on the GSE. Panel data include *N* individuals observed at *T* regular time periods. Panel data can be balanced when all individuals are observed in all time periods (T_i = T for all *i*) or unbalanced when individuals are not observed in all time periods ($T_i \neq T$). For the purposes of this study, a balanced annual panel data from 2004 to 2013 for all the selected cross-sectional elements (listed companies on the GSE) is used.

3.6 SPECIFICATION OF ECONOMETRIC MODELS

According to Fonta *et al*. (2009), an econometric model is a representation of the basic features of an economic phenomenon. For the purposes of this study, the models employed include Correlation Analysis, Fixed Effect model, Random Effect model, Pooled OLS Regression model.

In order to find out the relationship between different variables, first Pearson Correlation Coefficients are calculated. This was done by using the econometric model:

$$r = \frac{n\sum x_i y_i - \left(\sum x_i\right)\left(\sum y_i\right)}{\sqrt{\left[n\sum x_i^{\,2} - \left(\sum x\right)^2\right]\left[n\sum y^2 - \left(\sum y\right)^2\right]}}$$

For the correlation between any two of the variables, x and y

The impact of dividend policy on share price is then examined using the panel data of selected listed companies on the (GSE). Panel data models describe the individual behaviour both across time and across individuals. There are three types of models: the pooled model, the fixed effects model, and the random effects model. The pooled effect model specifies constant coefficients, which is the usual assumption under cross-sectional regression analysis. This is given by:

$$Y_{it} = \alpha + X_{it} + \mu_{it}$$

Where: Y_{it} is the dependent variable and X_{it} ,s the independent variables, with μ_{it} being the error term. This model assumes that something within the individual may impact or bias the predictor or outcome variables and therefore need to be controlled for. The Fixed Effect Model (FE) allows the individual-specific effects α_i to be correlated with the regressors X. Each individual has a different intercept term but the same slope parameters. The fixed effect model is given as:

$$y_{it} = \alpha_i + X_{it} + \mu_{it}$$

The Random Effect (RE) Model assumes that the individual-specific effects α_i are distributed independently of the regressors. α_i is included in the error term. Each individual has the same slope parameters and a composite error term of the form;

$\varepsilon_{it} = \alpha_i + e_{it}$.

Thus, the RE model is specified as follows:

$$y_{it} = x_{it}\beta + (\alpha_i + e_{it})$$

In order to identify the most suitable panel model to apply to the data, the Hausman test and the Breusch-Pagan Lagrange Multiplier (LM) test were conducted on the data. The Hausman test is used to ascertain the suitability of fixed effect model whiles the Breusch-Pagan Lagrange Multiplier (LM) test determines the suitability of random effect model.

In other to examine the impact of dividend policy on the share prices, the researcher adopted the econometric model proposed by Padachi (2006). Two sets of models are examined. The first is the model without the control variables. In this model, the dependent variable, Share price, is regressed against the two main independent variables, dividend yield and payout ratio. This model provides a test of the relationship between share price movement and the dividend policy. The model is specified as:

$$SP_{it} = \beta_0 + \beta_1(DY_{it}) + \beta_2(PAYOUT_{it}) + \eta_t + \lambda_t + \varepsilon_{it}$$

Where share price (SP) is the dependent variable, Dividend Yield (DY) and PAYOUT are the independent variables. The value β_0 is the intercept of the model whiles β_1 and β_2 are the coefficients of the independent variables. The η_t measures the specific characteristics of each listed company called unobservable heterogeneity, whereas λ_t is a parameter for time dummy variables which is equal for all listed companies in each year but changes over time and ε_{it} is the error term.

As far as the model with the control variables is concerned, the dependent variable was regressed against the two main independent variables and the control variables with the following regression model:

$$SP_{it} = \beta_0 + \beta_1(DY_{it}) + \beta_2(PAYOUT_{it}) + \beta_3(PAT_{it}) + \beta_4(ROE_{it}) + \beta_5(SIZE_{it}) + \beta_6(DEBT_{it}) + \eta_t + \lambda_t + \varepsilon_{it}$$

Where, Dependent Variable=Stock Price (SP), Independent Variables= Dividend Yield (DY), PAYOUT Ratio, Profit after Tax (PAT), Return on Equity (ROE), SIZE and DEBT.

3.7 a priori expectations

It is expected that Dividend Yield, Payout Ratio, Profit After Tax, Return on Equity and Size will be positively associated to stock market prices i.e. increases in dividend, profit after tax, and return on equity will result in increasing the stock market price of the selected companies while long term debt is expected to have a negative effect on share prices. Table 3.1 provides a summary of the various a priori expectations.

Table 4.1 Variable definition and expected signs.

Proxy variables	Definition	Expected Sign
Share Price (SP)	Average of low and high	
Dividend Yield (DY)	Ratio of dividend paid market capitalization	+
Payout Ratio (PR)	Ratio of dividend paid to profit after tax	+
Profit after Tax (PAT)	Net profit that is available to use	+
Return on Equity (ROE)	Ratio of profit after tax to total equity	+
Debt	Ratio of long term debt to total assets	-
Market Capitalization (SIZE)	Share price multiplied by the number of ordinary shares issued	+

Source: Researcher's own construct, 2015.

3.8 DEFINITION OF STUDY VARIABLES.

In the current study, the market price of stocks of the selected companies is used as the dependent variable. Dividend Yield (DY) and Payout Ratio (PR) are used as proxies for dividend policy (independent variable.) In addition, Return on equity (ROE), Size, Debt and Profit after tax (PAT) are used as control variables in the model. The definition and justification of the variables used in the study are further examined as follows.

3.8.1 Share Price (SP)

The share price is used as the dependent variable in the model. It is estimated by computing the average high and low of share prices of the selected companies. This approach was adopted based on previous studies such as Rashid & Rahman (2009) and Asghar *et al*. (2011). These studies used volatility in price as the dependent variable in examining the effect of dividend policy on share prices

3.8.2 Dividend Yield (DY):

Dividend yield of a stock signifies how much dividends a company pays in relation to its stock price. It is calculated as a ratio of annual dividends paid by the company to its stock price.

In most cases, investors keep a close eye on the dividend yield, which is estimated as the annual dividend income per share dividend by the current share price. The dividend yield is used to measure the amount of income received in proportion to the share price.

Dividend yield is considered an important variable that is used by Anwar & Ahmed (2010), Asghar *et al*. (2011), and it is significant in explaining the effect of dividend policy on stock market prices. All these researchers found positive relation between dividend yield and stock price.

3.8.3 Payout Ratio (PR)

Payout ratio is the ratio of dividends per share to earnings per share for all available years. The average over all available years was utilized. The figures were obtained directly from the financial records of the selected companies.

3.8.4 Profit after Tax (PAT):

In this study, Profit after tax (PAT) is used as one of the control variables. The decision to use this variable is informed by studies such Adesola & Okwong (2009), and Ahmed (2009) who employed profit after tax as independent variable in their studies and found positive relation between stock prices and profit after tax. They consider profit after tax as an important variable to explain the variation in stock prices.

3.8.5 Return on Equity (ROE)

Return on Equity is estimated by dividing profit after tax with shareholders' equity. Liu & Hu (2005) and Raballe & Hedensted (2008) and used Return on Equity in their studies and found positive relation between Return on Equity and Stock Prices.

3.8.6 Size (Market Capitalization).

The market capitalization is estimated by multiplying the average share prices by the number of ordinary shares issued. Natural logarithm is applied to this variable to obtain a variable that reflects orders of magnitudes.

3.8.7 Long-term debt (debt)

Figures for long-term debt and total assets were obtained from the financial records of the companies. These figures represent all interest-bearing financial obligations, excluding amounts due within one year, e.g. debentures, mortgages and loans with maturities longer than one year. It is shown net of premiums or discount. The ratio of long-term debt to total assets was calculated and the average over all available years was utilized.

3.9 DATA ANALYSIS TECHNIQUES

According to Saunders *et a.l* (2009), data analysis involves breaking down data and to clarify the nature of the components parts in order to establish relationship between them. Data can be analysed qualitatively or quantitatively based on the nature and objectives of the study. A qualitative data analysis enables a researcher to develop a theory from data, whiles a quantitative data analysis enables the researcher to explore, present, describe and examine relationships and trends with a quantitative data (Saunders *et al*., 2009). For the purposes of this study, a quantitative data analysis method is employed. This method was adopted because quantitative data in the form of financial data is used for the study. To analyse the data, descriptive and inferential statistics were employed. The descriptive statistics enabled the researcher to summarize the data collected using mean, standard deviations, minimum and maximum values among others for easy understanding and interpretation. Also, the inferential statistics was used to generalize and make predictions based on the data collected (Agresti & Finlay, 2009). Among the plethora of statistical test that can be used for inferential statistics, a panel data analysis technique was used due to its unique advantages highlighted in section 3.2 above.

3.10 THE GHANA STOCK EXCHANGE

The Ghana Stock Exchange (GSE), Ghana's only stock exchange, was incorporated in July 1989 as a company limited by guarantee under the Companies Code, 1963 (Act 179). Approval to operate as a stock exchange was obtained under the now repealed Stock Exchange Act 1971 (Act 384). Trading on the GSE commenced in 1990. It currently has 36 listed companies whose shares and bonds are traded on the floor of the exchange. These listed companies commit to disclosure standards and compliance with regulations. GSE All-Share Index is the only index that is compiled and published by GSE. GSE-All Share Index is a market capitalization index of all share listed on GSE. All listed companies are included in the index as total market for a period from 12 November 1990 to 30 December 1993 calculated by averaging the market capitalization for all trading sessions during this period. Base index value is 100. To maintain the continuity of the index, the base year total market value is adjusted for all events affecting the capitalization of the companies included in the index that are not caused by price changes. These invents include new share issues, new listings, de-listings, and right issues.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 INTRODUCTION

The previous chapter examined the methodology adopted for the study. In this chapter, the results of the impact of dividend policy and other explanatory variables on share price are presented and discussed. First, the descriptive analysis is presented followed by the Pearson's correlation analysis to examine the relationship between stock price and all independent variables. Panel data analysis is then conducted in order ascertain the impact of dividend policy on the market price of the listed companies on the Ghana Stock Exchange. SPSS and STATA were used to perform the analyses.

4.1 DESCRIPTIVE STATISTICS

The descriptive statistics of the dependent and independent variables are presented in Table 4.1. The dependent variable (Share Price) is measured by the average high and low price of each year. From Table 4.1 it can be observed that the average share price for the selected companies is 2.843 and ranges from 0.015 to 54.33 Ghana Cedis with a standard deviation of 7.00. Dividend yield (DY) which is one of the main independent variables ranges from 0.00 to 0.053 with a standard deviation of 0.034 and a mean value of 0.038. The descriptive statistics also shows that dividend payout ratio for the selected companies within the period of 2004-2013 averaged 0.295 with a standard deviation of 0.316. The return on equity (ROE), which is a measure of profitability of the firms, averaged 0.16 or 16% within the period considered. This shows that on average, every equity return 16% profit for the companies. The descriptive statistics of other relevant variables are captured in Table 4.1.

Table 4.1 Descriptive Statistics of study Variables

	No of observations	Minimum	Maximum	Mean	Std. Error	Std. Dev.
Share price	200	0.0150	54.3300	2.843100	.4965901	7.0228451
Return on equity	200	-0.9839	0.9716	0.161885	.0195839	0.2769585
Payout ratio	200	-0.9333	0.9776	0.295557	.0223941	0.3167010
Dividend yield	200	0.0000	0.05292	0.038571	.0038540	0.0545042
Size	200	12.9865	22.3092	17.642433	.1371200	1.9391697
Profit after tax	175	8.9688	19.2250	14.919674	.1682488	2.2257226
Debt	200	0.0000	1.2855	0.105531	.0150370	0.2126556

Key: SP=Average share price; ROE=Return on equity; PAYOUT=Payout ratio; LnSIZE=Natural logarithm of market capitalization; LnPAT= Natural logarithm of profit after tax; DEBT=Long term debt to total assets

Source: Researcher's own construct, 2015.

4.2 PEARSON'S MOMENTS CORRELATION ANALYSIS

In order to examine the relationship between the dependent variables and the set of independent variables, the Pearson's correlation coefficient (r) was employed. The correlation coefficient is the covariance of two variables (X and Y) divided by the product of their sample standard deviations. The following model was used to estimate the relationship between the variables of the study.

$$r = \frac{n\sum xy - \left(\sum x\right)\left(\sum y\right)}{\sqrt{\left[n\sum x^2 - \left(\sum x\right)^2\right]\left[n\sum y^2 - \left(\sum y\right)^2\right]}}$$

Where x and y are the variables being correlated and n is the number of observations.

The model tests whether the correlation coefficient (r) is significantly different from 0 or not. Thus, two hypotheses: the null hypothesis (H0) and the alternative hypothesis (H1) are tested:

H0: The correlation coefficient is equal to 0 (r=0)

H1: The correlation coefficient is not equal to 0 ($r \neq 0$)

The result of the Pearson's correlation analysis is presented in Table 4.2.

Table 4.2 Pearson's Correlation Matrix

		SP	PAYOUT	DY	LnSIZE	LnPAT	DEBT	ROE
SP	Correlation	1						
	Sig. (2-tailed)							
PAYOUT	Correlation	.231**	1					
	Sig. (2-tailed)	.001						
DY	Correlation	.244**	.305**	1				
	Sig. (2-tailed)	.001	.000					
LnSIZE	Correlation	.435**	.211**	-.030	1			
	Sig. (2-tailed)	.000	.003	.677				
LnPAT	Correlation	.395**	-.006	.243**	.731**	1		
	Sig. (2-tailed)	.000	.937	.001	.000			
DEBT	Correlation	-.102	-.173*	-.161*	-.239**	-.221**	1	
	Sig. (2-tailed)	.149	.014	.023	.001	.003		
ROE	Correlation	.250**	.408**	.138	.338**	.357**	-.279**	1
	Sig. (2-tailed)	.000	.000	.052	.000	.000	.000	
	N	200	200	200	200	175	200	200

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

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

Source: Researcher's own construct, 2015.

Correlation matrix of all variables included in the study is shown in Table 4.2. The result from of the correlation analysis indicates that there is positive and significant relationship between share price and Dividend Yield, Payout ratio, market capitalization, and return on equity. However, the result shows that there is a negative relationship between share price and firm debts, indicating that increases in leverage has a potential to reduce the value of the firm.

The correlation result shows that the independent variables are not highly correlated, indicating that there is no problem of multicolinearity among the independent variables. Pallant (2011) argue that having correlation of more than 0.8 or 80% between independent variables suggest some form of multicolinearity. However, the Pearson's correlation coefficients clearly show that there is no multicolinearity.

4.3 DETERMINING THE OPTIMAL PANEL MODEL

Panel data can be tested using fixed effect, random effect, and pooled OLS regression models. In order to determine which of the models was appropriate for the study, two main tests were conducted. These are the Hausman test and the Breusch-Pagan Lagrange Multiplier (LM) test. The Hausman test determines the more suitable methodology between fixed and random effect, whiles the Breusch-Pagan Lagrange Multiplier (LM) test determines the more suitable method between random effect and pooled OLS regression. These tests are further examined in sections 4.3.1 and 4.3.2.

4.3.1 Hausman Test

The Hausman test determines whether fixed effect model or random effect model is desirable. The Hausman test tests the null hypothesis that the difference between the fixed effect and the random effect of is not systematic. The result of the Hausman test is presented in Table 4.3.

TABLE 4.3 Hausman test results

	Coefficients		
	Fixed (b)	**Random (B)**	**Difference(b-B)**
DY	25.727	25.542	0.185
PAYOUT	3.136	2.874	0.288
ROE	5.985	5.748	0.237
LnSIZE	1.527	1.481	0.046
LnPAT	0.108	0.157	-0.048
DEBT	3.518	3.399	0.119
H0: difference in coefficients not systematic			
Chi^2 (6) = 0.86			
Prob>Chi^2 = 0.9905			
Dependent Variable: SP (Share Price)			

Source: Researcher's own construct, 2015.

The result shown in Table 4.3 indicates that we fail to reject the null hypothesis that the differences between the coefficients of the fixed and random effect models are not significant. This is because the prob Chi^2 is greater than 0.05. Therefore the test concludes that fixed effect is not the optimal model to be employed in this study, but does not at the same time guarantee that the random effect model is also optimal. In order to test whether the random effect model is optimal, the Breusch-Pagan Lagrange Multiplier (LM) test is employed to compare the random effect model and pooled OLS regression model.

4.3.2 Breusch-Pagan Lagrange Multiplier (LM) test

The Breusch-Pagan Lagrange multiplier (LM) test determines whether using the random effect model or the pooled ordinary least squares regression model is better. In the LM test, the null hypothesis is that the variance across the companies selected for the study is zero. Therefore, by rejecting the null hypothesis, one can conclude that there is variance among the selected

companies in the panel data and can reject the pooled OLS methodology for a random effects model. Table 4.5 provides the result of Breusch-Pagan Lagrange Multiplier Test.

Table 4.4 Breusch-Pagan Lagrange Multiplier Test Results

SP (id, t) =Xb + u(company) + ε(company, t)		
	Variance	**Std. Dev.**
SP	55.3001	7.4350
E	49.3900	6.5100
M	0.0000	0.0000
Test: Var(μ) = 0.0000		
Chibar^2 (01) = 0.0000		
Prob> Chibar^2 = 1.0000		

Source: Researcher's own construct, 2015.

The results of the LM test conclude that random effect model is not the better model to use with the panel data. This is because the prob<chi^2 is greater than 0.05 implying that there is no significant difference in the variance across the selected companies. Therefore, we fail to reject the null hypothesis that there is no variance across the selected companies. Consequently, we conclude that OLS is the most appropriate model for the study and the researcher proceeds with a pooled OLS panel data analysis.

4.4 ANALYSIS OF PANEL REGRESSION MODEL RESULT

Table 4.5 presents the results obtained from equation (1)

$$SP_{it} = \beta_0 + \beta_1(DY_{it}) + \beta_2(PAYOUT_{it}) + \varepsilon_{it} \quad \text{.....(1)}$$

In this equation, the dependent variable SP is regressed against dividend policy (measured by dividend yield and dividend payout ratio). The regression results show a positive and significant

relationship between the two independent variable and share price. The result implies that upward movement in share prices are accompanied by high dividend yield and payout ratio. Put differently, dividend yield and payout ratio positively impact on share prices. The adjusted R-square of 0.077 indicates that 7.7% of the variations in share prices are explained by dividend policy, measured by dividend payout and dividend yield. The *F*-Stat of 9.32 and its corresponding probability value of 0.001 shows the independent variables jointly and significantly explain the variations in the dependent variable.

Table 4.5 Result of the effect of dividend policy on Share prices

	Coefficient	***t*-statistic**	***p*-value**
Intercept	0.763	1.110	0.268
Dividend payout	3.824	2.410	0.017**
Dividend Yield	24.639	2.670	0.008**

Notes: significant at: **5 percent level; R^2 = 0.089, Adj. R^2 = 0.077, *F*-stat = 9.32; Prob of *F*-statistic =0.001, RMSE = 6.746; Model used is SP = $\alpha + \beta_1 DY + \beta_2 PAYOUT + \varepsilon$

Source: Researcher's own construct, 2015.

In the second model (2), the control variables (ROE, SIZE, PAT and DEBT) are included in the model to ascertain their impact on the share prices. The model with control variables is given by:

$$SP_{it} = \beta_0 + \beta_1(DY_{it}) + \beta_2(PAYOUT_{it}) + \beta_3(PAT_{it}) + \beta_4(ROE_{it}) + \beta_5(SIZE_{it}) + \beta_6(DEBT_{it}) + \varepsilon_{it} \quad \ldots\ldots(2)$$

The result of equation (2) is presented in Table 4.5

Table 4.6 Results of the effect of dividend policy on share price

	Coefficient	***t*-statistic**	***p*-value**
Intercept	-29.99	-6.15	0.000***
Dividend payout	25.54	2.16	0.032**
Dividend Yield	2.874	1.31	0.193
Return on equity	5.748	1.74	0.083*
Size	1.481	3.50	0.001**
Profit after tax	0.157	0.42	0.673
Debt	3.399	1.33	0.184

Notes: significant at: ***1, **5, *10 percent level; R^2 = 0.287, Adj. R^2 = 0.262, *F*-stat = 11.29; Prob of *F*-stat =0.000, RMSE = 6.388 Model used is $SP = \alpha + \beta_1 DY + \beta_2 PAYOUT + \beta_3 ROE + \beta_4 LnSIZE + \beta_5 LnPAT + \beta_6 DEBT + \varepsilon$

Source: Researcher's own construct, 2015.

The results indicate that two of the control variables, are significant in explaining changes in share prices of the selected companies. For instance the size of the firm has a positive and significant effect on share price movement ($p \leq 0.05$). Also, Return on Equity (ROE) has a positive and significant effect on share price movement ($P \leq 0.1$). However, the inclusion of the control variables makes the dividend payout have a positive but insignificant effect on share price movement. The adjusted R-Square value of 0.262 indicates that 26.2% of the variations in the dependent variable (Share Price) are explained by the model. The *F*-statistic has a value of 11.29, and a corresponding *p*-value of 0.000 showing that the model significantly explains the variations in the dependent variable.

4.5 DISCUSSION AND IMPLICATION OF THE FINDINGS

The debate over whether dividend policy affects the value of the firm still rages on. In developing countries like Ghana, various authors have entered into the debate by empirically

examining secondary data regarding dividend policy. This study also sought to provide some insight regarding the dividend debate. The correlation and regression analysis show that there is a positive relationship between share price movement and payout ratio, dividend yield, firm size, profit after tax (PAT) and return on equity (ROE). However, long term debt has a negative relationship with share price movement among the selected firms. The result is consistent with that of Allen & Rachim (1996) who found a positive relationship between share price and dividend yield. However, the result is in contrast with that of Baskin (1989) who observed a negative relationship between dividend yield and share price movement. Also the correlation between dividend payout and share price is positive, which contradicts the findings of Allen & Rachim (1996) who found negative association between share price and payout. The results clearly show that dividend policy, measured by dividend payout and dividend yield, has direct impact on share prices, all other things being equal. The result could be attributed to the dividend signalling effect, i.e. the information effect of dividend, meaning that as dividends increases, the confidence of investors improves, leading to increases in share prices. This is finding is in tandem with Gordon's (1959) view that dividend policy is relevant in the valuation of market prices of companies.

The result further shows that both Return on Equity (ROE) and Profit after Tax (PAT) have significant positive relation with share price movement. The result implies that when management efficiently utilizes the shareholders' funds and provides better return on investment, it will positively affect the stock prices. Raballe & Hedensted (2008) also found positive relation between Return on Equity and Stock Prices.

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The result is significant to the debate of dividend policy and how it affects the value of the firm. Going by the result of the study, it can be deduced that dividend policy has an impact on the

share prices of firms, and hence their value. The result is in sharp contrast with the theory postulated by Miller & Modigliani (1961) that dividend policy of the firm is irrelevant to the value of the firm. Their theory has led to what is generally known as dividend irrelevance theory. The findings in this study confirms the findings of many authors who have established that dividend of a firm matters and thus affects the value of the firm in one way or the other. For instance the study confirms the findings of Al-Malkawi (2007) who explained that dividend policy can serve as an important tool that informs the decision of investors.

The findings of the study is at variance with the findings of Black & Scholes (1974) who supported the dividend irrelevance theory by Miller and Modigliani by stating that there is no evidence that dividend policies will impact the share prices of the firm and hence its value.

Also, the findings of the study confirms that of Hussainey *et al*. (2011) and Nazir *et al*. (2010) who found that dividend yield has a positive impact on share price movement. However, the finding on dividend yield is contrary to the findings of Allen & Rachim (1996) who found a negative relationship between dividend yield and share price movement. The result shows that payout ratio and dividend yield (which are used as proxies for dividend policy) significantly affect the movement of share prices. The implication of the findings is that dividend policy is important and therefore investors/shareholders in Ghana are concerned about the direction of a company's dividend policy. Shareholders are more likely to have confidence in firms that have high (and consistent) dividend payout ratio and dividend yield. They are therefore more likely to invest in such firms, which may lead to an increase in their share prices.

The study also examined other factors that are likely to impact the movement of share prices in Ghana. The variables considered are the size of the firm (measured by the market capitalization),

Profit after tax, Return on Equity (ROE) and Long Term Debt. Among the control variables, the result revealed that that size and Return on Equity (ROE) have the highest impact on share prices of the selected firms. Both have significant positive impact on share price movement. The findings suggest that larger firms are likely to witness high share price movement. Also, the result indicates that more profitable firms are likely to have higher share prices. The significant relationship between ROE and share price movement implies that shareholders of the selected companies are particularly concerned about how managers efficiently utilize their funds. Though long term debt and profit after tax were found to have a positive effect on share prices, the results show that their effect is not statistically significant.

Since management and investors are concerned about the movement of share prices, this study sheds some light on the pathway to discovering what moves stock price, as well as important factors to be considered by investors before making investment decisions and by management in formulating dividend policies for their firms. The study also discusses some of the theories of dividend policy and empirically establishes that dividend policy matters as far as Ghanaian investors and shareholders are concerned. The study concludes that dividend policy is relevant in the valuation of a company's share price. This conclusion is consistent with earlier studies (for example: Gordon, 1959; Lintner, 1962; Pettit, 1972; Pradhan, 2003; and Khan, 2012)

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

The previous chapter provided the analysis and discussion of the secondary data collected from the selected companies using panel data analysis techniques. This chapter provides the summary of the key findings regarding dividend policy and how it affects the prices of shares. The chapter also provides conclusion and recommendations based on the key findings.

5.1 SUMMARY OF KEY FINDINGS

The focus of this study was to examine the impact of dividend policy on the share price movement of selected companies listed on the Ghana Stock Exchange. The companies selected were drawn from various sectors such as manufacturing, trading and financial services. Dividend payout ratio and dividend yield were used as proxies for dividend policy while the dependent variable was the average share price of the selected companies. A panel data analysis technique was used to examine the regression model.

The preliminary results show there are no fixed effect and random effect in the data. This was verified using Hausman test and Breusch-Pagan Lagrange Multiplier (LM) test respectively. This implies that the individual effects in the panel are not significant. Thus, it can be concluded that variations within the individual companies do not affect or bias the predictor or outcome of the variables and therefore there is no need to control for the individual effects.

The results of analysis show that dividend policy, measured by dividend payout and dividend yield, significantly affects the share prices of the selected companies, all other things being

equal. The results could be attributed to the dividend signalling effect, i.e. the information effect of dividends, meaning that as dividends increase, the confidence of investors improves, leading to increases in share prices. This finding is in agreement with Gordon's (1959) view that dividend policy is relevant in the valuation of market prices of companies, a view shared by Khan (2012) and Pradhan (2003).

The results further indicate that both Return on Equity (ROE) and Profit after Tax (PAT) have significant positive relation with share price, implying that when management efficiently utilizes the shareholders' funds and provides better return on investment, it will positively affect the Stock Prices. This finding confirms the findings of Raballe & Hedensted (2008) who also found positive relationship between Return on Equity and Stock Prices.

The study further established that firm size, measured by market capitalization, has a positive and significant impact on share price movement. This implies that firms with larger market capitalization are likely to attract more investors leading to appreciation in their share prices.

5.2 CONCLUSION

The study used pooled panel data regression analysis to examine the impact of dividend policy and other variables on the share price movement of listed companies on the Ghana Stock Exchange (GSE). Data from twenty (20) listed companies spanning 2004 to 2013 were analysed. The empirical results obtained from the panel regression analysis show that dividend policy, measured by dividend payout ratio and dividend yield, has significant and positive impact on the movement of share prices of listed companies on the Ghana Stock Exchange. The results further indicate that Market Capitalization (SIZE) has a significant and positive relationship with share price, implying that the larger the firm, the higher the movement in its share price. However,

long term debt shows insignificant effect on share price, suggesting that a firm's leverage does not significantly affect it share price movement. It can therefore be concluded that dividend policy is relevant in the valuation of share prices. This implies that managers of listed companies in Ghana may be able to influence the movement of their share prices by altering their dividend policies.

5.3 RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

First, quoted companies should manage their dividend policies effectively since it has significant impact on their share price. For instance, Ghanaian firms should adopt optimal trade-off policy between dividend payment and retained earnings that would increase the shareholders' wealth in the form of share price appreciation.

Second, investors seeking to invest in Ghanaian listed firms should consider their dividend policies before making investment decisions.

Third, future studies should examine the relationship between dividend policy and share prices using data from specific industries, for example, manufacturing, financial, trading, mining, etc. This will go a long way to ascertain whether variations exist among different sectors of the economy as far as dividend policy is concerned.

Fourth, the study mainly made predictions based on secondary data (financial information) gathered from the selected companies. Future studies should concentrate on managerial view of dividend policy since managers are directly involved in the day to day dividend decisions of the firm. .

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