"The Relationship Between the Dividend Payout Ratio and Value of the Firm Listed in the Egyptian Securities Exchange"

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Student's Declaration

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the LIGS University for academic credit.
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This project has been presented for examination with my approval as the appointed supervisor.
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Abstract:

Decision making about dividend payout is one of the most important decision that companies encounter with. Dividend payout ratio is dependent on lots of elements such as investing opportunities, profitability, income tax, laws obligation and liquidity. The objective of the study was to determine the relationship between dividend payout ratio and the value of the firm for companies listed at the Egyptian Stock Exchange. The study period was a six-year period i.e., 2014-2019.This study involved the use of a descriptive research design. Using a sample of 129 listed firms which were randomly selected the study employed secondary data. This study found that there was a significant relationship between dividend payout ratio and the value of the firm for companies listed at the Egyptian security market. Additionally, the findings revealed a positive relationship between dividend payout ratio and the stock trend in the Egyptian security market. In particular, change in dividend (i.e., dividend payout ratio policy) was a result of changes in Beta and standard deviation, as exploratory variables of stock trend, across the firms appearing in the 17 sectors as listed in the Egyptian Stock Exchange. The study recommends that since dividend policy has an effect on the value of the firms quoted at Egyptian Security Market, companies should pay dividends to maintain a high firm value.

CHAPTER ONE

INTRODUCTION:

1.1 Background of the Study

The optimal goal of a company is to maximize shareholder's wealth. This is at times referred to as the business of business is business. Investors of the firm expect to be repaid on the value of their shareholding through capital gains or inform of dividends depending on a company's dividend payout policy, respective to its profit. It is generally believed that dividend policy and payout plan is the surest ways through which a high market value is maintained. However, such assumptions fail to take into consideration that security market's trend mainly depend on the market forces.

Dividend policy is described as the regulations and guidelines that a company uses to decide to make dividend payments to shareholders' (Nissim & Ziv, 2001). It clearly expresses decision of the Board of Directors regarding the amount of dividend that should be distributed to the shareholders of the corporation. Dividend policy can either be formulated on an annual basis by the shareholders during the Annual General Meeting (AGM) or at the conception stage of the company. Dividend policy though takes into account the market dynamics, it tends to differ from one company to another, due to the diverse needs and objectives that companies have.

Dividends can be defined as the accrual realized by a shareholder, as a result of the investment that he or she has put Dividend payout ratio on the other hand is defined as the ratio of cash dividend declared and distributed to the shareholders by the firm. Dividend payout ratio is dependent on dividend policy. Dividend policy is therefore, designed a s along term decision by the management in deploying cash flows from business activities. This is appropriated in terms the amount of cash flow from the business activities, the much the business can be able to invest in business and the much that can be returned to the shareholders. The dividend payout ratio can either vary from one year to another, or remain static for some duration, depending on the dividend policy. There is not direct response as to which ratio should be adopted by a company at what time. As such, companies are at liberty to settle on their preferred rates and percentages. Some scholars argue that payout ratio should be based on the present and future value of the dividends. The challenge with this principle however, is that it is not possible to accurately determine the future value for the dividends. This is because the value of dividends is dependent on the market forces which are very volatile and unpredictable.

Pegged on the dividend policy is the dividend payout ratio, which refers to aggregate amount that has been declared and distributed in cash to the shareholders, relative to the net income realized during a particular trade year. Both dividend policy and dividend payout ratios are made by the management, but ratified by the shareholders. Dividend payout ratio decisions are made every year. Managers must make a decision on the amount to declare as dividends. Upon setting on the decision to pay dividends, the next question that managers must also answer is how much is payable during the year under focus. Dividend is not only pegged on the divided policy, but also the financial literature. Many researchers have come up with numerous models which outline the considerable factors by managers when making a decision on the dividend payout ratio (Amarjit et al.,2010).

Fundamentally, there are two extreme positions for dividend policy. These ranges from irrelevance of dividend policy and dividend payout ratio on stock value, and relevance of the same. According to Dhanani (2005), dividend policy is a critical factor in maximization of the shareholders' value, and the value of the firm thereof. This is however, disputed by some scholars. Miller and Modigliani (1961) for instance argue that in a set-up of capital markets, decisions revolving around dividends have zero effects on the firm value. Decisions on dividend policy of firms constitute the primary elements of the policies of a corporate. Some of the factors that are put into consideration include financing limitations, potential investment

opportunities and choices, capital size, shareholder's preference regulatory policies among others. It is worth to note that dividend payout ratio is not the only cash flow in company. However, it is key in determining the current liquidity position and the future state thereof. Research done by Dhanani (2005) on the other hand, discovered that dividend policy has a significant contribution in maximizing the value of a firm. In the real world, the imperfections which are influenceable by dividend policy include; information asymmetry between shareholders and managers, agency conflicts between the shareholders and managers, tax obligations, transaction costs among others. These have an impact on the firm value as per the shareholders' perspective.

The theory of irrelevance is questionable due to the several assumptions made, which can hardly be applied in a real-world situation. Research done by Kinkki (2001) however, established empirically that there is some independence between the dividend yield and the share prices. The pioneer of dividend policy is a scholar known as Lintner. This scholar interrogated the factors which have an influence on the size and shape as at the time that dividends are paid in cash. This scholar found out that cash dividend payment is objectively propelled, and firm value maximization is one of the factors (Litner, 1956). This position was later on disputed by Modigliani and Miller (1961) who established zero effects on firm value dividend policy. Modigliani and Miller argued that it is investment policies that have an effect on the value of the firm, and not dividend policy. The position of Modigliani and Miller was later on disputed by Gordon two years later. According to Gordon (1963), the progressive growth in the value of a firm can be faintly traced to dividend policies.

Based on empirical data, investors in the twenty first century have used dividend policy in attempt to arrive at critical financial management objectives, leading to wealth maximization. In Egypt for instance, it is a requirement that all firms which are publicly listed, have a clear and verifiable dividend policy both for short term duration and long-term duration (Baker & Kent, 2009). Owing to the fact that dividend policy has a direct impact on the liquidity position of the company, they are usually designed strategically. It is however, worth to note that there is a difference in the general trends displayed by dividend policies in developing and developed nations. This can be attributed to the difference in the economic status of the investor, which influences their investment objectives. Just like dividend policy, dividend payout ratio also differs in developed and developing nations. According to Glen et al (1995) established that dividend payout ratio in developing nations only accounted for approximately of two thirds of the dividend ratios in developed nations.

Dividends are usually calculated on the basis of revenue after tax, after which dividends are distributed in cash, and part of the income retained based on the operating and adopted policy. However, dividend payout ratio, dividend policy and their influence on stock trends remains very controversial. This is despite the numerous researches that have been done on this topic. Whereas some scholars agree that firms paying high amount of stock stand a higher chance of attracting more purchasers of their stock, or else the value of their stock rising, others argue that dividend policy and ratio is a purely an internal matter, and has not influence whatsoever on the stock trends.

From the forgoing, it is evident that dividend influence on stock trends remains a puzzle that scholars are trying to solve. Dividend payout ratio, as influenced by the dividend policy however, remains one of the most important financial decisions for managers in the corporate sector. This is due to the fact that, it has the potential of influencing growth the growth and base of equity internally through retentions and leverage. Some scholars argue that firms are bound to issue cash dividends, in the event that the managers are not able to identify with certainty, a potential opportunity that would be beneficial to the shareholders. Any amount that would be retained into the company, without a proper objective that would benefit the shareholders, should be paid out as dividends. Payout principle therefore, strikes a balance between the need of the shareholders to maximize their wealth, without reducing the liquidity position of the company.

The principle of creating wealth, or else maximizing the value of the firm in finance, has some leaning on payout ratios and the positive fluctuations on the stock price. Many scholars have a belief that argue that for a company to be able to maximize on their wealth, then they must be able to regularly distribute their dividends based on a certain principle, otherwise referred to as payout ratio. According to Brealey and Myers (2003), when dividends are paid out, then there is a possibility of having capital gains. These scholars argue that properly managed dividends have a significant impact on the trends displayed by the stock. It is however, worth to note that dividends payments are attributed to firms which have good corporate governance.

Companies that are deemed to be successful tend to have surplus revenue that can be distributed and a portion of it retained to cater for the day-to-day activities, as well as the strategic objectives. In essence, the income of a company can either be shared with the shareholders, be re-invested or be used in redeeming the redeemable shares. As at the time of re-distributing the income realized by a company, several fundamental issues must be taken into account. Some of the issues that are taken into account typically include; the distribution ratio, otherwise referred to as payout ratio, whether to distribute the shares in cash or convert the same to more shares to the current shareholders, among others. The above further reveals the controversy surrounding the dividend policy. Research conducted by Black (1976) revealed that for the shareholders and managers thereof, the harder they have a look at the dividends picture, the more it would seem to them as a puzzle with a feature which cannot be fitted easily. This seemed to have been a starting point for the many controversial empirical research on dividend policy that followed.

According to Amidu and Abor (2006), there are numerous reasons in existence, giving reason as to why a company should or should not pay dividends at the end of a trading year. Figuring out on whether or not to pay dividends, after settling the tax obligation however, still remains a great puzzle. Though company dividend policy remains an internal issue or strength, it remains a very controversial decision to make, owing to the fact that the impacts of either decisions cannot be supported with certainty. None the less, managers are expected to make the decision on behalf of the shareholders who have appointed them on agency basis.

Dividend has been adjudged to be the catalyst for the financial performance of firms/companies. The issue of dividend payout is a very important one in the current business environment and more especially on the performance evaluation of firms/companies. When paying their dividends, company rely heavily on the payout ratio. The dividend payment decisions of firms are the primary element of any corporate policy which is basically the benefit of shareholders in return for investing their money in the organization. These factors include financing limitations, investment chances and choices, firm size, pressure from shareholders and regulatory regimes (Ajanthan, 2013). One of the main source of cash flow for shareholders are dividends paid in cash. Similarly, through the dividends declared and paid, companies are able to know the performance status of the subject company. It is because of this reason, that dividend policy remains one of the most critical one

The dividend payout of firm's is not only the source of cash flow to the shareholders but it also offers information relating to firm's current and future performance. The dividend policy remains one of the most important financial policies not only from the view point of the company, but also from that of the shareholders, the consumers, employees, regulatory bodies and the government. Shareholder's wealth is margin influenced by growth in sales, improvement in profit margin, capital investment decisions and capital structure decisions (Azhagaiah and Priya, 2008). Capital investment in this case, refers to the investments which have a direct positive influence on the net worth of a company. Capital investments therefore, have an effect on the capital structure of a company.

According to Hashemijoo, et al (2012) dividend policy as a company's policy determines the amount of dividend payments and the amounts of retained earnings for reinvesting in new projects. The theory dividend declaration and distribution, asserts that investors always expect higher dividends, save in a situation where they have a strong conviction that if the amount is retained, then it would be translated to higher dividends in the near future. The conviction can emanate from various angles such as an outstanding performance in the current year, consistent performance in the past three years, potential and conspicuous opportunities within the economy among others. The preference of cash dividends by shareholders is based in a bird in hand theory. A bird in hand theory states, that an amount at hand now, is better than an amount expected in the future time. This is because the subject amount in hand today, can be invested, and realize a hundred percent yield within a foreseeable time period.

Even though investors would prefer leaving their cash within a company if they have a conviction that it would be more profitable if ploughed back, the decision which have to be subjected to another opportunity. A general analysis and over view of dividend payout trend, displays a higher dividends declaration and distribution amongst more profitable firms, as compared to less profitable firms. Similarly, firms that have a generally stable market, or operate in stable economies, also tend to have a higher dividend declaration, as compared to those that operate in economies which are generally less stable. Across the globe for example, companies within the United Kingdom and Britain have the highest pay-outs comparatively amongst the industrialized nations. Similarly, companies within the Northern region of America, also have higher pay-outs, as compared to companies within the Western part of Europe and Japanese firms.

The high payout ratios in the areas mentioned can be attributed to capital market financing in Britain and Northern America. This is unlike the Japanese firms, and other firms within the industrialized zones, which are financed through intermediated financing system. Companies within France for example, have been affected grossly from the socialist relationship that the country has with Italy. According to Amadasu (2011), the aforementioned intervention gives a limitation on encouragement of dividends payment.

Uwuigbe, et al (2012) also assert that while several prior empirical studies from developed economies have shed light on the relationship between financial performance of companies and dividend payout, the same is not true in developing economies like Nigeria. This is because there are quite a lot of researches on the dividend distribution controversy and its causality effect on financial performance, yet there is no universally accepted conclusion (Rahaman, 2013; Muhammed and Zulkifi, 2012; Umuigbe, et al, 2012; Zakaria and Tan, 2007). Dividend payout is the amount of cash that a company sends to its shareholders in the forms of dividends.

The company can decide to send all the profits back to its shareholders or investors, or could keep a portion of it as retained earnings. Healthy dividends payouts thus indicate that companies are generating real earnings rather than cooking books (Barron, 2002). Zhou and Ruland (2006) revealed that high dividend payout firms tend to experience strong future earning but relatively low past earnings growth despite market observers having a contradicting view. Arnoth and Asness (2003) also revealed that future earnings growth is associated with high rather than low dividend payout. A high payout ratio means more dividends and less funds for expansion and growth. A low payout, on the other hand, results in a higher growth (Pandey,

2010). Considering dividend payout in information perspective, the dividends signaling theory prescribes that dividend payout can be used as a device to communicate information about a company's financial performance to investors. Cash dividend announcement convey valuable information which shareholders do not have about management's assessment of a firm's future profitability, thus reducing information asymmetry. Such information can be made use of by investors in assessing the firms' financial performance and making investing decision (Murekefu, et al, 2012).

Dividend policy, and ability to maintain consistent payout ratio are impacted by the set internal factors, otherwise referred to as strengths. Some of the internal factors that affect dividend policy include; ability to maintain stable earnings, the leverage structure of the firm; which has an influence both on the liquidity and solvency of the firm, among other factors. The leverage structure is usually influenced by external factors such as legal provisions which give guidelines on the dividends payable from every earning registered during a trading year ending, and the legally binding limitations, which may hinder declaration and paying of dividend cash. Other external forces that could have an influence on the internal policy on payout ratio are inflation, the fluctuation of the exchange rates, the inflationary trends, the money supply trend, among other fiscal policies.

Gill, Biger and Tibrewala (2010) suggested that dividend is paid to provide certainty about the company's financial wellbeing, dividends are attractive for investors looking to secure

current income, and dividends help maintain market price of the share. Finnerty's (1986) advised that firms should establish its dividend policy with a view to maximize shareholders wealthIn the modern economy, the stock market has been deemed very important since it acts as a mediator between lenders and borrowers. Listed company issued the share in the stock market that helps to convert the savings into investments; such investments help to boost the business activities. An operational stock market may assist the development process in an economy through two important channels, one by boosting savings and two by allowing for a more efficient allocation of resources (Alshogeathri, 2011). Savings have been found to increase as they are presumed to provide households with assets that satisfy their risk preference and liquidity needs (Kibet, 2015).

Miller and Modigliani (1961) stated that in perfect capital market, the firm's choice of dividend policy is irrelevant and does not affect the value of the firm. The irrelevance theorem is emerging that dividend policy is shaped by market imperfections, such as taxes, agency costs, transactions costs, and asymmetric information between managers and investors. Focusing on price mechanism, an operational stock market values the profitable company's share. Relative share prices in operational stock market may reflect the status of a company listed in the stock market. Price mechanism therefore ensures the efficiency of utilizing current and future economic resources (Lamin, 1997). Dividend policy has been an issue of interest in financial literature since Joint Stock Companies came into existence. Dividends are commonly defined as the distribution of earnings (past or present) in real assets among the shareholders of the firm in proportion to their ownership (Frankfurter, and Wood 2003). Dividend policy connotes to the payout policy, which managers pursue in deciding the size and pattern of cash distribution to shareholders over time. Firms generally adopt dividend policies that suit the stage of life cycle they are in. For instance, high-growth firms with larger cash flows and fewer projects tend to pay more of their earnings out as dividends

Berkand DeMarzo (2011) argued that dividend policy has no effect on either the price of firms shares or it's cost of capital. They rather argued that the firm's value is determined only by its basic earnings power and its business risk that is the value of the firm depends only on the income produced by its assets, not on how this income is split between dividends and retained earnings.

Diamond, (1967), Gordon (1963), Litner (1962), and Walter (1963) propose that cash dividends are worth more than capital gains to be received basic earnings power and its business risk that is the value of the firm depends only on the income produced by its assets, not on how this income is split between dividends and retained earnings. Further, volatility characterizes the behaviour of the stock market (Mandelbrot, 1963; Black, 1976). Paramin (2013) has described volatility as the rate of change in the price of a security which is measured over a given time period. He further explained that higher volatility will lead to higher risk of substantial gain or loss. It is the relative rate at which the price of a security moves up and down within a very short period of time (Taylor, 2007). Volatility is calculated by variance or the standard deviation of the price of stock market returns. A highly volatile market means that prices or stock returns have enormous swings over a specific time which may be day, week, month or year

Brigham and Houston, (2004), assert that investors are interested in the income after tax. Dividends may have higher taxes than capital gains and thus investor's prefer capital gains to cash dividends due to the tax effect. Dividends communicate message about the company, so it suggests the feasibility of its influence on the stock market. Paying large dividends lowers the risk and influences stock price (Gordon, 1963) and is a proxy for the future earnings (Baskin, 1989). Various attempts have been made to establish the effect and relationship between dividend payment and the market prices of shares. Empirically is has been established that there is a positive relationship between the movement of stock prices and the stock exchange to earnings, trading volume, dividend or general economic conditions (Paramin, 2013). Theorists like Gordon (1963), Walter (1961), Modigliani and Miller (1961) have raised question about the determinants of movement of stock prices which led to the emergence of two distinctive groups namely the dividend relevance and dividend irrelevance groups.

From the foregoing discussion, it is clear that the issue of the relationship between dividend policy and the share price volatility has generated intense debate for many years. Further, whether to distribute earnings or not to the shareholders or to plough the money back into the firm has left the opportunity for many finance scholars and professionals to examine its various effects. Previous research has revealed mixed results on the idea of whether to support or reject the idea that dividends reduce stock price volatility (Magnus & Fosu, 2006; Olowe, 2011).

Rozeff (1982) and Easter (1984) in their study to determine whether dividends are announced and paid continuously. They found a positive reaction to the stock market and also a reduction in the agency cost. Manager's ability to use excess funds can be monitored by dividend payout policy. These studies further established that firms with low dividend yield and dividend payout ratio had not only greater investment opportunity but also high stock price volatility. Moreover, according to Donaldson (1961) and Gordon (1963) if the policy of the dividend is in the same pattern, then the stocks with high dividend yield depicted a shorter life compared to the stocks with low dividend yield and payout. They therefore concluded that expanding firms although may have lower payout ratio and dividend yield, it will result in price stability. This may be attributed to the fact that dividend yields and payout ratio serves as proxies for the amount of projected growth opportunities (Vijay, 2015).

1.1.1 Dividend Payout Ratio

Companies maintain a dividend payout policy to instil investor confidence, which in return raises the company's market value by increasing the share price in the securities market. However, theories in finance proposed by Miller and Modigliani observed that dividends are irrelevant and that firms should have more retained earnings to explore investment opportunities within their operations. Setting of dividends policy therefore, remains a controversial decision, as there are both positive and negative factors associated with dividend payout. Ross, Westerfield& Jaffe (1999) defined dividend payout as amount of cash paid to shareholders expressed as a percentage of earnings per share. Welch (2009) defined dividend payout ratio as the ratio of dividends to net income. The dividend payout ratio measures what percent of earnings is paid out as dividends. Holding everything else equal, the same firm that pays out more of its earnings today would pay out less in the future. If it had retained earnings, it would have earned more cash for payout later.

According to Brealy, Myers & Marcus (2007), a firm's payout decision is often intertwined with other financing or investment decisions. Some firms pay out little cash because management is optimistic about the firm's future and wishes to retain earnings for expansion. In this case the payout decision is a byproduct of the firm's capital budgeting decision. Another firm might finance capital expenditures largely by borrowing. This frees up cash that can be paid out to shareholders. In this case the payout decision is a byproduct of the borrowing decision.

Brealy, Myers & Marcus (2007), isolated payout policy from other problems of financial management by asking a question on the effect of a change in payout policy given the firm's capital budgeting and borrowing decisions. If a firm proposes to increase its dividend, the cash to finance that dividend has to come from somewhere. Fixing the firm's investment outlays and borrowing leaves only one possible source which is to issue stock. If a firm decides to reduce its dividend it will have extra cash. If investment outlays and borrowing are fixed repurchasing stock is the only one possible way that this cash can be used. The payout policy therefore involves a tradeoff between higher or lower cash dividends and the issue and repurchase of stock. There exist three opposing point views with payout policy. On one side there is a group that believes high dividends increase value. On the other side there is a group that believes high dividends bring high taxes and therefore reduce firm value and in the third party believes payout policy makes no difference.

Amidu &Abor (2006) summarized significant variables measuring firm's financial performance as profitability, cash flow, sale growth and market-to-book value. Brealy, Myers & Marcus (2007) defines profit as sales less all expenses that are associated with the sales. Ross, Westerfield& Jaffe (1999) defines cash flow as cash generated by the firm and paid to creditors and shareholders. It can be classified as from operations, cash flow from investments and financing activities. Sale growth is a measure of increase in sales volume over a period time. According to Brealy, Myers & Marcus (2007), the book value of the company's equity is equal to the total amount that the company has raised from its shareholders or retained and reinvested on their behalf. If the company has been successful in adding value, the market value of equity will be higher than the book value. The difference between the market value of the firm's equity and its book value is referred to as the market value added.

1.1.2 Value of the Firm

Firm value refers to the sum of its equity and liabilities, which is purely dependent on the income generated by the assets. It is therefore, factual to state that the firm value refers to the economic measure which is a reflection of the whole business. The sum takes into considerations all the short- and long-term obligations of the firm. It is worth to note that the firm can raise its finance either through stock sale, or through debts. Unlike debt which tends to dilute ownership, equity financing makes the ownership more certain. However, the debt finance has interest element which is tax allowable, hence advantageous too. According to Amidu &Abor (2006) a positive relationship is expected to exist between profitability, cash flow and dividend payout. On the other hand, a negative relationship is expected to exist between sales growth, market-to-book value and dividend payout. This is explained by the fact that highly profitable firms tend to declare and pay high dividend. Thus, they would have exhibited high payout ratios.

A firm's profitability is considered an important factor in influencing dividend payment. The liquidity or cash flow position is an important determinant of the dividend payout ratio. A good liquidity position increases a firm's ability to pay dividend. Generally, firms with good and stable cash flows are able to pay dividend easily compared with firms with unstable cash flow position. According to Amidu &Abor (2006) growth in sales and market-to-book values represent firm's future prospects and investment opportunities. Growing firms require more funds in order to finance their growth and therefore would typically retain greater proportion of their earnings by paying low dividend. Also, firms with higher market-to-book value tend to have good investment opportunities and thus would retain more funds and record lower dividend payout ratios.

1.2 Research Problem

Despite the importance of paying dividends and its link to the firm's valuation, there has been little exploration of the firm's dividend payout ratio and market value for firms quoted in the Egyptian securities exchange. The dividend irrelevance theory proposed by Modigliani and Miller suggested that dividend policy is irrelevant and shareholder's wealth remains unchanged (Al-Malkawi, 2007). On the other hand, the financial signalling theory signifies the importance of paying dividends as they are used to convey positive information to shareholders, which affects the value of a firm's share price (Brigham & Gapenski, 1994). Moreover, the stakeholder theory proposed by Cornell and Shapiro (1987) indicates a positive influence between investment and financing decisions with the firms' shareholders. The Egyptian Securities Exchange is an important driver of the economy. The securities exchange provides a decentralized marketplace for purchase and sell of shares among other forms of securities including bonds and derivatives.

Dividend policy is an issue of interest in the financial literature, despite vast research on the topic it has remained a controversial issue. The ideal situation is that a good company should have investors in their mind when developing a dividend policy. The ideal situation has not been met due to the problem of practice; in most cases companies have ignored investor's interest when coming up with dividend policies. Dividend policy indicators of payout ratio and dividend yield are among the key factors that an investor would consider during an investment decision. They determine whether the investor will or will not invest. Investors pay close attention to the dividend yields, and that the riskiness of their investments may affect the evaluation of firm's shares in the long run. As such therefore, dividend policy may have an influence on share price volatility. Dividend policy continues to generate endless debate despite years of theoretical and empirical research. These include the linkage between dividend policy and stock price risk (Allen and Rachim, 1996).

The dividend policy is a controversy on how much the company needs to plough back so as to foster growth or else put itself strategically in the market, and the much that the investors should be rewarded for having their interests in the business. Both of these two critical portions have an influence on the stock price, investors level of confident and company's opportunity in generating income. The decision and urge to distribute free cash flows, otherwise referred to as cash dividends of the firms has become a contentious factor to achieve optimum payout policy (Baker, 2015). Firms are faced with in sharing their dividends to stockholders and/or retain their realized earnings with an objective of reinvesting it back into the business so as to promote further growth. Managers who have the tendency of outsourcing for help in making dividend policy decisions come across numerous theories and the explanations, where in actual situations, determination of an appropriate payout policy involves a difficult choice between the need to balance many potentially conflicting forces.

Dividend distribution seems to be a tool to increase the value of a firm in the eyes of investors; it is still unclear what financial factors management uses to support their decision behind declaring a dividend payment. Researchers have different views about the dividend policy and share prices. Research regarding the influence of dividend policy measures on share price volatility has produced mixed results in different countries. For instance, studies using the data from US, Japan and Singapore markets have found that stock price has a significant positive relationship with the dividend payment (Irfan and Nishat, 2001). It is however, worth to note that some of the studies that were done much earlier, found a negative relationship between payout ratio and the share price of the publicly listed companies.

According to, Enhardt (2013), that an increase in dividend payout policy advances to higher stock prices and bring down the cost of equity. Enhardt (2013), also studied the relationship between dividend policies and share prices and found that there

was positive relation between dividend policy and share price. Ogolo (2012) studied the effect of dividend policy on share prices on firms listed Egyptian Stock Exchange. The study found positive relationship between market price per share and dividend policy. According to Muriuki (2012), the relationship between dividend policies and share prices for publicly listed companies are significant. His findings were that there was a statistically significance positive relationship between the dividend payout and share price of the firms listed at NSE.

Azhagaih and Priya (2008) studied the impact of dividend policy on shareholder's wealth in organic and inorganic chemical companies and found that shareholder's wealth was not determined by dividend policy. Sew and Ahmad (2015) studied relationship between dividend policy and share volatility in Malaysian market they found that dividend payout ratio and dividend yield to be negatively related to share price volatility. The findings of the research contradict previous studies. Peterson (1985) in his findings concluded that high elevated dividend payout ratio, heightened returns are needed by firm's shareholders and this leads to lower share price. In Nigeria, Woosung (2014) in his study on the effect of dividend policy on stock price volatility found that dividend yield and dividend payout ratio, have significant negative impact on stock price volatility. In South Africa, Umwari (2015) found that both the dividend policy and asset growth and leverage did affect the share price volatility. This conflicting research indicates a knowledge gap in research regarding the impact of dividend policy measures on share price volatility. The conflicting results despite the magnitude of international empirical and theoretical research, demonstrate that there is need to further investigate the effect of dividend policy measures on share price volatility in the NSE in Kenya.

Although extensive theorizing and empirical research into the motivations of paying dividends help to explain the dividend puzzle, all of the pieces of this puzzle still do not fit into coherent whole. Despite some inconclusive evidence about the competing theories of paying dividends, some theories or explanations have relatively more empirical support than others. Despite dividend policy being one of the mostly researched topics in the field of finance in most developed countries. The main point of concern is whether or not, there is a significant influence of payout ratio on the volatility of the stock price. It is also evident that most of the studies done in the past, have mainly concentrated on the developed economies. The concern on whether or not the dividend payout ratio, which is purely influenced by dividend policy have an influence on the volatility of stock prices in developed nations. Owing to the few studies that have been done in these economies, this concern is valid. Companies in developing countries like, such as Nigeria have low dividend payout if they pay at all. Therefore, the empirical studies which have mainly focused on developed economics show that there is relationship between the dividend payout and financial performance of companies in such developing nations. The payment of dividend to shareholders depends on a great deal on the financial performance of companies. Current dividend payment reduces investors to discount the firm earnings at lower rate of return while dividend reduction increases investors' uncertainty, raising the required rate of return. Therefore, dividend payout has effect on the financial performance of quoted cement companies thus triggering on the research to be undertaken. Theories discussions on dividend suggest relevance on dividend policy as far as dividend payout ratio is concerned. However, no model or theory has been developed to show how a particular dividend payout policy affect share price. A number of studies have been conducted in Nigeria and other economies on the dividend payout policy and financial performance of companies. However, the studies produce conflicting result and moreover, further research has to be done on the effect of dividend payout on the financial performance of quoted cement companies in Nigeria using more recent data. This study is aimed at testing and ascertaining the effects of payout ratio on the volatility of the stock price in the Egyptian Security market.

In Egypt, not many studies have been done on the stock price volatility. A few studies done in the economy however, have shown that the return volatility and equity prices in which both yield positive and significant conditional variance parameters and shocks to equity returns of conditional volatility were highly persistent. Kenyoru, Kundu and Kibiwott (2013) investigated the effect of dividend policy on the share price volatility in Kenya where regression models were used to test the relationship between dividend yield and dividend payout ratio and stock price volatility. They found dividend payout ratio to be an important predictor of share price volatility while the dividend yields enhanced share price volatility. A study done in Kenya by Waweru (2013) on the determinants of stock price volatility at the NSE used regression model to measure the effect of interest rate, exchange rate and inflation rate on volatility. She found interest rate to have a positive but weak relationship with stock price volatility while exchange rate and inflation negatively influenced stock price volatility. While these studies are beneficial to the researcher, most of the studies, none of the studies looked at the combination of policy indicators of dividend yield, payout ratio and firm size on the stock price volatility. Secondly, the studies were done over a shorter period of five to ten years and none looked at the effect of the variables over a period of over twenty years hence a knowledge gap. This study sought to fill this gap by investigating the effect of payout ratio as influenced by the dividend policy, or on the price volatility of the companies listed at the Egyptian Security Market between 2014 - 2019

1.3 Research Objective

The general objective of this research is to analyses and establish the relationship between dividend payout ratio and market value of firms listed in the Egyptian Securities Exchange. This general objective will be addressed by answering the following specific objectives;

i. To establish the relationship between the dividend payout ratio and the stock trend in the Egyptian security market.
ii. To determine the effect of stock trend on the value of the firm.

1.4 Significance of the Study

The study is targeting to help the various stakeholders in policy formulation policies and management of corporate affairs thereof. Company managers for instance will be benefitted by this paper in making better policies geared towards maintaining a high market value. The study will also contribute to the currently existing literature on the factors contributing value of the firms in the Egyptian Security Market. The following are the main categories of people are stand a chance of benefitting out of this project:

1.4.1 Shareholders

This study gives an in-depth analysis of the objectives of the shareholders, and how the managers can meet the set objectives thereof. Also analysed is the practice of dividend policy and its relationship on the share price of non-listed firms which is also useful in appraisal of the efficiency of the management in decision making. Whereas the managers have been entrusted with the responsibility of managing the company, it is the responsibility of the shareholders to lay oversight role on the day to day running of the company. This is to done to ensure that the objective of the shareholders, which is to maximize wealth is met.

1.4.2 Managers

The study will give an in-depth analysis of the decision-making process in dividends declaration, payment and how to formulate dividend policies thereof. The study will also touch on the considerable factors as at the time of formulating the dividend policies. The paper also touches on the most important pieces of information which should be conveyed to the shareholders, to make them maintain high level of confidence on the managers who act on their behalf on agency basis. With a proper understating of how to relate with their principals, and understanding how to satisfy their investment objective thereof, the managers will not win the trust of the shareholder, but also be able to satisfy them fully.

1.4.3 The Government

The study will be very handy to the government in making or else formulating policies regulating publicly listed companies. This paper will therefore be very handy to the government in formulating policies which are geared towards protection of the rights and interests of the investors in the publicly listed companies. This will be done through ensuring that the shareholders have been given an insight on how that they are aware of the non-financial policies, as well as financial policies of the companies listed in the Egyptian Securities market.

1.4.4 Investment analysts

In the analysis of investments, utilization if the findings add value to the clients under focus. Value addition will therefore, ensure that there is maximization of the share values which are at hand. With this, the possibility of adding the level of credibility will be enhanced at the face of the clients, hence widening the market scope.

1.5 Limitations of the Study

In the study, the limitations have been set on the basis of the case study, as well as the date which has been set. There could be other relevant factors which would have a significant influence on the stock price at Security market of Egypt, apart from the dividend policy. This could be inferred from low adjusted R^2 from the analysis. This means the explanatory power of the selected predictor variable is low and the others relevant factors are worth exploring. However, the discussion of these factors is beyond the scope of the study. This study is seeking to establish the relationship between dividend pay-out ratio and the value of firms in the security market of Egypt. In this this study, the scope will be limited to the publicly listed firms in the Egyptian Security market. Only firms whose listing have been consistent in the past 10 years will be analysed. The

independent variables under focus were the payout ratio, dividend yield and firm value while the dependent variable was the stock price volatility. Having a relation in the equation is an indication of an association between the variables under focus.

CHAPTER TWO

LITERATURE REVIEW

Literature review is the revisiting of the other scholar's work related with the area of study in order to establish the benchmark and link to assist the current research in propelling his/her study to a successive conclusion. This section of the paper presents information available in the literature regarding the topic of the study at hand, the relationship between dividend pay-out ratio and value of the firm listed in the Egyptian Security Exchange. Principally, this chapter is divided into three sections: section 1 – definition or an overview of dividends and associated dividend policy; section 2 – theories related to dividend pay-out ratio and value of the firm; and section 3 – empirical studies on dividend pay-out ratio and value of the firm.

2.1 Dividends and Dividend Policy

The issue of corporate dividends dates back to the development of corporate in itself. In particular, during the early 16th century in Britain and Holland, captains of sailing ships began to sell financial claims to investors, which in the process entitled them to proceed sharing of the voyages, if any (Walker, 1931). At the end of every voyage, the capital and profits were distributed among investors, which liquidated and ended the life of the venture. Such financial claims, by the end of the 16th century, started to be traded on Amsterdam's open markets and would usually be replaced gradually by ownership of shares. Noteworthy, she investors would purchase shares from more than one captain leading to risk diversion connected to such kind of business. At the closure of each of voyage, the venture liquidation ensured that there was profit distribution to owners, and this helped in reducing the possibilities of fraudulent exercises by captains (Baskin, 1988). Nonetheless, due to the establishment of the profitability by ventures and associated regularisation, the liquidation process of the assets at the termination of every voyage became costly and inconvenient. The success stories of the ventures, however, widened their "shareholdership" and credibility due confidence in the managerial capability by the captains leading generous payment of dividends (Baskin, 1988). To this end, companies began to trade coupled with distribution of profits as compared to the entire invested capital. The emergence of companies initiated the vital practice of firms in deciding on what portion of the companies' income, and not assets, returned to investors and yielded the first payment of dividend regulations (Frankfurter & Wood, 1997). Corporate charters, gradually, started to control the payment of dividends based on the profits only.

The ownership structure as evident of the shipping companies evolved with time to form joint stock companies. by 1613, the British East India Company issued its first stock shares as pegged on nominal value. According to Walker (1931), "no distinction was made, however, between capital and profit" (p.102). Consequently, by 17th century, this type of business was enhanced by additional business organisational structures to include other activities such as banking, mining, clothing and utilities. By the early 1700s, there was an excitement regarding the possibilities of the expanded trade and such a corporate form attracted speculative bubbling, which, however, spectacularly collapsed upon the South Sea Company becoming bankrupt. The Bubble Act of 1711 enacted in an attempt to slow down this form of business, did not terminate its development in Britain for a period spanning a whole century (Walker, 1931). During the early stages of this corporate form, managers were able to realise the stability of dividends payments. Alternatively, this was a way whereby some investors ensured the security the financial form being traded making it to analogous with the government bonds. Bonds were well paying in terms of stable and regular interest payment and to their amazement, corporate managers realised that investors showed preference to shares, which behaved like bonds based on the stability and regularisation. For instance, in 1781, the Bank of North America managed to pay dividends within a half a year of its operation making the bank charter to compel the Bord of Directors to regularly distribute dividends out of profits. In the words of Frankfurter and Wood (1997), "paying consistent dividends remained of paramount importance to managers during the first half of the 19th century" (p.24).

The significance of dividend stability by investors led to the emergence of perception of dividends as important information form. The unreliability and scarcity of financial data, in many cases, resulted in investors assessing corporations through payment of dividends as opposed to reported earnings. In other words, investors were often subjected to inaccurate information concerning the performance of firms making them to put into use the dividend policy as manner of gauging the view of the management of the firm's future performance. An increase in dividend payments, consequently, was reflected in the rising prices of stock. This phenomenon raised the possibility of the management using dividends to signal good earnings prospects of companies and, therefore, supporting the share price since investors read announcements on dividends as earnings growth's proxy. In sum, the development of shareholders' dividend payments is part of the corporate form's development.

Simply put, a dividend is the benefit realised by shareholders as a result of involvement in risky investment. According to Deeptee and Roshan (2009), a dividend is the distribution of a company's profit. Consequently, the dividend policy refers to the guidelines and regulations used by a company in deciding to make dividend payments to shareholders. According to Lease et al. (2000), dividend policy refers to "the practice that management follows in making dividend pay-out decisions

or, in other words, the size and pattern of cash distributions over time to shareholders" (p.29). Virtually, all firms pay their dividends in the form of cash meaning that they are to decide on earnings percentage to be distributed among shareholders and, therefore, the need for a dividend policy. Dividend payments satisfy expectations of shareholders making corporate managers to realise its importance. The shareholders often smoothen dividends with time on the premise that dividend reductions have unfavourable impacts on the share price and, therefore, dividends are used to signal market information.

There are four main types of dividend policies, and they include: constant payout ratio, constant amount per share, constant DPS surplus or plus extra, and residual dividend policy. Constant payout ratio is whereby the firm pays a fixed rate of dividend of earnings. Dividend per share (DPS), therefore, would fluctuate as earnings per share is prone to changes. Dividends directly depend on the earning ability of the firm, meaning that if there are no profits, then dividends would not be there. Such a dividend policy creates uncertainty to ordinary shareholders relying on dividend income (Ndeda, 2013). Contant amount per share is whereby the DPS is fixed regardless of the level of earnings. Unlike constant payout ratio, constant amount per share creates certainty making it preferred by shareholders relying on dividend income. This form of dividend policy protects the firm from periods of low earnings through fixed DPS especially at lowest level possible. Additionally, this kind of policy treats all shareholders equally by giving a fixed return i.e., are shareholders are preferred. Even if the DPOS is increased to a higher level, it is still relatively sustainable. In constant DPS plus extra or surplus, a constant DPS is payable annually. Nonetheless, extra dividends are often paid during years when super normal earnings are achievable. This kind of policy creates flexibility in the firm in that dividends would be increased when earnings are high and shareholders granted with the opportunity of participating in super-normal earnings. The extra dividend is not a must and should be given in such away that the firms if perceived as committed to continue with the same in the future (Ndeda, 2013). Contant DPS is often preferred by sectors that are highly volatile. Finally, residual dividend policy is whereby earnings left over after completing investment decisions are paid as dividend. To this end, dividends will only be paid if there is no profitable investment. This dividend policy is congruent with the shareholder wealth maximisation aim.

Accordingly, dividend policy has an effect on the share price. Since the 1950s, the dividend policy's effect on the value of the firm and other corporate dividend policy's issues have been subjects of greater debate among finance scholars. According Al-Malkawi et al. (2010), the issue of dividend policy has been a point of interest to finance scholars since the mid of the previous century making it remain one of the contested financial issues. Dividend policy has engaged managers since the inception of modern commercial corporation. The extensive range and enduring nature of the debate on dividend policy has resulted into vast amount of literature, which is growing day-by-day. To this end, a full review of debates is not viable and feasible. Nonetheless, this paper attempts to give justice to the significance to the topic and dividend policy as an avenue of financial economic research. In addition, the literature addresses the topic by reviewing the most influential and important studies in this area, and also tries to highlight the main explanations and theories of the dividend policy, and reviews main empirical studies regarding corporate dividend policy.

2.2 Theories Related to Dividend Pay-Out Ratio and Value of the Firm

From the previous section, it is evident that dividend policy's development is analogous to that of the corporate itself. The emergence of dividend policy as an important element to investors was driven, to a greater extent, by the financial markets' evolving state. Initially, investment in shares was similar to that of bonds since regularity of payments was critical. Additionally, the absence of accurate and regular corporate reporting made dividends to be preferred to reinvested earnings as being better indicators of corporate performance as compared to published accounts of earnings. Nonetheless, as financial markets developed to the point of becoming efficient, some individuals believed that dividend policy became increasingly irrelevant to investors. To this end, dividend policy has been theoretically controversial. This is perpetuated by three main theoretical frameworks of dividend policy. On one hand, some theorists argue that increasing payments of dividends increases the value of the firm. On the other hand, others claim that high dividend payouts reduces the value of the firm, an opposite effect. Another theoretical approach gives an assertion that dividends are irrelevant with all efforts committed to dividend decision being wasted. These views are cemented by their related theories of dividend policy: the bird-in-hand theory – high dividends increase the share value of the firm; the tax-preference theory – low dividends increase the share value; and dividend irrelevance theory – dividends are irrelevant. Debate on dividend policy is not only limited to these three theoretical underpinnings; there are other theories which increase the dividend puzzle's complexity, and they include signalling theory (information content of dividends), the clientele effects, and agency cost. These theories are discussed as shown below.

2.2.1 Dividend Irrelevance Theory

Prior to the renowned publication made Miller and Modigliani (1961), referred in this thesis as M&M, on dividend policy, the general norm was that higher dividends increase the value of the firm. This believe is orchestrated by the bird-in-hand theory, discussed subsequently in this paper. In the same vein, "the sole purpose for the existence of the corporation is to pay dividends", and companies that highly pay for dividends should equally sell their shares highly (Frankfurter et al., 2002, p.202). Nonetheless, under the influence of the 1960's new wave of finance, M&M managed to demonstrated perfect capital markets rendered dividend policy irrelevant based on certain assumptions. Given that the divided policy in a perfect market does not affect the stock price or cost of capital in a company, then the wealth of shareholders is not influenced by the dividend decision and, therefore, indifference between capital gains and dividends. The indifference is caused by the shareholder wealth resulting from the income generated by the investment decisions made by a firm, and not on the distribution of the income. To this end, M&M justifies the irrelevance of dividends. According to M&M, irrespective of the company's distribution of income, its value is pegged on the basic earning power and investment decisions. In their own words, "...given a firm's investment policy, the dividend pay-out policy it chooses to follow will affect neither the current price of its shares nor the total returns to shareholders" (M &M, 1961, p.414). Simply put, investors are capable of calculating the value of companies on the basis of capitalised value of their futuristic earnings, which is not influenced by whether companies pay dividends or not, and the way of setting dividend policies. Further, M&M suggested that all dividend policies are the same to investors in terms of effectiveness, and creation of "homemade" dividends is possible through adjustment of their portfolios and matching of preferences.

M&M arguments were based upon idealistic assumptions of a perfect capital market and rational investment decisions. These assumptions are necessary for the dividend irrelevancy in the following ways: no differences between taxes on capital gains and dividends; no floatation and transaction costs incurred when trading on securities; all participants in the market have free and equal access to similar information; no conflicts of interest between security holders and managers; and all market participants are price takers. In understanding the irrelevance preposition by M&M, it is worth considering the valuation of the common stock model, dividend discount model. In general, the dividend discount model (DDM) holds that the value of stock is predetermined using future dividends (i.e., proxy of earnings), and the needed return on the stock rate. For instance, the value attached to share at time zero is the present value of all future discounted dividends at an appropriate rate of discount expressed as equation (1) as shown:

$$P_0 = \sum_{t=1}^{\infty} \frac{D_t}{(1+r_t)^t}$$

……….. Equation 1

Whereby P_0 is the present/current share price, t is the time taken by the dividend, D_t is the paid dividends at time t, and lastly r is the rate of return for period t. according to the DDM, the future discounted dividends, D_t, fundamentally determine the value of the present share price, P_0, and not any other future share price. To this end, share price is the vital determinant of the value of the firm. More dividends, accordingly, increases the firm value, other factors remaining constant. This institution was the generally accepted paradigm by majority of economists until M&M made public their seminal paper, which embroiled the dividend controversy.

In a perfect market scenario, the required rate of return by an investor on equity shares, r, can be equated to the dividends combined with capital gains, and this is represented in equation (2) as shown:

$$r = \frac{D_1 + (P_1 - P_0)}{P_0}$$

………. Equation 2

Where, P_0, is the present market share price; P_1, is the anticipated market price at the end of the trading period; and D_1, is the dividend at the end of the trading period. Rearranging equation (2) to obtain the current market share price (P_0) leads to the equation (3) as shown below:

$$P_0 = \frac{D_1 + P_1}{(1+r)}$$

………. Equation 3

Equation 3 above also be derived from the basic valuation framework, represented in equation 1. Equating n to the number of outstanding shares at time zero, t_0, then the present value of the firm (V_0) is as represented in equation 4 as shown:

$$nP_0 = V_0 = \frac{nD_1 + nP_1}{(1+r)}$$

………. Equation 4

Recalling what M&M stated in a perfect capital market, that the value of the firm is independent of dividend policy, an illustration can be done by employing the use and source of funds equation. On the assumption that the firm's market value is independent of capital structure, according to M&M (1958), debt financing is not part of the analysis. The sources of funds by a firm as included in the equation involve cash flow from operations (CF_1) and new equity financing, mP_1, in which m represents the number of issued shares at t_1. Regarding the uses of funds, they include dividends payments, nD_1, and investment made during the period under consideration, I_1. Due to the fact that sources of funds must be equalled to the uses of funds, therefore equation 5 can be represented as shown:

$$CF_1 + mP_1 = nD_1 + I_1$$

………. Equation 5

Rearranging the above equation so as to obtain nD_1 yields equation 6 as shown:

$$nD_1 = CF_1 + mP_1 - I_1$$

………. Equation 6

Substituting equation 6 into equation 4 for D_1 equation 7 is obtained as shown:

$$V_0 = \frac{CF_1 + mP_1 - I_1 + nP_1}{(1+r)}$$

………. Equation 7

$$V_0 = \frac{CF_1 - I_1 + (n+m)P_1}{(1+r)}$$

………. Equation 8

Since $(n+m)P_1 = V_1$, hence

$$V_0 = \frac{CF_1 - I_1 + V_1}{(1+r)}.$$

………. Equation 9

Since dividends do not appear in the final equation, equation 9, and operating cash flows (CF_1), investments (I_1), and required rate of return (r) are not elements of divided policy, therefore, the value of the firm is independent of its current dividend policy. Even if this kind of analysis is repeated over and over again, the results will remain the same (i.e., the firm's value is not affected by the dividend policy). The notion that dividend policy is not relevant in a perfect capital market can be a logical extension of the preposition by the neoclassicalists concerning the perfect competition within the jurisdiction of financial economics. Indeed, its simplicity and elegance were visualised by M7M. For example, the duo observed that "like many other propositions in economics, the irrelevance of dividend policy, given investment policy, is 'obvious, once you think of it" (M&M, 1961, p.414).

The discourse above gives a suggestion that the investment policy of a firm is a critical determinant of value as well as the residual dividend policy. Operating cash flows are dependent on investments. In other words, the investment committed by a firm in terms of the positive net present value would increase the operational cash flows, and this is the only way of increasing the firm's value. In sum, guided by the assumptions characteristically of perfect capital markets, the future cash flow of firms as generated by investment activities is only determinant factor of the firm's value. According to Bishop et al. (2000), the pay-out policy is independent of its value.

2.2.1.1 Empirical evidence

The dividend irrelevance preposition by M&M has formed the bedrock for subsequent research work on dividend policy. Nonetheless, the empirical tests that justify M&M preposition has proven difficult to design and carry out (Ball et al., 1979). Given the fact that M&M built their deductions on certain set of assumptions within the context of perfect markets, relaxing a single or more of these assumptions has been instrumental for majority of the empirical and theoretical studies. To start with, Black and Scholes (1974) did examine the relationship between stock returns and yielded dividend with the aim of identifying the effect of dividend policy on the prices of stock. In their study, they constructed 25 portfolios based on common stocks extracted from the New York Stock Exchange in an attempt to extend the capital asset pricing model while testing the long run estimate of yield effects resulting from dividend. This particular study employed the use of the following regression equation or model:

$$E(\tilde{R}_i) = \gamma_0 + \left[E(\tilde{R}_M) - \gamma_0 \right] \beta_i + \frac{\gamma_1(\delta_i - \delta_M)}{\delta_M} + \varepsilon_i$$

...........Equation 10

Where $E(\acute{R}_1)$ represents the anticipated or expected return on portfolio I, $E(\acute{R}_M)$ is the expected return in the context of market portfolio, γ_0 is the comparative intercept with the short-term risk-free rate R, $\beta_{i\ is}$ is the systematic risk of portfolio I, γ_1 is the impact created by the dividend policy, δ_i is the yielded dividend on portfolio i, δm is the yielded dividend on the market, and ε_i, finally, is the error term.

Black and Scholes (1974) employed into use a long-term definition of the yielded dividend (i.e., dividends of the previous divided by the share price of the end-year). Their outcomes indicated that the coefficient of the yielded dividend (γ_1) was not significantly different from zero either for the entire analytical period (i.e., 1936 - 1966) or for any other shorter period. In other words, the expected return either being low or high, yielded the same stocks. On this basis, Black and Scholes (1974) concluded that they were unable to indicate the difference in dividend yield with corresponding change in stock price. Obviously, Black and Scholes study supported the dividend irrelevance preposition by M&M. In the same vein, subsequent studies (Miller & Scholes, 1982; Miller, 1986; Bernstein, 1996) were in favour of the dividend irrelevance argument.

Nonetheless, some studies have contradicted the preposition. While being informed by the findings by Black and Scholes (1974), Ball et al. (1979) examined the impact of dividends on the value of the firm using the Australian context between 1960 and 1969. According to Ball et al. (1979), there was no conclusive evidence to support the preposition of M&M, the irrelevance of dividend policy. Additionally, Bake et al. (1985) upon surveying the chief financial officers of a total of 562 companies listed on the New York Stock Exchange emanating from three different industries (i.e., 309 manufacturing, 150 utilities, and 130 wholesalers and retails), found that, as supported by 318 responses, study participants strongly agreed with the fact that dividend policy impacts on common stock prices. Baker and Powell (1999) also found similar findings while carrying their study on 603 chief financial officers of United States firms listed on the New York Stock Exchange (NYSE) with 90% of the respondents agreeing that dividend policy is acritical detriment of firm value. A study by Casey and Dickens (2000) also provided similar findings invalidating M&M preposition.

Irrespective of the empirical work already discussed, effect of dividend policy on the firm's value is an unresolved issue. According the M&M's preposition, several bindings assumptions pegged on the nature of perfect capital market are worth reconsidering. In essence, this is direct replica of how perfect markets operate. Ordinarily, upon departure from the M&M's line of thought or preposition and further relaxing one of more of the assumptions of prefect capital markets, the dividend policy is further complicated. Introduction of market imperfections, obviously, changes the irrelevant decision making in favour of dividend policy. Interestingly, when the dividend policy becomes or is considered relevant, interaction with additional decisions about the firm's financing and investment may ensue. That is to say, conceivably, there may be reasons for the significance of dividend policy. As already been noted, the findings that dividend is insignificant in the context of the value of the firm had spurred a number of theoretical explanations concerning its relevancy. In demystifying the further, the dividend policy, alternatives of dividend irrelevancy hypothesis are presented herein beginning with the bird-in-hand theory.

2.2.2 Bird-in-the-Hand Theory

An alternative to the dividend irrelevance hypothesis, is the older bird-in-hand theory or high dividends increase of stock value theorem. Dividends are differently valued to retained earnings or capital gains in a world of imperfect information and uncertainty (Al-Malkawi et al., 2010). To this end, investors show preference to "bird-in-hand" of cash dividends rather than "two-in-the bush" of futuristic capital gains. Therefore, increasing payments of dividends, other things remaining constant, may be connected to increase in the value of the firm. Since a higher current dividend has the capability of reducing future cash flows' uncertainty, a higher pay-out would have a reducing effect on the cost of capital thereby increasing the share value. A such, the "bird-in-hand" hypothesis (shortened as BIHH) argues in favour of increased dividend pay-out ratios as causative agents of maximised value of the firm. Accordingly, Diamond (1967) argues that "a dollar of dividends has, on average, four times the impact on stock prices as a dollar of retained earnings" (p.16). Other studies that support the BIHH's preposition include Gordon and Shapiro (1956), Gordon (1959), Linter (1962), and Walter (1963).

M&M (1961), obviously, criticises the BIHH's preposition on the ground that the risk of the firm is informed or determined by risky nature of the operating cash flows, and not by the distribution of the its earnings. According to M&M, this scenario tantamount to the bird-hand fallacy. On the same vein, Bhattacharya (1979) suggest that the reasoning behind BIHH is shrouded in fallacy. In addition, Bhattacharya argues that the risk of the firm has an influence on the dividend level, and not the other way round. In other words, the riskiness of the cash flow of a firm affects the associated dividend payments, but dividends' increases would not reduce the firm's riskiness. The idea that firms subjected to greater future cash flow uncertainty have a high propensity of adopting lower pay-out ratios is seemingly theoretically plausible. Based on empirical

findings, Rozeff (1982) realised a negative association between dividends and the risk of the firm: as the riskiness of the firm operations increased, the payments of dividends reduced.

2.2.2.1 Empirical evidence

Gordon (1959) in his study on BIHH found three possible reasons for investors to buy certain stock. First, was to obtain both earnings and dividends. Second, was to get only dividends, and third, was to obtain only the earnings. During the examination of these three hypotheses, Gordon used various regression models across cross-sectional data generated from four industries i.e., machine tools, steels, chemicals and foods for a period of two years, from 1951 to 1954. The resulting hypothesis was examined or subjected to testing using linear regression as exemplified in the equation shown:

$$P_{it} = \alpha_0 + \alpha_1 D_{it} + \alpha_2 R_{it} + \varepsilon_{it}$$ …………Equation 11

Where, for the firm i operating within a period of t, P is the share price, D, dividends, and R, retained earnings. The dividend coefficient's reciprocal, α_1, is the approximated required rate of return on common stocks minus growth, the retained earnings' coefficient, α_2, is the growth price. Using the above linear regression model, Gordon was able to find that dividends greatly influence the share price more than retained earnings. Additionally, according to his findings, Gordon claimed that the required rate on share return increased with retained earnings' fraction due to the uncertainty connected to future earnings. On a similar note, Gordon (1963) found that higher dividend pay-outs decreased the cost of equity, or simply the required return of return on equity. Additionally, Fisher (1961) while using data from Britain between 1949 and 1957 arrived at the same conclusion i.e., dividends greatly impact on share price as compared to retained earnings.

Nonetheless, Gordon's (1959) model has been a subject of criticism. To start with, the model does not put into consideration the variation of risk among firms emanating from different industries and, therefore, an upward bias on the dividends' coefficient (α_1) is likely. This means that high risk connected to stock may yield low price and low pay-out, whereas low risk connected to the stock might lead into low price and high pay-out. Also, the model only accounts for the for the growth attributed to the sue of external financing. Consequently, this may make coefficient of retained earnings to be biased. Further, as dividends are a bit stable in comparison to reported earnings, the short-run income fluctuations would be majorly reflected in retained earnings' change. If the model biasedly favours dividends, then the share prices and dividends would be related to normal income and not on reported income. Finally, on the criticisms, dividends are subjected to more precise measurement as compared to retained earnings since the projected retained earnings are dependent on the procedure of accounting followed in measuring toral earnings, which further place downward bias on the coefficient of retention (α_2) (Diamond, 1967).

In an attempt to correct the above potential sources of biasness resulting from the mentioned criticism above, Diamond (1967) came-up with an additional element on regression equation or model by introducing an average of three-year earning-price ratio centred on t-1. He managed to examine the impact of retained earnings and dividends on share process using a sample frame of 255 U.S-based firms across eight industries between 1961 and 1962. In his analysis, Diamond only found a weak support for the preposition that investors prefer dividends to retained earnings. In particular, Diamond realised that industries where growth rates were relatively high experienced high preference for retained earnings to dividends, nonetheless, in mature industries with low rate of growth, a dollar od dividends was preferred to a dollar of retained earnings, and this suggested a negative association between dividend pay-out and the growth of the firm. Similarly, a survey by Baker et al. (2002) of the managers of firms listed on NASDAQ in assessing their view concerning issues on dividend policy including BIHH. One particular statement on the questionnaire about BIHH read as follows: "investors generally prefer cash dividends today to uncertain future price appreciation" (Baker et al., 2002, p.278). Responses on this question were as follows: 17.2% of responses agreed with the above statement; 28% had no opinion; and 54.9% disagreed with the statement. Based on these responses, the authors agreed the study participants did no support the preposition that BIHH compels firms to pay dividends.

In sum, the support for BIHH empirically as a motivator for paying dividend is limited in scope, being chiefly challenged by the M&M's preposition that the required rate of return, or the cost of capital is not dependent on divided policy making investors to be indifferent between capital gains and dividends. In fact, on the basis of tax-preference hypothesis, which is discussed shortly as one of the theories of dividend policy herein, the dividend policy culminates into an opposite outcome. In other words, investors are subjected to a disadvantaged situation upon receipt of cash dividends (Litzenberger & Ramaswamy, 1982). Therefore, the next theory delves on the examination of how low dividends are preferred to higher dividends.

2.2.3 Tax-Effect Theory

The M&M assumption of the existence of a perfect market excludes the possibility of any tax effect. Consequently, assumedly, there is no big difference in relation to tax treatment between capital gains and dividends. Nonetheless, in the real-world scenario, taxes exist and have a high likelihood of significantly influencing the dividend policy and the firm's value. Generally, there is a differential tax treatment between dividends and capital gains, and since majority of investors show interest in after-tax return, the tax influence might affect the demand for dividends by the them (investors) (Al-Malkawi et al., 2010). Taxes also have a high propensity of affecting the supply of dividends upon response by managers to tax preference by investors in an attempt to maximise wealth of shareholders or value of the firm through increment of earnings' retention ratio. The tax-effect theorem gives a suggestion that low dividend pay-out ratios have a lowering effect on the cost of capital while increasing the stock price. Low dividend pay-out rations, in other words, lead to the maximisation of the value of the firm. This kind of preposition is grounded on the assumption that dividends are highly taxed as compared to capital gains. Additionally, dividends are immediately taxed, whereas capital gains are subjected to deferment until such a time when the stock is sold. These advantages of taxation in favour of capital gains over dividends, compel investors who show preferential treatment to capital gains to companies retaining majority of their earnings as opposed to paying them out as dividend, and willing to pay highly for low pay-out companies. To this end, a low dividend pay-out would make low the cost of equity while increasing the price of stock. Notably, such a prediction is exactly opposite of the BIHH, and obviously, challenges the dividend irrelevance hypothesis by M&M.

In most countries, a higher rate of tax is applicable to dividends, and not to capital gains. Thus, investors falling under the high tax brackets, or investors who are highly taxed, may need an equivalent high pre-tax adjustment of their returns to enable them hold stocks that yield higher dividends. Such a relationship occurring between yielded dividends and pre-tax returns is what leads to the positive-tax-effect theorem or hypothesis. Brennan (1970) came-up with an after-tax replica of the capital asset pricing model in an attempt to test the relationship between yielded dividend and tax risk-adjusted returns. In the Brennan's model, the pre-tax returns of stock are linearly and positively related to the associated dividend yield, and also to the systematic risk. Higher adjustment of pre-tax returns is connected to higher stocks of dividends so as to compensate the investors through the returns' tax disadvantages. This gives a suggestion that a stock with higher yield of dividend will be sold at a lower price due to the disadvantages of higher taxes attributed to the dividend income, ceteris paribus. The Brennan model is represented as indicated in the equation below:

$$E(R_{it} - R_{ft}) = \gamma_0 + \gamma_1 \beta_{it} + \gamma_2 (D_{it} - R_{ft})$$ ………Equation 12

Where, R_{it} is return on stock, i, during the duration, t; R_{ft} is the less risky rate of interest; β_{it} is the beta coefficient for the stock, i, during the period t; and D_{it} is the yielded dividend of stock i, in period t. Assumedly, the coefficient, γ_2, is taken to mean an implicit tax bracket, which is independent of the yield level of dividend, D. If the dividend yield coefficient, γ_2, is significantly different from zero, and is also positive, the interpretation of results is considered as evident of tax effect. This means that a higher adjusted pre-tax risk returns are needed for compensating investors due to holding high-dividend paying stocks due to the disadvantage connected to dividend income. The empirical evidence is presented in the section below.

2.2.3.1 Empirical evidence

A plethora of empirical studies are available that are geared towards addressing the preposition of Brennan's model so as to better understand the relationship between stock returns and dividend yields. For instance, Black and Scholes (1974) upon testing the Brennan's model and found no tax effect evidence. In particular, the coefficient of dividend impact according to the study by Black and Scholes was found to be statistically insignificant. To this end, they deduced that high or low-dividend yield stocks did not affect the returns of stocks either prior or after taxes. Nonetheless, Litzenberger and Ramaswamy (1979) greatly challenged the findings by Black and Scholes by criticising the methods used especially in the definition of dividend. Instead Litzenberger and Ramaswamy (1979) extended the definition of Brennan's model as far as dividend is concerned by classifying stock into classes of yields: zero-dividend-yield class and positive dividend yield class. In their findings, Litzenberger and Ramaswamy (1979) found that the coefficient of dividend yield represented by γ_2 was highly significant and positive. These results corroborated the preposition made by Brennan's (1970) model. In their conclusion, they categorically stated that for every dollar increase in return in the form of dividends, investors require an additional 23 cents in before tax returns" (Litzenberger & Ramaswamy, 1979, p.190). notably, the divided coefficient, γ_2, obtained was 0.236, which is corroborated by Black and Scholes (1974). The implication of the findings by Litzenberger and Ramaswamy (1979) is that companies are capable of increasing their share prices through reduction of dividends. However, if this prediction is to go by, then the impending question worth asking is why companies pay dividends?

In addressing this question, Miller and Scholes (1982) criticised Litzenberger and Ramaswamy' (1979) preposition especially the short-term or monthly dividend yield. Instead, Miller and Scholes (1982) suggested that test employing the use of monthly or short-term dividend yield were inappropriate in detecting the effect of differential treatment of tax in the context of dividends and capital gains in relation to stock returns. Additionally, Miller and Scholes presented an argument on the positive yield returns created by information bias. This is because Litzenberger and Ramaswamy (1979) did not put into consideration the information effect of omitted dividends. Dividend omissions, often considered as bad news, would result in an upward bias within the coefficient of dividend yield due to reduction of zero yield-dividend class' return. In correcting this anomaly, Miller and Scholes re-ran the tests used by Litzenberger and Ramaswamy. In their analysis, they found that the coefficient of dividend yield was not statically different with reference to zero. The same findings were found by Hess (1981). Hess, in his study, found mixed results upon relating between the dividend yield and monthly stock returns during the period between 1926 and 1980: the findings partly reinforced Miller and Scholes's study outcomes, and also lent empirical support to the M&M's preposition.

Litzenberger and Ramaswamy (1982) re-examined the corelation between dividend yield and stock returns through adjustment of the coefficient of dividend yield for any potential effects of information. Their findings generated dividend yield, which was statistically significant and positive. Kalay and Michaely (2000) upon re-examining the Litzenberger and Ramaswamy (1979) using experimental weekly data attempted to find whether the positive dividend yield was due to information effects as proposed by Miller and Scholes (1982) or tax effects as conjectured by Litzenberger and Ramaswamy. Kalay and Michaeley excluded all the weeks that comprised of omitted dividends. They found a positive and significant coefficient of dividend, which, however, was not consistent with the conjecture proposed by Miller and Scholes (1982) concerning a positive yield coefficient fuelled by information bias. In addition, by using daily and monthly data from Britain, Poterba and Summers (1984) provided an evidence that strongly supported by the tax-effect hypothesis.

Further, Keim (1985) estimated the relationship between stock runs and long-run dividend yield by using a sample size of 429 US-based companies in 1931 and 1289 companies in 1978. In this particular study, Keim constructed a total of six portfolios of dividend yield with the first portfolio containing all zero-dividend companies and the remaining five being ranked from the lowest to the highest positive dividend-yield companies. A non-linear relationship was developed between the stock returns and dividend yield rejecting the hypothesis that average returns are the same across various portfolios. Furthermore, Keim manage to test the effect of firm size and seasonality of stock return on the relationship between dividend yields and stock returns, and a positive and significantly different coefficient of yield was obtained. Nonetheless, non-linear relationship was much concentrated in January, 1985 for small firms. Additionally, Keim (1985) reported indirect relationship between the firm size and positive yield as determined by market capitalisation. On this basis, Keim concluded as follows: "at a minimum, the results suggest the observed relation between long-run dividend yields and stock returns may not be solely attributable to difference in marginal tax rates for dividends and capital gains" (p.487). Indirectly, Keim's arrived at the yield-related effect of tax. However, due to the seasonality issue, which poses a significant effect on the relationship between stock returns and dividend yields, the findings are not consistent with the after-tax model. As such, the conclusion is puzzling in further complicating the yield-related tax effect issue.

A study by Morgan and Thomas (1998) while using data from the United Kingdom in examining the relationship between stock returns and dividend yields between 1975 and 1993, tested the tax-based proposition, and found a positive relationship between the variable under study i.e., dividend yields and stock returns. Nonetheless, in the study, the authors pointed out that the received capital gains had a disadvantage effect on the tax treatment in comparison to dividend income; subsequently, the tax-based theorem, ultimately predicted a negative relationship between risk-adjusted returns of stock and dividend yields, which is attributed to the 1973 imputation tax system in the UK. ordinarily, low-yield stocks ought to generate higher returns in compensating stockholders due to the increased tax burden connected to the capital gains, and the contrary is true. Nonetheless, the findings by Morgan and Thomas (1998) found a positive relationship between stock returns and dividend yields. Additionally, these findings depicted a non-linear relationship between dividend yields and risk-adjusted stock returns, which is refuted by the Brennan's model. Further, the size of the firm and seasonality seemingly influenced the correlation between dividend yield and stock returns. Therefore, Morgan and Thomas were unable to support the tax-effect theory. In the same vein, while using NASDAQ firms and the case study, Baker et al. (2002) did no support the tax-preference hypothesis.

In sum, the tax-effect hypothesis is on the basis of simple supposition: majority of investors are subjected to high taxation of dividends more than capital gains. Also, the dividends are immediately taxed, while the capital gains' taxation is delayed or deferred until such at time the gains would be actually realised. To this end, the tax-effect hypothesis gives a suggestion that taxable investors tend to demand for superior pre-tax stock returns that are capable of paying a large part of their income in the nature of high-taxed dividends. Investors, in other words, would value the capital gains' dollar as compared to the dividends' dollar leading to lower dividends being sold at relatively higher prices as compared to the higher dividends. Based on this, and as evident in the above empirical studies, facts on tax-effect hypothesis seemingly are not conclusive. All the

studies so far analysed employ the use of one perspective, and that is the relationship between stock returns and dividend yields. Though the literature has provided a plethora of empirical research on tax-effect hypothesis through examination of the behaviour of prices of stock, the findings are not robust and, therefore, the next section of this paper furthers this discussion through the lens of clientele effects hypothesis.

2.2.4 Clientele Effects of Dividends Theory

Making reference to the M&M (1961), the dividend clientele effect theory, under certain conditions, play a critical role in dividend policy. According to M&M, the choices of portfolio by individual investors can be influenced by certain imperfect market conditions such as differential rates of taxation and transaction costs, compelling them to show preference to different mixes of dividends and capital gains. M&M claimed that these imperfections may make investors to opt for securities that have reducing effect on such costs. They termed the propensity of investors to prefer certain forms of dividend paying stocks as "a dividend clientele effect." However, M&M maintained that even if the clientele effect may change the dividend policy of a firm in attracting certain clienteles, in a perfect market situation, every clientele is good and, therefore, the valuation of affirm is unaffected meaning that the dividend policy is irrelevant. Practically, investors are often faced by different treatments of tax for capital gains and dividend income and, thus, incur costs upon trading securities in the form of changing portfolios and transaction costs. As such, on the basis of different situations investors find themselves in, transaction costs and taxes are likely to create investor clienteles like in the case of tax-minimised induced clientele and transaction cost minimised induced clientele. These categories of investor clienteles would be attracted to companies that consistently pursue dividend policies suiting their particular conditions. On a similar note, firms be avenues of attraction for various clienteles through their dividend policies. For example, companies that operate in high growth industries and sectors and pay low dividends will only attract clientele preferring price appreciation (capital gains) to dividends. Contrarily, firms paying a large proportion of their earnings in the form of dividends will only attract clientele that likes or prefers high dividends and not low dividends. Allen et al. (2000) claim that clienteles in the infirm of institutional investors have the tendency of being attracted to invest in stocks that are dividend-paying since they are presented with tax advantages as compared to individual investors. Such institutions, however, are subjected to restrictions in the form of institutional charters, which to a greater extent, bar them from investing in low-dividend or non-paying stocks. On a similar note, good firms that advocate for quality are points of attraction to institutional clienteles since institutions are well-informed in comparison to retain investors in addition to be capable of monitoring or detecting quality. Allen et al. (2000) deduces on the nature of investor clientele as "...these clientele effects are the very reason for the presence of dividends" (p.2531).

2.2.4.1. Tax-induced clientele effects

Since majority of investors show interest in after-tax returns, the various tax treatments subjected to dividends and capital gains have an influential effect for dividends more than capital gains, and this is the very essence of the tax-induced dividend clientele effect hypothesis. For instance, when all things are held constant, low tax-bracket investors relaying on regular and steady income would be attracted to firms paying dividends, which are high and stable. Additionally, some institutional or corporate investors have a tendency of being attracted to high-dividend stocks (Short et al., 2002). But, relatively high tax-bracket investors will tend to invest in firms that are capable of retaining majority of their income with the aim of obtaining capital gains like tax deferred entities and tax exempt (Elton & Gruber, 1970).

2.2.4.2 Transaction cost-induced clientele

An additional argument of the dividend clientele effect hypothesis is based on the proposition that dividend policy influences various clienteles in shifting their portfolio allocation culminating into transaction costs. For instance, small investors like income-oriented individuals and retirees who depend on dividend income for consumption have a tendency of being attracted to stable and high-dividend stocks, since the transaction costs connected to selling stocks may be "expensive" for such investors. Wealthy investors, on the other hand, who do not depend on their share portfolios in satisfying their liquidity needs tend to prefer low dividend pay-outs so as to circumvent transaction costs associated with dividend proceeds reinvestment, which such investors do not presently need for consumption (Bishop et al., 2000). Notably, for both investor groups, transformation of financial asset from one to another, involves incurrence of transaction costs. On this basis, the notion of homemade dividends, according to M&M, attracts some costs and their existence (i.e., the existence of such costs) render dividend policy to be relevant.

Transaction costs also affect dividend policy through restoration of cash pay-out since dividends with new equity concerns, or simply debt financing, take advantage of new opportunities of investment. The firms have a high likelihood of relying on retained earnings and not on external financing when issuing costs are significant. This is supported by empirical data that retained earnings comprise of major firm's financial source both in developing and developed capital markets. In this regard,

Fazzari et al. (1998) found that, between 1970 and 1984, the value of retained earnings was 71.1% oof cumulative sources of funds with an average retention ratio of 60% among the considered US firms. The findings revealed a negative relationship between dividend payments and transaction costs. In this context, firms were able reduce or avoid such expenses through lowered dividends payment or avoidance of their payments in totality. Nonetheless, practically, majority of firms continued to pay dividends in cash while concurrently issuing new equity and debt, suggesting that additional factors may be at play in influencing dividend policy. A notable implication of this in the context of dividend clientele effect hypothesis is that by changing the dividend policy, the ownership structure of a firm can be changed. According to Scholtz (1992), another implication of the clientele theory, particularly transaction cost-induced clientele theory, is that firms ought to embrace a stable dividend policy so as to desist from inducing shareholders in modifying their portfolios, which entail transaction costs. The dividend clientele hypothesis' theoretical plausibility is itself relatively ambiguous. On one hand, the taxes and transaction costs influence dividends' demand. On the other hand, the existence of transaction costs, which is dependent, is not in itself a theoretical explanation of the dividend's policy determination. Therefore, and not surprisingly, majority of the literature have tested dividend clientele effect hypothesis, and produced mixed results, presented in the next section.

2.2.4.3 Empirical evidence

Empirical studies on clientele effect hypothesis are diverse in nature. On one hand, a number of studies have put into consideration portfolios of investors and their associated demographic attributes inclusive of taxes. Pettit (1977) gave empirical evidence for the occurrence of a clientele effect through examination of portfolio conditions of 914 individual investors, and found a positive and significant relationship between the age an investor and the portfolio of dividend yield. Nonetheless, he a found a negative relationship between the incomes of investors and dividend yield. Further, Pettit, based on the findings, suggested that low income of elderly investors make them to prefer relying on their financial portfolios for present consumption and, therefore, avoiding the transactional costs connected to selling of stocks. Subsequently, they have a high likelihood of investing in high-dividend stocks. Petit was also able to prove that investors with low systematic-risk portfolios preferred high-payout stocks and, thereby, the tax-induced clientele effect. On the other hand, Lewellen et al. (1978) while using sample from the same database as Petit (1977), found a weak clientele effect theorem. Later, Scholz (1992) examined an individual portfolio data leading to the development of a model in demystifying dividend clientele hypothesis, and found that differential treatment of dividends tax and capital gains had an influence on decisions by investors in choosing between lower dividend portfolio or higher dividend portfolio, consistent with tax or dividend-clientele hypothesis.

Another strand of studies explored and examined the relationship between changes in dividends and clienteles. Accordingly, Richardson et al. (1986), tested a sample size of 192 US-based firms that, for the first time, initiated dividends between 1969 and 1982, and the authors investigated whether the observed increase in the stock volume of trading firms was attributed to the signalling effect, or was an outcome of adjustment into various tax clienteles' portfolios. The findings revealed that the said increase in trading connected to changes in dividend policy was due to the information contained in the announcement of dividend with only a small portion being associated with clientele adjustment. The authors made a conclusion that "... the evidence supporting existence of clientele trading is somewhat weak" (Richardson et al., 1986, p.330). Another study by Dhaliwal et al. (1999) upon examination of changes in institutional shareholding due to dividend initiations, expected an increase in institutional ownership as a result of dividend initiations as guided by the theory of tax-induced clienteles based on sample size of 133 dividend initiators between 1982 and 1995. Unfortunately, the findings were not consistent with their expectation with 80% of the sample firms experiencing an increase in institutional shareholdership as instigated by dividend initiation, and such an increase was not only statistically significant, but also economically. According to their conclusion, the tax//dividend-clientele effect very strong in influencing the decisions of investors. A study by Seida (2001) obtained similar findings as that of Dhaliwal et al's.

Lastly, another section of empirical evidence infers the company's marginal investors tax characteristics on the basis of stock price movements around "the ex-dividend day." The relation between ex-dividend day and stock price is that, in a relational capital market characterised by certainty, share prices ought to drop proportionately to the dividend-per-share amount on the ex-dividend stock day (Lease et al., 2000). The investor is not able to claim dividend payments in the case of ex-dividend stock and, therefore, would not be able to pay similar amount since the stock is not with or cum-dividend. The ex-dividend day's stock price should, therefore, be lower as compared to the case cum-dividend in reflecting the lost dividend (Lease et al., 2000).

The clientele effect hypothesis, however, is not evident in some cases. This is because dividends are heavily taxed in comparison to capital gains. Accordingly, investors within the highly-taxed class bracket prefer receiving income in terms of capital gains and not dividends. The tax effect means that any drop in stock price may be negligible in comparison to dividends since investor consider dividends to be more valuable than capital gains. A study by Elton and Gruber (1970) concerning tax-induced clientele hypothesis by observing the behaviour of share price of firms listed in NYSE on ex-dividend

days between 1966 and 1967 found that the prices of shares fell down by amount less than the dividend amount. Additionally, they also found a positive relationship between the stock's dividend yield and the proportional size of the associated ex-dividend price drop. To this end, Elton and Gruber interpreted their findings as evidence of induction by differential taxes to prefer capital gains relative to dividends and, thereby supporting the tax clientele hypothesis. In their conclusion, the authors indicated that "... firms not only seem to attract a clientele, but they attract a rational clientele, one which should prefer their dividend policy" (Elton & Gruber, 1970).

Kalay (1982) while criticising Elton and Gruber claimed that the marginal investor tax rates could not be inferred from the ex-dividend day price drop, and that the observed positive relationship between dividend yield and price-drop ratio may not be associated with tax induced clientele effects. Instead, Kalay (1982) developed another explanation, referred to as the "short-term traders" theorem, where he argued that if the ex-dividend price ratio drop was less than one (i.e., less than the dividend amount), then short-term traders who made faced similar tax rate on dividends and capital gains were privileged to make arbitrage profits. That is, investors could buy stocks prior going ex-dividend and sell soon after. Nonetheless, such an arbitrage process could be curtailed by transaction costs. Kalay then suggested that transaction costs were insignificant for broker dealers who happened to be the potential short-term traders. On the other hand, Karpoff and Walking (1990) showed that excess ex-dividends were positively correlated with transaction costs, and this relationship increased the value of high-dividend yield stocks. This implied that short-term trading, or simply dividend capture had an influence on the ex-ex-dividend day changes in stock price and, therefore, any clientele effect might not be the only cause for such changes.

A closer examination of the ex-dividend day share prices' behaviour was extended to the various stock markets inclusive of Australia, Canada, Finland, Greece, and New Zealand with mixed reactions to the ex-dividend day-effect. Notably, the dividend clientele effect, to a greater extent, may be contradictory to other dividend policy explanations as presented by agency cost and signalling effect hypotheses, discussed herein. For instance, the signalling effect hypothesis holds that dividends carry information concerning the future prospects of a firm, and investors on this basis show preference to capital gains due to the heavy taxation of cash dividends, and thereby associate with firms with high-payout ratios, which contradicts the preposition made by the tax-induced clientele effect. Additionally, as guided by the agency theory, dividends may provide mitigation for the free cash in the managers' hand in an attempt to manage the agency problems, attracting the interest of investors who prefer high-dividend stocks, though they are tax-disadvantaged.

2.2.5 Signally Theory

Another premise for rejecting the M&M's dividend clientele hypothesis is that it is inadequate in explaining the financial market practice in terms of its existence as an epicentre of asymmetric information between managers and directors (collectively referred to as insiders), and shareholders (outsiders). The assumption by M&M is that managers and outside investors enjoy free, equal and instantaneous access to similar information concerning the prospects and performance of a firm. But ideally, managers looking after the operations of a firm are privileged to current and future prospects' information of a firm, unlike outsiders. Such an informational gap between insiders and outsiders makes unavailable to the market, the true intrinsic value of the firm. In other words, the share price may not be very accurate as a measure of the value of the firm. In trying to close this informational gap, managers would have to share their knowledge and what they know with outsiders for the latter to understand the firm's real value. According to Baskin and Miranti (1997), historically, the cash flow provided often formed the basis for the market valuation in the absence of accurate and complete information at the disposal of shareholders. To this end, dividends played a critical role in helping managers to convey private information to the market since investors employed into use visible or actual cash flows to equity as a way of firm valuation. Further, most financial practitioners and academics suggest that dividends possess implicit information concerning the prospects of a firm. This is also supported by M&M in the sense that imperfect markets have their share prices responding to dividend changes. In other words, announcements of dividend may be visualised as conveying implicit information concerning the future earning potential of a firm. This hypothesis has since been "baptised" as the "information content of dividends" or simply signalling hypothesis. Nonetheless, M&M rejected the possibility that this happened through the suggestion that the empirical evidence is not supported by the notion that investors show preference to dividends relative to retained earnings.

As per the signalling hypothesis, investors infer information about the future earnings of a firm via the signal coming from announcements of dividends in terms of stability and changes in dividends. Nonetheless, for this hypothesis to be justified, firstly, managers ought to have owned private information about the prospects of a firm, and have in place incentives in conveying this kind of information to the market. Secondly, the signal must be true i.e., a firm with bad future prospects is unable to mimic and convey falsified signals to the market via increased dividend payments. Therefore, the market should be able to depend on the signal in differentiating among firms. If these conditions are accomplished, then the market would be able to favourably react to the announcements concerning dividend increase (Koch & Shenoy, 1999).

Since managers have a high likelihood of being in possession of more information concerning the future prospects of a firm as compared to outside investors, they may use dividends' changes as an avenue for communicating information to the financial market regarding the future earnings and growth of a firm. Consequently, outside investors would perceive dividend announcements as a way of reflecting the assessment by managers on the performance and prospects of a firm. Further, any increase in dividend pay-out would be interpreted as a food future profitability by the firm, which is considered good news, and, therefore, the share price will be positively reacting. On the other hand, cuts in dividends would be considered as a signal of poor future prospects of a firm (bad news), and this will make the share price to react unfavourably. To this end, managers would always be reluctant to spared the bad news by announcing reduction in dividends. According to Lintner (1956), firms have a tendency of increasing dividends upon managers believing that earnings increase on a permanent basis. This gives a suggestion that dividend increases portend long-term sustainable earnings. This supposition is congruent with the "dividend-smoothing hypothesis." This simply means that managers would endeavour to smoothen dividends with time, and hesitate in making substantial increases in dividends until such a time increased dividends could be maintained in the foreseeable future. In regard to this, Lipson et al. (1998) made an observation that "managers do not initiate dividends until they believe those dividends can be sustained by future earnings" (p.44). Notably, although the management can be able to use dividends changes as signal of conveyance into the market, in some instances, changes in dividends may only be ambiguous. This is explained classically in the example of FPL Group, which the host company to Florida Power and Light Company; on May 9th 1994, the company announced a 32% deduction in its dividends (quarterly), and obviously, the market responded negatively to such bad news making the FPL's stock to drop by 20% since the market considered it as a bad signal of the company's future prospects. But the FPL board made a decision on retaining funds for the purpose of new investments with the aim of improving the future performance of the company. Upon analysing the situation on the reason for reducing dividend by financial analysts, it was deduced that the scenario was not a financial distress' signal, and thereafter the stock of price of FPL recovered. Indeed, the market was originally mistaken, and this a perfect example of possible and sometimes contradictory signalling effect of announcing dividends.

Though the content of information of dividends, signalling, had not been noted earlier, its modelling was not done until late 1970s and early 1980s. The notable signalling models are those developed by Bhattacharya (1979), Miller and Rock (1985), and John and Williams (1985). Generally, these models work on various assumptions. To begin with, there is asymmetric information between managers (corporate insiders) and shareholders (outside investors). Additionally, dividends comprise of information concerning the present and future cash flows of a firm, and managers are privileged to incentives enabling them to convey private information into the market via dividend payments in closing the information gap. Also, the dividend increase announcement would be considered as good news, and the market will accordingly bid-up shares. On a similar note, a dividend cut announcement will suggest unfavourable market prospects coupled with dropping of share price. Indeed, dividends are credible signalling tools due to the involved dissipative cost. For instance, the model developed by Bhattacharya's (1979) claim that the signalling cost is similar to the transaction cost attributed to the external financing. In the Miller and Rock's (1985) model, the dissipative cost is synonymous to the distortion in deciding on optimal investment, while the model by John and William (1985) suggests that the dissipative signalling cost is the same as the tax penalty incurred on dividends, and not by capital gains. To this end, only under-valued firms, otherwise referred to as good quality firms, can eb able to use dividends in signalling prospects since poor-quality firms are unable to mimic and can only send false signal into the market due to the involved costs. Nonetheless, these models are criticised on the premise that they use only dividends as signal prospects by firms, yet there are other less costly means of doing so like in the case of share repurchases (Allen & Michaely, 2002).

2.2.5.1 Empirical evidence

From the theoretical discourse above, the dividend signalling effect is premised in the proposition that investors or corporate insiders are more informed about the present and future performance prospects of a firm as compared to the outside investors, shareholders. This suggests that the perception of dividends in the market is as signals of the view by the management about the fortunes of a firm and, thus, prices of shares are reactive to signals. On this basis, empirical evidence on dividend signalling can be approached in two ways: firstly, whether prices of shares move in similar direction as announcements of dividend changes; and secondly, whether changes in dividends are informative as far as prediction of future earnings is the market is concerned. Accordingly, financial scholars have elaboratively addressed these two viewpoints with mixed findings and inconclusive deductions. The first preposition has attracted much attention in the literature since in the event announcement of dividend changes does not impact on share prices as predicted, the validity of dividend hypothesis' information content can be in doubt. According to Pettit (1972), dividend announcements communicate valuable information and shows the positive market reaction to the announcement of increase in dividends, whereas negative announcement is associated with decrease in dividends, as observed in his study. Additionally, Pettit (1972) claims that forthcoming dividend

announcement may significantly convey more information as compared to when the information is implicit in the context of earnings announcement. Similarly, Aharony and Swary (1980), in their study, found that announcements of dividend and earning are not ideal substitutes and proper indicators of signalling hypothesis as the effect of the announcements are not taken into consideration. Their findings corroborate that of the Pettit's even after controlling the effect of contemporaneous announcements of earnings. Subsequently, Woolridge (1983) released a significant increase and decrease in returns of common stocks following the non-expected increase and decrease in dividend announcements respectively.

Further Asquith and Mullins (1983) did examine the reaction of market towards dividend announcements using a sample frame of 168 firms that either initiated dividends for the first time or resumed dividends payment after 10 years on the least. Moreover, the authors tested the average daily stock returns' excess ten days before and after the dividend announcement. For the case of two-day dividend announcement, the findings revealed that an excess return of approximately +3.7% was realised. Upon using a cross-sectional regression analysis, Asquith and Mullins (1983) found that a positive and significant relationship between the abnormal returns on the day-announcement and magnitude of initial dividends was evident. To this end, the conclusion was that the size of change in dividend matter. Asquith and Mullins progressed in another study three years later, and reinforced their previous findings by offering more support to the dividend hypothesis' information content. Michaely et al. (1995) went further to examine the effect of both cash dividends' initiations and omissions on the reaction of share price by observing 561 initiation events of dividend and 887 omission events of dividend between 1964 and 1988. The findings revealed that, after three days of dividend announcement, the average excess return was +3.4% for dividend initiation events, and -7.0% for dividend omission events. As clearly evident, the market reactions towards dividend omissions were greater than dividend initiations. In other words, the market reacted optimistically in favour of dividend initiation or increase, whereas the same market reacted pessimistically against dividend omission or decrease. Additionally, Michaely et al. (1995) realised significant long-term drifts in prices of stock due to dividend initiation and omission. In particular, +7.5% excess returns within one year of initiation announcements, and cumulatively total of +24.8 within a span of three years. For the case of omission announcements, -11.0% abnormal returns and cumulatively, -15.3% were reported within one year and three years respectively. Bali (2003), as well, presented an evidence corroborating the above findings by reporting an average of +1.17 abnormal return in the case of dividend increases, and -5.87% for dividend decrease. Additionally, Bali examined the long-term reaction to stock prices in terms of both dividend increases and decreases respectively as conducted by Michaely et al. (1995). From these empirical findings, seemingly there is a general agreement that prices of share follow the same contour as announcement of dividend change. Dividend increases (initiations) and decreases (omissions) are connected to subsequent increases and decreases in share prices. Also, share prices' reaction in the case of decreases in dividend or omissions is highly significant or more severe.

Nonetheless, the signalling hypothesis in relation to the first preposition, may not be same in all markets with the exemption of the US markets. For instance, a comparison study between US and Japanese firms in terms of dividend policies revealed the influence of signalling effect of dividends as being more significant in the US than in Japan (Dewenter & Warther, 1998). In this particular study, 420 US firms and 194 Japanese-based firms were used., and the findings can be summarised as follows: for two-day (narrow window) announcements of dividends, dividend omissions resulted into mean returns of -4.89% and -2.53%, whereas for dividend initiations, increases to the tune of +2.38% and 0.03% were realised for US and Japanese firms respectively; and for 62-day dividend announcements, average returns for omissions were -17.03% and -6.48%, while for dividend initiations, 10.24% and +0.1% increments were realised for US and Japanese firms respectively. Indeed, from the findings, it is well evident that the influence of dividend initiation and omission announcements was significantly higher on US stock prices more than the Japanese stock prices. An explanation of this discrepancy is associated with the information asymmetry (i.e., Japanese firms have less information asymmetry particularly among keiretsu – industrial groups), structures of corporate governance, and the nature of corporate ownership (Dewenter & Warther, 1998). These findings are supported by Conroy et al.'s (2000) findings.

Apart from the differences in country's specific attributes, firm values can also lead to the disparity in signalling hypothesis. A study conducted by Amihud and Murgia (1997) using a sample size of 200 firms listed on Frankfurt Stock Exchange found a correlation between changes in dividend and values of firms. By examining the stock price reaction to announcements dividends using 255 dividend increase events and 51 dividend decrease events between 1988 and 1992 and comparing these results with that of the US data, the findings revealed that an average excess return of stock prices was 0.0965% and -1.73% for dividend increase and decrease respectively. Though the earning news heralded change in dividend announcements, information on dividends still had significant effect. This notwithstanding, the findings by Amihud and Murgia (1997) were not consistent with the tax-based signalling models since Germany is not tax-disadvantaged. Tax-based signalling models are presented with higher taxation on dividends making them to be informative concerning the value of a firm. Therefore, such models argue that share models should not be responsive to changes in dividend if the dividends themselves are not subjected to a tax penalty, like in the case of Germany. Apart from the developed economies, Travlos et al. (2001) found an evidence from the perspective of emerging markets in favour of dividend signalling theorem. In their study, they employed

the use of 41 announcements of dividend increase and 39 announcements of stock dividends for firms listed on the Cyprus Stock Exchange for the period of 1985 and 1995, and examined market reaction to the cash dividend increase and decrease (stock dividends) announcements. Travos et al. (2001) found a significant and positive abnormal return for both increases in cash dividend, and stock dividend announcements, and their findings were consistent with the signalling hypothesis.

Regarding the second concern, whether changes in dividends are informative as far as prediction of future earnings is the market is concerned, a plethora of studies have been carried out. To begin with, a study by Watts (1973) that used 310 firms between 1946 and 1967 tested the hypothesis that present and past dividends provided more information in predicting future earnings than that which is not related to either present or past earnings. Watts tested the correlation between annual earnings in the future in year t +1, and the dividends level in years t-1 and t. also the author did examine the relationship between the abdominal increase or decrease in prices of stock, and unexpected dividends changes. Accordingly, the results found that the average approximated coefficients of present dividends, upon regression of earnings in the coming year (t+1) onto present years dividends (t), were positive, nonetheless, the average level of significance was quite small. Furthermore, Watts did report identical findings concerning the relationship between unexpected changes in dividend and prices of share with the conclusion that generally, the dividends' information content could only be trivial. The same findings were corroborated by Gonedes (1978).

Similarly, using a sample size of 1025 companies listed in the NYSE between the duration of 1979 and 1991, Bennartzi et al. (1997), upon studying the relationship between the future earnings and changes in dividend in firms, did not find the any evidence in support of the preposition that changes in dividends are able to predict associated changes in future earnings. The findings are also strongly related to the lagged and contemporaneous changes in earnings. However, these findings contradict the signalling hypothesis. Similar findings were found by DeAngelo et al. (1996) (i.e., no evidence confirming that dividends offer valuable information concerning future earnings). However, these findings are refuted by results generated by Laub (1976) and Pettit (1976). In these two studies, dividends convey information concerning future earnings beyond the prospects predicted by previous earnings. Additionally, Nissim and Ziv (2001) realised that changes in dividend as well as earnings were positively correlated, supporting the signalling hypothesis, however, their findings were not identical for either dividend increase or decrease. In particular, Nissim and Ziv (2001) were not able to find a relationship between future profitability and dividend decrease even after managing both present and anticipated profitability, and such a scenario was associated with accounting conservatism. Unlike the first preposition that addresses the reaction of stock prices to changes in dividends, the supposition that changes in dividend transmit information concerning futuristic earnings is weakly supported.

Mixed support, indeed, exits about the concerns relating to the dividend hypothesis' information content, as evident in the dividend literature as presented in the discourse above. As already been indicated, firms employ the use dividend policy in communicating information about the future market prospects, and this plays a key role in providing another possible explanation for the payment of dividends by firms. In other words, the signalling hypothesis is pivotal in determining the dividend policies and their values to firms. The signalling theorem enables managers to assumedly want to signal the proper firm value through dividends. Nonetheless, an alternative hypothesis has been established based on the fact that managers have incentives, which are not used in paying dividends and would, therefore, employed in forcing payment of dividends. Such an aspect has been explained in detail under the urgency costs hypothesis as far as dividend is concerned.

2.2.6 Agency Costs Theory

The overriding assumption as put-in-place by M&M is still that perfect capita market is characterised by no conflicts of interest between the inside investors, managers, and outside investors, shareholders. However, practically this assumption is not feasible since the firm owners are separate from the management. In such instances, managers are imperfect shareholder agents. This is because interest of managers is not always the same as interest of shareholders., and the former may involve themselves in actions that are costly to the latter, like consumption of excessive perquisites or doing over-investment in managerially rewarding, yet unprofitable ventures. Therefore, shareholders incur costs, otherwise referred to as agency costs often connected to the monitoring of behaviour of managers, and these costs are implicit since they emanate from conflict of interest among corporate managers and shareholders. Dividend payment may act as alignment to the interests in mitigating the agency problems between shareholders and managers through reduction of discretionary funds at the disposal of managers (Alli et al., 1993). Additional source of agency costs issue, that may be impacted by dividend policy, refers to the potential conflict between bondholders and shareholders. ordinarily, shareholders act as agents of funds belonging to bondholders. On this basis, if shareholders appropriate upon themselves excess dividend payments, then they expropriate wealth from bondholders (Jensen & Meckling, 1976). Shareholders are privileged by the virtue of having limited liability in the sense that they can access cash flow before bondholders. Consequently, bondholders show preference to putting constraints on dividend

payments in securing their claims. For the same reasons, however, shareholders prefer to own large payments of dividends, and all these contribute to agency costs.

According to Easterbrook (1984), dividends can be used in reducing the free flow of cash at the disposal of managers. Additionally, Easterbrook prepositioned those payments of dividends would oblige managers in approaching the capital market in an attempt raise funds. In such a case, investment by professionals like financial analysts and bankers would make it possible to monitor the behaviour of managers. To this end, shareholders can be bale to monitor managers at possible lower cost while minimising any collective action issue or problem. This then suggests that payments of dividends increase scrutiny of management by external forces, and thereby reducing the chances for managers acting in their own self-interest. Nonetheless, on this Easterbrook suggested that increase of dividend payment might compel managers to be involved in undesirable actions like increasing company leverage, which has a high likelihood of increasing the riskiness in a firm. In the same vein as the argument made by Esterbrook, Jensen (1986) progressed the discussion by explaining that paying of dividends is guided by the agency cost hypothesis. According to Jensen, firms with excess cash flow grant managers with the opportunity of being flexible in using organisational funds in away that benefit themselves and not shareholders. Managers have incentives that can empower them to enlarge firm size beyond the optimal boundary with the aim of amplifying resources under their control while ate the same time increase their compensational gains, which is determined by the size of the firm. Therefore, if a firm is privileged to have a substantial surplus of cash, then the overinvestment problem would ensue. Extraction of this excess cash flow of funds to the management can be able to reduce the overinvestment issue. Accordingly, increasing dividend pay-out may be beneficial in mitigating the free flow of cash under the control of managers and, therefore, curtailing them from overinvestment in poor projects. Paying additional dividends, as a result, will decrease the agency costs between shareholders and managers. According to Jensen, having a debt may be helpful in reducing agency costs of free flow of cash through reduction of funds being managed by managers. As per the M&M preposition, the dividend policy of a firm is not dependent on its investment policy. Contrarily, free cash flow hypothesis argues dividend policy and decision on investment are interrelated. Arguably, an increase in payment of dividends reduces the problem of overinvestment, which ultimately presents a positive influence on the firm value in the market, other factors reaming constant (Lang & Litzenberger, 1989). Nonetheless, acceptance of the notion that an increase in dividend will reduce the amount of cash flow available for the use of managers by forcing them to be in the market for the purpose of acquiring funds implies that shareholders ought to be willing to withstand the risk of the company being indebted in addition to accepting to pay higher personal rates if tax on dividends. Shareholders, in other words, will have to trade between the costs and benefits of more dividend acquisition.

2.2.6.1 Empirical evidence

The agency cost hypothesis issue has been broadly discussed in empirical research as an explanation of corporate dividend policy. To start with, Rozeff (1982) is considered one of the first researchers to model agency costs using a huge sample size of firms form the US. The regression model developed by Rozeff and associated hypothesised variable signs are represented in the equation below:

$$PAY = \beta_0 - \beta_1 INS - \beta_2 GROW1 - \beta_3 GROW2 - \beta_4 BETA + \beta_5 STOCK + \varepsilon$$ ..Equation 13

Where PAY is the above equation represents the average pay-out ratio over the seven years through which the study was accrued out i.e., from 1974 to 1980; INS is a representation of the percentage of common stock held by insiders (managers) over the seven-year period; GROW1 refers to the realised average rate of growth of firm's revenue over a five-year duration i.e., from 1974 to 1979; GROW2 is the forecasted sales growth over the same five years period; BETA is the estimated beta coefficient of the firm; and STOCK is the natural log of the shareholders' number at the till end of the seven years.

The main idea underlying Rozeff's model is that the optimal pay-out of dividend is at the level, which equals the sum of transaction costs and agency costs at the minimal level and, therefore, the name if the other mane of the model as "cost minimisation model." The model comprises of two proxies, in relation to agency costs: INS and STOCK. Notably, the hypothesized signs of these two variables are that INS is positive and STOCK is negative, and indication of positive relationship between the number of shareholders and the dividend payout ratio, and a negative relationship between stock percentage held by insiders (managers) and the payout ratio. Using the model, Rozeff (1982) found-out that the agency cost variables to be significant and consistent with the hypothesized sign, providing an empirical support to the agency cost theorem. Damsey and Laber (1992), a decade later confirmed the validity of Rozeff's model.

However, using factorial analysis in modelling the determinants of corporate dividend policy, Alli et al. (1993) realised that the dispersion factor was insignificant in relation to the dividend decision, which was inconsistent with Rozeff's (1982) model. Nonetheless, the variable depicting insider ownership was found to be significant while being negatively related to dividend payout. Overall, the findings by Alli et al. sufficed in supporting the agency cost hypothesis as far as dividend policy is concerned. Further, Jebsen et al. (1992) while applying the three-stage least square method in examining the

determinants of cross-sectional differences within the insider ownership, dividend policy and debt, used a sample size of 565 firms and 632 firms in 1982 and 1987 respectively, and from the developed dividend equation, it was found that the insider ownership variable was statistically significant, though with a negative sign. This implied that there was a negative relationship between dividend payments and insider holdings. This confirms the agency cost hypothesis as postulated by Rozeff (1982). Later, Holder (1998) by examining a total of 477 US-based firms between 1980 and 1990, reported that the insider ownership was negatively and significantly related, whereas the number or shareholders positively influenced dividend payouts. Additionally, Holder et al. (1998) supported the free cash flow hypothesis as already been confirmed by Jensen. Similarly, Saxena (1999) upon examining 98 regulated and 235 non-regulated firms listed in the NYSE between 1981 and 1990, reinforced the results found by Holder et al. and, therefore, supporting the validity of agency cost hypothesis, and that the agency cost is a critical parameter of the firm's dividend policy. Apart from the developed economies, Al-Malkawi (2005) by applying the panel data models, in particular Tobit and Probit models, in the context of firms listed in emerging economies like the Amman Stock Exchange between 1989 and 2000, found a significant support in favour of agency cost hypothesis.

Further empirical justification for agency cost hypothesis, particularly free cash flow hypothesis, comes from the study carried out by Lang & Litzenberger (1989) upon using a sample size of 429 dividend announcements for the US firms between 1979 and 1984. Lang and Litzenberger employed the use of Tobin's Q ratio in distinguishing been value maximising and overinvesting firms. The authors used the preposition that if Q ratio for a given company is less than unity) i.e., Q <1, then the said company will be regarded as overinvesting. On similar note, if Q is more than one, a there is a high likelihood that the firm is at the level of value-maximisation of its investment. On the basis of Lang and Litzenberger's hypothesis of over-investment, on the other hand, firms experiencing a Q ratio of less than one should have larger average returns of stock in line with announcements of dividend change. In other words, firms with low Q are susceptible to positive abnormal stock returns as initiative by announcements of dividend increase since the markets expects such as a reduction in the problem of over-investment. Accordingly, increases in dividend payments decrease the cash flow and, therefore, not invested leading to negative scenario. Contrarily, decrease in dividend payments implies the growth of overinvestment problem, and this prediction is congruent with the cash flow hypothesis. Lang & Litzenberger (1989) found that the average stock returns when Q is less than one, indicated significance difference for both increases and decreases of dividend. Additionally, the authors highlighted those changes in dividend for overinvesting firms signalled information concerning investment policies. In sum, Lang & Litzenberger provided an evidence that free cash hypothesis as legit in explaining better the reaction of share price to change in dividend announcements.

On the flipside, other studies have been able to justify cash flow hypothesis. Howe et al. (1992) while using a sample of 55 self-tenders coupled with 60 special announcements of dividends between 1979 and 1989 generated findings that contradicted those of Lang & Litzenberger, since there was no relationship between Q and reaction to stocks in relation to one-time announcement of dividend. In addition, Denis et al. (1994), upon investigating a sample of 5992 increases in dividend and 785 decreases from 1962 to 1988 in addition to the examination of the relationship between Q and dividend yield, found the correlation to be negative. This negative relationship was attributed to the negative relation between Q and dividend yield, suggesting that the perception of the market was that this was an indication that the overinvestment problem might have been reduced. Denis et al. also did examine the capital expenditures' level for both high and low firms in the context of dividend changes, they realised that firms with Q less than 1 increased their investments due to dividend increases, and the same time decreased their investments following dividend decreases, and these findings are not congruent with the overinvestment hypothesis. Additionally, Yoon and Starks (1995) in their study used a sample of 4179 dividend announcements for firms listed on the NYSE between 1969 and 1988, found similar findings and thereby supporting cash flow signalling theorem and not free cash flow hypothesis. Lie (2000) investigated the free cash flow hypothesis by using special dividends, regular dividend increases, and self-tenders, and found little or no support of the agency cost theorem. According to Lie (2000), neither special dividends nor increase in regular dividend increases could provide solution to the overinvestment problem, which is not consistent with the free cash flow hypothesis.

In the case of emerging markets, the support for agency cost hypothesis is seemingly tenable. In particular, a study by La Porta et al. (2000) investigated a total of 4000 companies emanating from 33 emerging economies, and the findings supported by the agency cost theorem. The authors divided the countries into two groups first, countries that protected minority shareholders; and second, countries with poor legal protection. After this categorisation, the effect of protection of investors on dividend pay-outs was tested so as to generate two agency models: substitute model and outcome model. Accordingly, the outcome model implied that countries exhibiting more effective legal protection for investors empowered shareholders to enjoy greater rights while forcing managers to disgorge cash leading to increased dividend payments. In the substitute model, countries with weaker protection for investors compelled firms in their own capacities to engage in reputation building for them to attract shareholders. in this scenario, dividends substituted shareholdership legal protection, and the authors hypothesized that higher pay-outs are evident in countries experiencing poor legal protection to shareholders, ceteris paribus.

The findings by La Porta et al., indeed, supported the agency cost hypothesis i.e., countries with better protection of shareholders encourage firms to pay more dividends, and also firms with rapid rate of growth pay fewer dividends as compared to their counterparts with slow rates of growth. An implication is that in such countries, shareholders are ere legally empowered to compel managers in disgorging cash in instances of low investment opportunities, and these findings are congruent with agency cost hypothesis as far as dividend policy is concerned. The findings by La Porta et al. give suggestion that dividends cam be used in reducing conflict between insiders – managers, and outsiders- shareholders. In summary, the empirical evidence for the agency cost hypothesis is enshrouded in mixed findings. This notwithstanding, the agency cost preposition is the dividends play a key role in mitigating cash under the control of the management, and through this, the use of funds by managers to satisfy their own self-interests is minimised. Similarly, dividends prevent the tendency of managers to overinvest., and in this way, they reduce conflict between shareholders and managers. Since dividend payment reduce the problem of overinvestment and associated agency costs, they have a positive impact on the price of stock, which is a critical determinant of a firm's value.

2.3 Summary

The dividend policy's literature has generated a plethora of theoretical and empirical outcomes in an attempt to justify the relevance of M&M (1961) seminal publication on the dividend irrelevance theory. Interestingly, no generalised consensus is evident after many decades of examination and investigation with scholars disagreeing about same empirical evidence. According to M&M, in perfect capital markets, the firm's value is not dependent on its dividend policy. Nonetheless, various imperfections in the market exist such as transaction costs, taxes, agency problems and information asymmetry among others; these imperfections provide the basis for the development of different theories of dividend policy, as already been described above. Although various studies have investigated numerous issues about dividend policy, mixed and inconclusive findings are evident, making the statement by Black (1976) on divined policy to be valid; "the harder we look at the dividends picture, the more it seems like a puzzle, with pieces that just do not fit together" (p. 5).

CHAPTER THREE

METHODOLOGY

Research methodology part plays a great role in ensuring that a study is done to its completion while factoring in the achievement of aim in a consistent manner. In other words, research methodology is the blueprint of a chieving a particular study. As such, this particular study is guided by the research onion, which consists of different sections such as research philosophy, research approach, research strategy, time horizon, and data collection and analysis as represented in Figure1
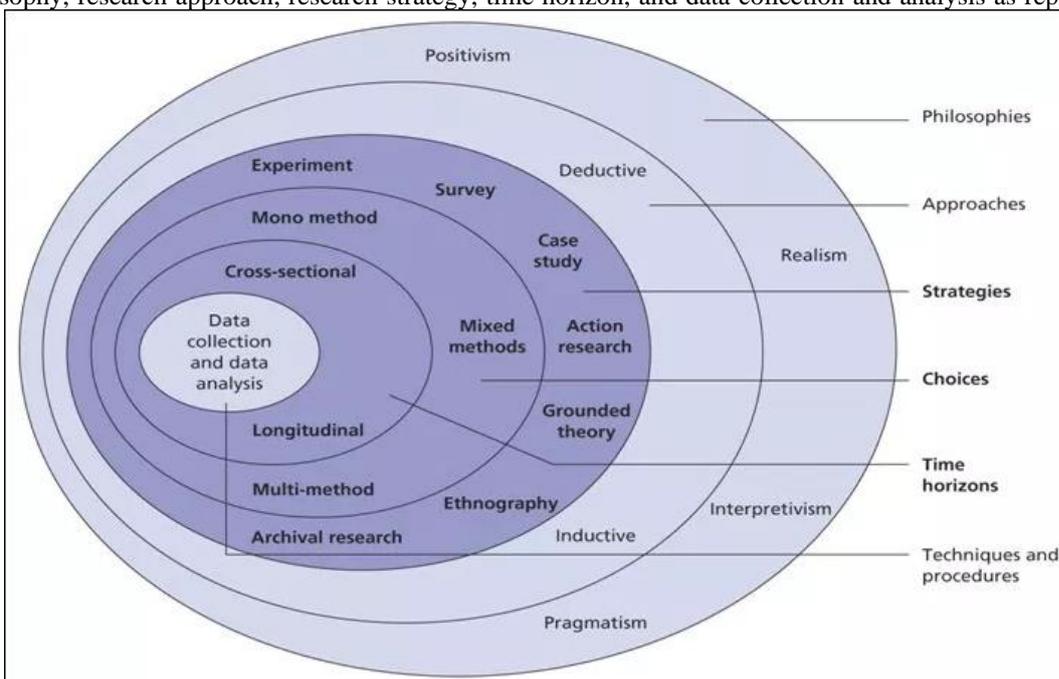
blow.

Figure 1:Research onion

Saunders et al. (2012)

3.1 Research Philosophy

A research philosophy is simply a belief concerning the manner in which is a study is to be carried out in terms of data collection and analysis among others. Research philosophy can either be epistemology i.e., what is generally known as true, or doxology, what is true on the basis of belief system (Galliers, 1991). Generally, a scientific undertaking is a process meant to transform things believed as known to be true (i.e., from doxa to episteme). Apart from epistemology and doxology, there is also an ontological position, which according to Bryman and Bell (2011) is the "theory of the nature of social entities" (p.716). It describes the stand taken by an individual on the nature of reality, whether it is an objective reality or subject reality (Flowers, 2009). Based on epistemology, there are two mainly used research philosophies: positivism and interpretivism. Positivism is the belief that reality is stable and, thus, can be observed objectively and described minus creating interference to the scenario under study (Levin, 1988). On the other hand, interpretivism is the subjective observation in an attempt to fully understand reality. To this end, interpretivism is often used in qualitative studies, whereas positivism is quantitative studies. The present study employs the use positivism since the outcomes would be quantitatively determined using statistical approaches. additionally, positivism permits prediction to be meted on the basis of formerly observed phenomena in terms of reality and inter-relationship (Levin, 1988). As evident in both theoretical and empirical review, the current study makes predictions based on the previous models so as to make the results generalisable, reliable and quantifiable. Positivism is useful in hypothesis testing, and this was used in testing the objectives of the study (i.e., whether there is a relationship between cash dividend and stock trend in the Egyptian security market; and also, weather there is a relationship between the dividend payout policy and the stock trend in the Egyptian security market). Additionally, knowledge can only be acceptable if it can be proved by empirical findings, conforming the use application of positivism in this study.

On the other hand, the question of ontology is concerned with the fact that whether social entities are privileged to have an external reality as compared to social actors (Bryman & Bell, 2011). Particularly, objectivism as an ontological stance implies "how social entities exist independent of social actors (Saunders et al., 2009, p.110). In other words, social actors do not give meaning to social phenomena: social phenomena have an external reality, which is independent of social actors. For instance, a business organisation is a social entity and, therefore, must be considered or treated as a tangible object since it has procedures, rules, regulations, and mission statement among others. These features influence people within the organisation because they need to respect the laid-down rules, regulations and procedures as well as working towards achieving the mission statement, and they fail to do so, they risk being rendered unemployed. Thus, it is evident that the organisation has an external reality away from the people working within. In this way, the organisation is characterised by an objective reality on the basis that it possesses the characteristics of an object. Contrarily, constructionism or subjectivist view implies that social actors create social phenomena and their associated meaning through their perceptions and actions (Bryman & Bell, 2011). In other words, social reality depends on social actors. Explicitly, this view is contradictory to objectivism. Using the same organisation as an example, it can be said that the organisation lacks an objective reality, and that the organisational characteristics depend on social actors working within, and being constantly changed due to the daily interactions between the social actors (Bryman & Bell, 2011). Based on these deliberations, the present study is based on objective findings. The research was based on "historical" financial statements of the companies listed ion the Egyptian Stock Exchange, and related statistical analysis was conducted in achieving the study objectives. Particularly, the data used for this study was secondary information collected by other actors before the actual active of the research, creating independence. This can only be objectively pursued, and not subjective.

3.2 Research Approach

After the philosophical question has been addressed in a research, then the methodological question should be addressed as well. The methodological question is related to the research approach, which simply highlights what the researcher believes to be known. Research approach can either be inductive, deductive, or a combination of both. The main difference between deductive and inductive research approach is the theoretical development in study: an inductive approach is aimed at developing a new theory form the gathered data, whereas a deductive approach is geared towards testing an already existing theory (Azungah, 2018). A deductive approach develops a hypothesis from the study objectives, whereas an indicative approach uses research questions. Additionally, a deductive approach puts emphasis on the causality, whereas an inductive method aims at investigating an existing phenomenon or new one. Also, the deductive approach is used in quantitative studies, while indicative method is employed in qualitative studies. These differences are further illustrated in Figure 2 below.
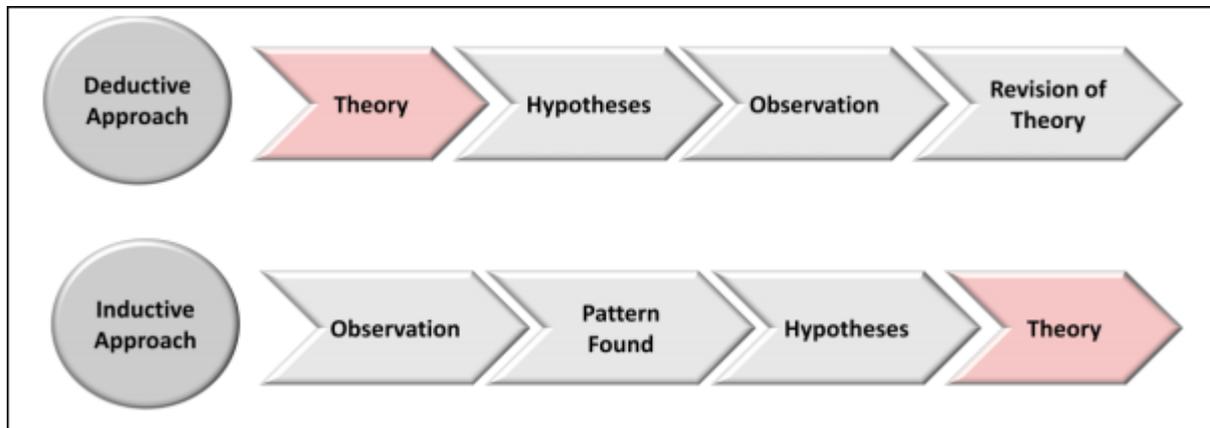
Figure 2:Deductive and inductive research process

Source: Bryman and Bell (2011).

Based on above differences, the present study has used a deductive approach since the current inquiry is quantitative in nature. Also, deductive approach goes hand-in-hand with the positivism philosophy or paradigm. Moreover, the causality between cash dividend and stock trend, and dividend payout policy and the stock trend in the Egyptian security market, can only be analysed with the aid of a deductive approach. In this study, there is the use of existing theories in generating hypotheses that are tested by carrying out an empirical study.

3.3 Research Strategy

There are a number of research strategies, which have been further grouped as guided by research philosophies (i.e., positivism and interpretivism). Under positivist strategies, there are, surveys, forecasting, theorem proof, and simulation. In the case of interpretivist strategies, there are action research, reviews, subjective or argumentative studies, descriptive or interpretive, role or game playing, and future research. Since the current study has embraced positivist paradigm, a descriptive strategy suffices in collecting data from firms listed in the Egyptian Stock Exchange. According to Kothari (2004), a descriptive research strategy focuses on specific predictions while factually narrating the attributes about the situation being studied. Accordingly, data was extracted from the financial statements of companies listed in the Egyptian Stock Exchange, with analysis covering a period of six years i.e., from 2014 to 2019. The six-year period is justifiable since it provides the most recent and accurate as well as more reliable data, which is worth using in establishing the existence of a relationship between dividend payout ratio and the firm's market value as reflected in share prices throughout those years.

3.4 Research Choice/Method

The content under study can be successful by putting into consideration how the study is done, and this gives provision to the choice of the method. An inquiry can either be quantitative, qualitative, or a combination of the two. According to Lee (1992), both quantitative and qualitative research methods comprise of different approaches. Consequently, these approaches are guided by various research philosophical assumptions. In particular, Barnham (2012) state that quantitative and qualitative research methods have varied underlying approaches, and the also the relative aims of these methods differ. To begin with, a quantitative research encompasses collection and analysis of data with the aim of yielding numerical outcomes coupled with the use of quantitative statistical tools. In the words of Bryman and Bell (2011), a quantitative research is "a research strategy that emphasizes quantification in the collection and analysis of data" (p.26). Further, Hyde (2000) claims that the quantitative research is not focussed on details, but more on the generalisation of sample characteristics. In other words, in quantitative research, a large sample is usually used in drawing general conclusions of the population under study. Before the quantitative data can be subjected to analysis and thereafter turned into useful information, it is normally not "appealing." To this end, statistics and graphical representations in terms of graphs and charts are some of the techniques used in helping researchers turn quantitative data into useful and meaningful means.

On the other hand, qualitative method generates qualitative information or non-numerical data. In other words, the qualitative research is concerned with words. According to critics, the fact that numbers are not used much in the case of qualitative research does not make it to be different from the quantitative research. The most probable way of differentiating the two is that interpretivism as an epistemological position, in often attributed to the qualitative research, whereas a more scientific model of using positivism warrants a quantitative research. Additionally, whereas a quantitative research often includes a more objectivist ontology, a qualitative research focuses on details rather than generalising on a topic under study (Hyde, 2000). As already been mentioned, this study is quantitative in nature, and according to Williams (2011), quantitative research designs are guided by positivism paradigm since they are anchored on precision, objectivity and rigor. Additionally, Danial (2004) argues that a quantitative research method is geared towards explaining a phenomenon by getting data

numerically and consequently analysing it using mathematical methods. Also, a quantitative research method is useful in testing relationships or causality, which is ideal in this study since two relationships were tested: cash dividend and stock trend, and dividend payout policy and the stock trend in the Egyptian security market. Further, in the present research, the study is more concerned with numbers in terms of the relationship between dividends and stock trend or return volatility. There are no human beings used as study participant exempt the financial statements of the firms used in the study and, therefore, the researcher is granted with the opportunity of making a personalised view. Additionally, hypotheses have been generated from existing theories; a deductive research approach, which only favours the study at hand. Additionally, the findings have been generalised, which is a typical feature of a quantitative study.

3.5 Research Design

The research design plays a key role in data collection and analysis. According to Bryman and Bell (2011), research design reveals the manner in which the researcher allocates his/her priorities in relation to the research process. Further, Saunders (2009) refers to the research design as how the researcher plans to go about in managing to give answers to the research questions. Some authors take research design to be the same as research strategy. The five known research designs include: experimental design, cross-sectional design, longitudinal design, case study design, and comparative design. The experimental design is whereby an experiment of any kind is included in the study. Experimental inquiries like field experiments form part of the experimental design. Cross-sectional design is whereby either qualitative or quantitative data is gathered on two or more study variables at a particular point of time. To this end, data is analysed for patterns (Bryman & Bell, 2011). This design is considered as a thought of taking a snapshot at a certain time. Longitudinal design is instrumental in finding and plotting changes. The data is collected at different points in time, and in this way, the time order of variables is illuminated and, thus, the causal inference's prospects are high (Bryman & Bell, 2011). To this end, the longitudinal design is better placed in studying changes over time. Case study design is often used in the case of a single element being examined. For instance, it can be an inquiry about an individual, a firm, or an event among others. It is a common design in business research. Lastly, comparative design is employed into use upon examining two or more opposing cases wile using same methods. According to Bryman and Bell (2011). A comparative design "is used to understand a social phenomenon better as its relation to contrasting cases is compared" (p.63). Based on these study designs, the longitudinal design is the most probable one. The justification for the use of a longitudinal research design is that the sample data was examined on many occasions i.e., more than one. The data was collected over a six-year period, i.e., from 2014 to 2019 to assess whether a change in cash dividend or/and dividend policy is as a result of stock trend. Particularly, the study was geared towards investigating whether trend in stock over time caused changes in cash dividend or dividend policy.

3.6 Sampling Technique and Sample Size

A sampling technique can either be probability or non-probability. Probability sampling is whereby every item in the sampling frame has an equal chance of being selected into the study, whereas non-probability sampling does to guarantee that i.e., not every item has equal opportunity of being selected to participate in the study. This study, by default, has used non-probability sampling by the virtue that only firms listed in the Egyptian Stock Exchange can participate in the study. Consequently, the sample size was 129 firms or companies listed in the Egyptian Security Exchange Market. The 129 firms were only a section of the firms listed in the Egyptian Stock Exchange, and they were selected based on their high profitability indices. Listed companies are preferable due to the availability of their financial statements. Additionally, the companies were grouped based on the sector they belong to such as food, beverage and tobacco, textile and durables, basic resources, banks, contracting and construction engineering, non-bank financial services, and shipping and transportation services among others. According to the Central Limit Theorem, a sample size of 30 and more suffices for robust statistical analysis. To this end, the same size of 129 used in this study was sufficient.

3.7 Data Collection Method

After the selection of an appropriate research method, the next activity is the determination of the data source and data type. Data can be collected via three means: using a primary method, secondary method, and tertiary method. Primary method involves the use of first-hand techniques in collecting data, in other words, in primary data collection method, the researcher interacts with the responded face-to-face using techniques such as questionnaires, interviews, observations, and focussed groups among others. The primary data is the information that appears for the first time. On the other hand, secondary method is whereby the person doing the inquiry use existing information or data i.e., data which has been collected by other people and seemingly used in meeting certain aims and goals. Secondary source is what is published after the generation of primary data, for example, books and journals. A tertiary source either introduces a concept or helps the search for primary or secondary data, such as encyclopaedia and database (Saunders, 2012).

This study has used already existing information, in particularly financial statements of the listed companies, and, therefore, making it to be secondary in terms of data used in meeting the set objectives. First, the study used secondary information in generating the list of companies in the Egyptian Stock Exchange market. Second, the secondary data was gathered form published reports of firms listed in the Egyptian Stock Exchange Market. Third, additional information was readily availed

at the Egyptian Stock Exchange. It is from these sources that the data was extracted to compute relevant ratios as needed by the study. The use of secondary data for any particular study has benefits advantages. To begin with, it saves on cost and time: using secondary data makes it possible to access high quality data instantly, in which collecting data by oneself would be more costly and time-consuming. Further, there is more time created for data analysis. Also, the official data, which has been used in this study, are of high-quality ensuring reliability of the data set. In addition, secondary data makes it possible for longitudinal analysis (Bryman & Bell, 2011). On the flipside, there are some drawbacks of using secondary data, and they include: difficulty in becoming familiar with the data being collected; dealing with complex and voluminous data; and the researcher has no control over the quality of data, especially if it is collected from non-regulated sources. Although these limitations may be problematic in some instances, for this study, such challenges have not affected the study negatively. This is because the financial statements were collected via the Egyptian Stock Exchange, which is reliable.

3.8 Data Analysis

According to Mertens (2014), establishing the relationship between the analysed data is the important aspect as far as getting useful information is concerned to the researcher. To this end, both descriptive and inferential statistics were used in meeting the study's aim. Descriptive statistics were employed into use in comparing the involved variables numerically. Accordingly, inferential statistics were used to perform correlation analysis in determining the relationship between payout ratio and the value of the firms listed in the Egyptian Stock Exchange. Particularly, coefficient of correlation (r) and coefficient of determination (r^2) were calculated or estimated in determining the nature and magnitude of the relationship. R was specifically used in measuring the extent to which dividend payout ratio related with the market value of the firm. It was also an indication of the magnitude of correlation i.e., a strong or weak linear relationship. The coefficient of determination (r^2) was used to measure the percentage of firm value's variations, explained by the firm value's regression on dividend payout ratio. Accordingly, regression analysis generated correlation coefficient of determination and ANOVA, which was conducted at p<0.05. In addition, MS Excel was used to carry out mainly descriptive statistics requiring graphical representations.

3.9 Model used by the Current Study

The aim of the current study, as already been mentioned, is to explore the relationship between dividend pay-out ratio and the value of firm, using firms listed in the Egyptian Exchange Market as a case study. In meeting the study objectives, four equations were used: stock returns equation, stock return trend or volatility equation, and dividend payout ratio equation; and value of the firm equation. To begin with, though daily stock prices of individual stocks listed on the Egyptian Exchange Market were collected, however, rather than visualising the stock prices, the current study was interested in examining stock returns with the aim of receiving the highest possible return coupled with minimal possible risk; the goal of investors. The stock return can be calculated through log returns, otherwise referred to as continuously compounded returns. The log returns were calculated using the equation developed by Ruppert (2004) as shown:

$$r_t = \ln(1 + R_t) = \ln(P_t) - \ln(P_{t-1}) = \ln\left(\frac{P_t}{P_{t-1}}\right)$$ ………..Equation 14

Where r_t is the log return; P_t is the set price at time $_t$; and P_{t-1} refers to the price in a single period before time $_t$. To this end, r_t is a natural logarithm of the ratio of the stock price at a particular time $_t$ to the stock price at $_{t-1}$. Log returns are the most used type of returns when analysing financial data since they facilitate statistical inference. This is due to the fact that log returns are time-consistent. According to Ruppert (2004), log returns are simple to use in the case of multiperiod returns. To compute a particular log return, one need only to cumulatively sum all single-period log returns, which is different in the case of ordinary returns whereby multiplication of all observations is done, and this is extremely time-consuming. Additionally, using log returns as compared to ordinary returns creates more statistical freedom since the log returns are normally distributed. This is because it is assumed that prices are normally distributed, mutually independent, and identically distributed. The stock prices used in calculating log returns are basically adjusted stock prices. The adjusted stock prices refer to the official closing prices subjected to adjustment for subsequent capital actions. Thus, the effect of dividend is accounted for while being excluded from the stock prices. The adjusted stock prices are ideal for this study since its is advisable to exclude the influence of dividend when calculating the measures of stock trend or volatility, standard deviation, and beta, which are all dependent on the stock returns. Ultimately, it was possible to estimate the effect of dividend changes on such measures.

Regarding trend in stock, both standard deviation and beta were used as proxies. After the calculation of the log returns, standard deviation and beta of individual returns for every stock used in the study were consequently calculated. Beta was calculated using the formula derived from Bodie et al. (2009) as shown below:

$$\beta = \frac{Cov_{(ri,\ rm)}}{Var_{(rm)}}$$ ……………..Equation 15

Where Cov $_{(ri, rm)}$ is the covariance of particular return of individual stock $_{(ri)}$, and the market index return $_{(rm)}$, and Var $_{(rm)}$ is the variance of the market index return. As aforementioned, therefore, beta is a measure of how much, and direction moved by the individual company stock upon the movement of market index. To this end, beta is an index stock's sensitivity as compared to its benchmark.

The second measure for trend in stock, as mentioned above, is the standard deviation. According to Moore et al. (2009), standard deviation is the spread of observations taking the mean as the reference point. The stock's log returns of each company were used to calculate the standard deviation. Standard deviation is the most predominant measure in determining volatility of investments, and in the context of this study, trend in stock prices. The further the variance the observations or returns from the mean (average stock return), the greater the standard deviation, and consequently, the higher the stock return volatility. As shown in the equation below, standard deviation is simply the square root of the variance of the observations. Notably, standard deviation is simply the mean and, thus, can be vulnerable to the effect of outliers; the more the outliers, the greater the standard deviation (Moore et al., 2009). Accordingly, the data collected was tested for normal distribution in discovering any aspect of skewness that could affect the findings. The values for standard deviation and beta were calculated putting into consideration changes from one year to the other. Through examination of changes in both standard deviation and beta in the context of stock returns, empirical findings that brought nuances to the findings and further contributed to the significant understanding of the relation between cash dividend/dividend policy and trend in stock prices, were accomplished. Regarding changes in dividend form year to year, the dividend per share (DPS) suffices. Specifically, the following equation was used in determining change in dividend:

$$\Delta\,Dividend = \frac{DPS_t - DPS_{t-1}}{DPS_{t-1}}$$

.............Equation 16

Where the change in dividend is a product of the ratio of change in DPS between time $_t$ and $_{t-1}$ to the DPS in time $_{t-1}$. The DPS was generated from the Egyptian Stock Exchange within the six-year period. The DPS is a reflection of 12 months anticipated payments on the basis of indications and forecasts, exclusive of special dividends, divided by outstanding shares amount of the period under consideration. Additionally, is represents the gross dividends i.e., from which no tax has been deducted. Therefore, DPS is a good proxy for payments of dividend as it is a representative of changes in cash dividends in form of percentages allowing the researcher to make comparisons between firms and size of capitalisation. From the DPS, dividend payout ratio was determined by dividing DPS with earnings per share as indicated in the equation below:

Dividend Payout Ratio $= \frac{Dividend\ per\ share}{Earnings\ per\ share}$…………Equation 17

From the dividend payout ratio combined with other variables, equation representing the value of the firm was determined as represented below:

$Y = a + b_1\,X_1 + b_2\,X_2 + b_3\,X_3 + b_4\,X_4$ ………………. Equation 18

Where Y is the value of the firm; a the regression equation's intercept, and represents the value of the firm where there is no dividend payment; X_1 is the dividend payout ratio; X_2 is the profitability of the firm; X_3 is the liquidity, X_4 is the growth opportunity at the firm; e is the error term capturing unaccounted variations within the model; and lastly $b_1….b_4$ representing regression coefficients, which were used in measuring the sensitivity of the Y, dependable variable, to unit change in the predictor variables. The value of the firm, Y, was determined or measured with the aid of the Tobin's Q ratio, which is calculated through the division of sum of the owner equity's market value by the total liabilities' book value to the total assets' book value. Profitability of the firm, otherwise referred to as the return on equity (ROE), was obtained by dividing net profits by total equity. Liquidity of the firm (current ratio) was calculated by dividing current assets with current liabilities. Finally, growth opportunity, which is also the same as price earnings ratio, was obtained by dividing the market price with earnings per share. A summary of the model used in this study is represented in Figure 3 below.
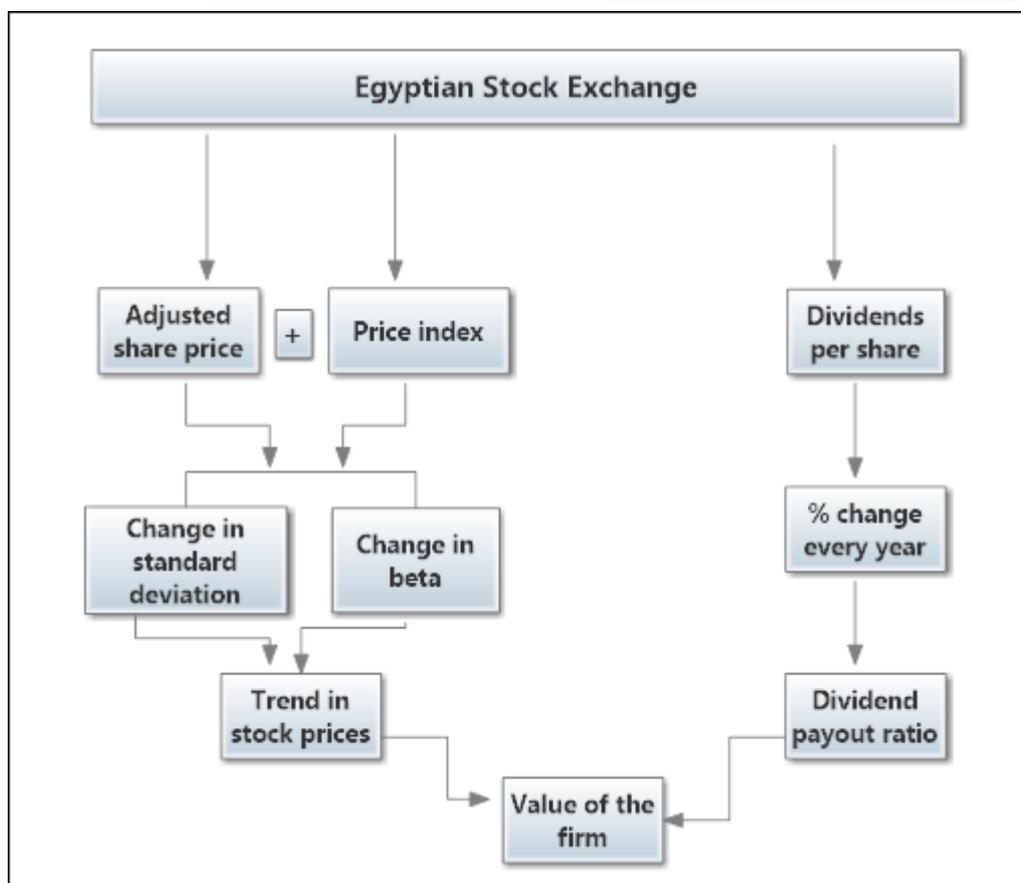
Figure 3: The model of the study depicting the data collection process
Source: Author

3.10 Validity and Reliability

Validity and reliability are two key evaluation criteria for a research process. In other words, if the research is not both reliable and valid, then it is worthless, and should not have been carried out int eh first place. Reliability is a situation whereby there is a possibility of repeating the same study and getting similar results. According to Bryman and Bell (2011), reliability is a matter of concern for a quantitative research. There are three factors that determine the reliability of a research. First, is the stability, which corresponds to the inter-observer consistency and internal reliability. Stability is concerned with whether the results change over time or the findings would be replicated in another setting. Internal reliability means that there are consistencies as far as the indicators forming the scale are concerned. in the same vein, an inter-observer consistency means that the decision by the observer is consistent.

On the other hand, validity refers to the "the integrity of the conclusions that are generated from a piece of research" (Bryman and Bell, 2011, p.42). validity, in other words, is a situation whereby the indicator used in measuring a concept is the right one or not. According to Saunders et al. (2009), validity is evident in a research when the results appear as expected. Two types of validity are evident: internal validity and external validity. To begin with, internal validity is related to the causality. This means that for a valid research, the variable under study, and not any other, should be responsible for the results. For instance, if it is believed that A causes B, then only A should be causing B. External validity, on the other hand, is concerned with generalisation; in other words, it is answering the question of whether results can be used out of the context of the research under consideration. External validity makes it possible to use a representative sample.

Regarding the present research, it is reliable and, therefore, can be repeated with guaranteed similar results. This is because the indicators or variables used in carrying study do not change with time. Additionally, there is observer consistency since the researcher has only interpreted the statistical tests, and not own assumptions. Further, data has been collected from the Egyptian security market, which is a reliable interphase. Also, statistical tests have been done with the aid of SPSS, which is a reliable and known statistical tool. With respect to internal validity, the study at hand is studying whether change in cash dividend or dividend policy is responsible for stock return volatility or change in stock prices. If it is evident that change in

stock prices is due to change in cash dividend or dividend policy, then it can be concluded that there is a causal relationship between these variables under consideration, which was confirmed by the findings. In the case of external validity, the researcher focused on the Egyptian security market, and the findings may be applicable to other countries with the same market condition and, therefore, there is an evident of external validity.

3.11 Ethical Consideration

Ethical issues have an influence on the integrity of a research. According to Diener and Crandall (1978), research ethics are guidelines that facilitate researchers in their quest to uphold values and make goals in conforming to values. Ethics also provide support for responsibilities of a positive nature more than just curtailing scientists in their inquiries. Diener and Crandall (1978) highlights four areas as far as ethical issues in research are concerned: informed consent, invasion of privacy, harm to study participants, and deception. Nonetheless, these ethical concerns are normally associated with qualitative studies and, therefore, may not be relevant to the present study. This notwithstanding, honesty and accuracy on the part of the researcher play a critical role in any type of study. Researchers may be tempted to fake data in an attempt to produce significance findings. Accordingly, the researcher was aware of the devastating effect brought by non-accuracy and dishonesty in a research work and, therefore, the motivation to falsify data or report only report part of the findings was not promoted in this study. The outcomes of this study would be availed for the public scrutiny thereby making dishonesty and non-accuracy not to be tolerated. Additionally, concerns related to conflicts of interest, affiliation, copyright and data management were put into consideration. Accordingly, the fata used in this research was collected from a public database i.e., Egyptian security market and, thus, issues related to copyright was deemed unsignificant. Data management is concerned with whether the collected data is used for the purpose leading to its gathering (Bryman & Bell, 2011). This particular study employed the use of collected data in investigating the relationship between dividend payout ratio and value of the firm, which is the research aim. This was further supported by the deductive approach and quantitative research method adopted by the current study in addition to the statistical analysis of the collected data to yield empirical and generalisable findings. Lastly, the author is not affiliated to any organisation as far as funding por sponsoring is concerned for the study: the research is entirely independent. To this end, there are outside interests that would influence the presentation of the study's results, making this research to be free from conflict of interests and any other issue that would rise due to affiliation.

CHAPTER FOUR

FINDINGS AND ANALYSIS

This chapter presents findings and data analysis. In achieving the aim of the study, which is to determine the relationship between dividend payout ratio and the value of the firm for companies listed on the Egyptian security market, statistical tests such as logistic regression analysis, normality tests, and correlation test have been used. Generally, this section of the paper starts with descriptive statistics followed by inferential tests.

4.1 Descriptive Statistics

4.1.1 Sectorial Analysis

To begin with, the highest representation in terms of the number of listed firms by sector on the Egyptian Exchange was Banks, Basic Resources, Building Materials, Food, Beverages & Tobacco, Healthcare & Pharmaceuticals, Non-bank Financial Services, Real Estate, and Travel & Tourism each represented by 8%. This was followed by Contracting & Construction Engineering (7%), then Textile & Durables (6%), Industrial Goods, Services & Automobiles, and IT, Media & Communication Services each represented by (5%), Paper & Packaging (4%), Education Services, Shipping & Transportation Services, and Trade & Distributors each represented by 3%, and lastly Energy & Support Services (2%). A graphical representation is shown in Figure 4 below.
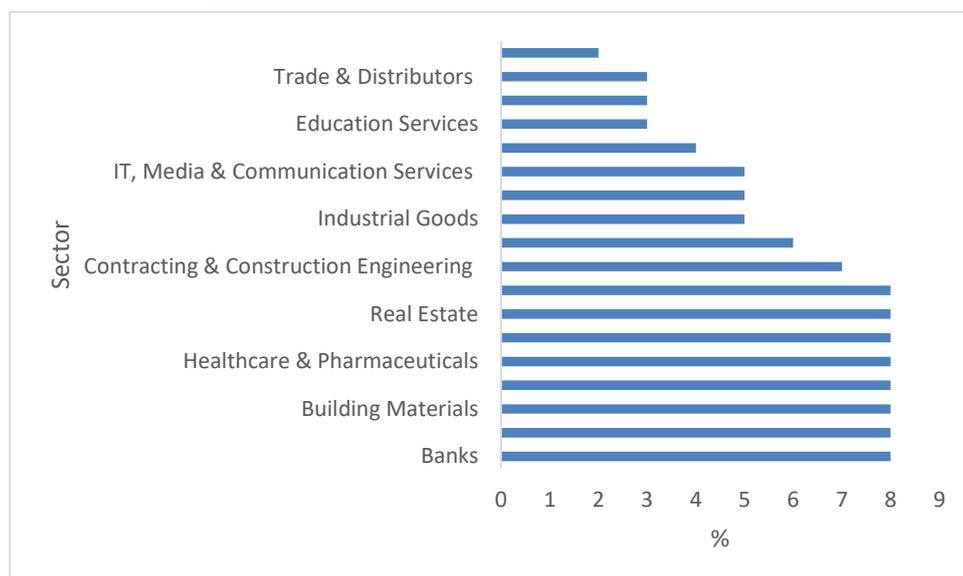
Figure 4: Sectorial analysis

Regarding the various determinants of the value of the firm, the descriptive statistics for dividend payout ratio, current ratio, ROE or profitability, price-earnings ratio, and Tobin Q ratio for all the 17 sectors included in the study are presented in Table 1 below. The summary statistics put into consideration include mean and standard deviation. To start with, the average or mean Tobin Q ratio was found to be 1.50 ± 0.41, implying that the firms' market value was higher than the total asset value, an indication of overvaluation. Dividend payout ratio, on the other end, was 0.40 ± 0.06. ROE was 0.27 ± 0.25 with an implication that profitability was evident in all the 17 sectors included in the study. Similarly, liquidity had a mean of 1.67 ± 1.52, and this implied that the current assets were higher as compared to the current liability. Lastly, the price-earnings ratio (P/E) was 11.20 ± 0.90.

Table 1:Sectorial analysis

Sector	Tobin Q Ratio	Dividend Payout Ratio	Current Ratio	ROE	P/E
Banks	0.77	0.16	2.77	0.35	9.90
Basic Resources	0.93	0.17	1.16	0.13	10.14
Building Materials	0.99	0.19	1.30	0.17	10.67
Contracting & Construction Engineering	1.89	0.32	1.29	0.30	15.68
Education Services	1.70	0.50	1.60	0.59	13.50
Energy & Support Services	2.00	0.28	1.40	0.09	15.80
Food, Beverages & Tobacco	1.00	0.20	1.39	0.20	12.51
Health Care & Pharmaceuticals	0.97	0.26	1.39	0.39	9.63
Industrial Goods, Services & Automobiles	2.67	0.36	1.29	0.37	11.50
IT, Media & Communication Services	1.06	1.99	2.56	0.30	10.09
Non-bank financial Services	1.56	0.24	1.80	0.50	11.9
Paper & Packaging	1.50	0.40	1.77	0.36	12.00
Real Estate	0.77	0.16	1.16	0.20	9.47
Shipping & Transportation Services	2.67	1.90	2.78	0.67	13.67
Textile & Durables	0.87	0.63	1.52	0.28	9.59
Trade & Distributors	1.56	0.75	1.87	0.49	10.45
Travel & Leisure	1.41	0.86	1.38	0.21	12.69
Mean	1.50	0.40	1.67	0.27	11.20
Std Deviation	0.41	0.06	1.52	0.25	0.90

Subsequently, individual analysis of the ratios determining the value of the firm across the 17 sectors, as extracted from the financial statements, indicated change dynamics within the period under consideration i.e., 2014 to 2019. Dividend payout ratio as a dividend policy showed an increase from 2014 to 2016, and the possible cause of this could be increased profitability

of the firms within the 17 sectors. Nonetheless, there was a decrease in dividend payment between 2017 and 2018. After this, a slight increment was reported in 2019. An illustration is represented in Table 2 and Figure 5 below.

Table 2: DPR analysis across the 17 sectors

Year	2014	2015	2016	2017	2018	2019
DPR	0.27 ± 0.41	0.34 ± 0.52	0.38 ± 0.87	0.30 ± 1.42	0.28 ± 0.98	0.40 ± 1.03
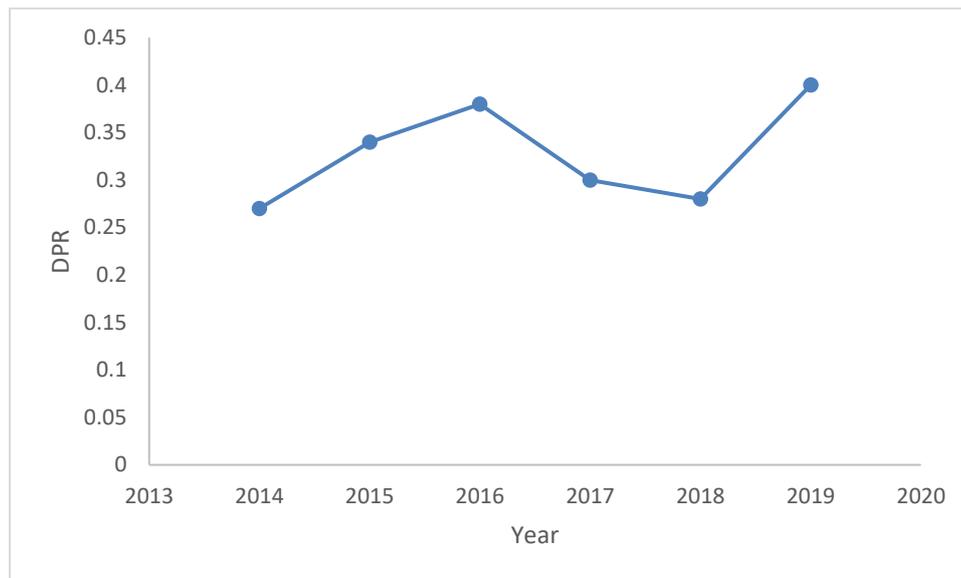
Figure 5: DPR analysis

Firm growth analysis as expressed by P/E ratio showed an increment from 2014 to 2015. However, this was followed by a decrease spanning from 2016 to 2017. This was short-lived as increase in P/E ratio was observed from 2018 to 2019. Such a growth of firms implies that the companies listed on the Egyptian security market had been engaging in heavy investment to stay afloat in the market. A diagrammatic illustration of this is presented in Table 3 and Figure 6 below.

Table 3: P/E Ratio analysis across the 17 sectors

Year	2014	2015	2016	2017	2018	2019
P/E Ratio	9.60 ± 0.94	11.30 ± 0.76	10.78 ± 0.95	4.40 ± 1.69	9.03 ± 0.79	12.47 ± 1.86
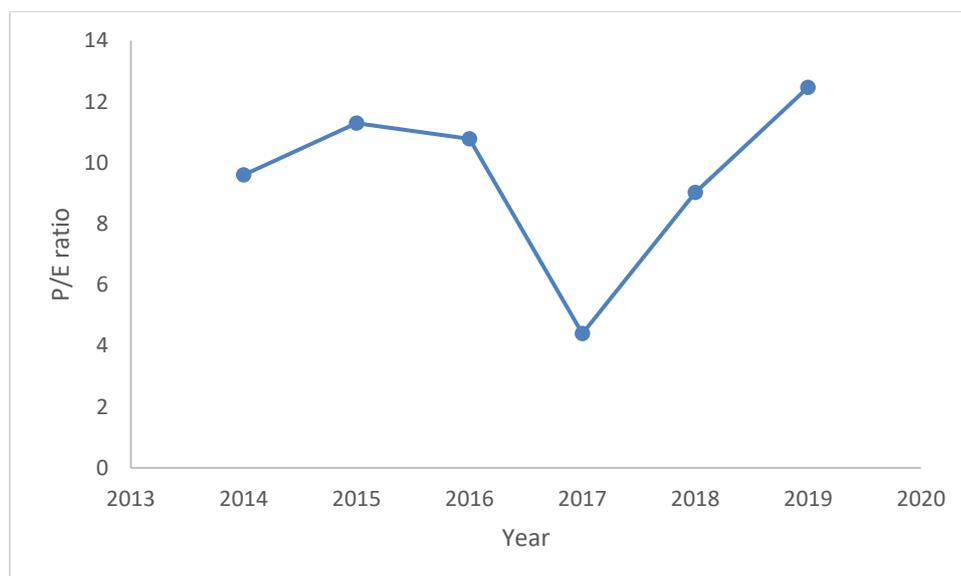
Figure 6:P/E ratio analysis

Regarding liquidity, otherwise referred to as the current ratio, an initial decrement was evident between 2014 and 2015, but later increased in 2016. This, however, was again followed by a slight decrease in 2017. Between 2018 and 2019, the firms listed on the Egyptian security market showed an increase in liquidity implying growth in profitability. This rise could have been due to an increase in cash flows. Subsequently, seemingly, between 2018 and 2019, the listed firms did not face financial difficulties because of sufficient liquidity in managing both short-term and long-term financial obligations. An illustration is represented in Table 4 and Figure 7 below.

Table 4: Current Ratio analysis across the 17 sectors

Year	2014	2015	2016	2017	2018	2019
Current Ratio	1.43±0.14	1.38±0.72	1.50±0.87	1.39±1.24	1.50±0.96	1.69±1.94
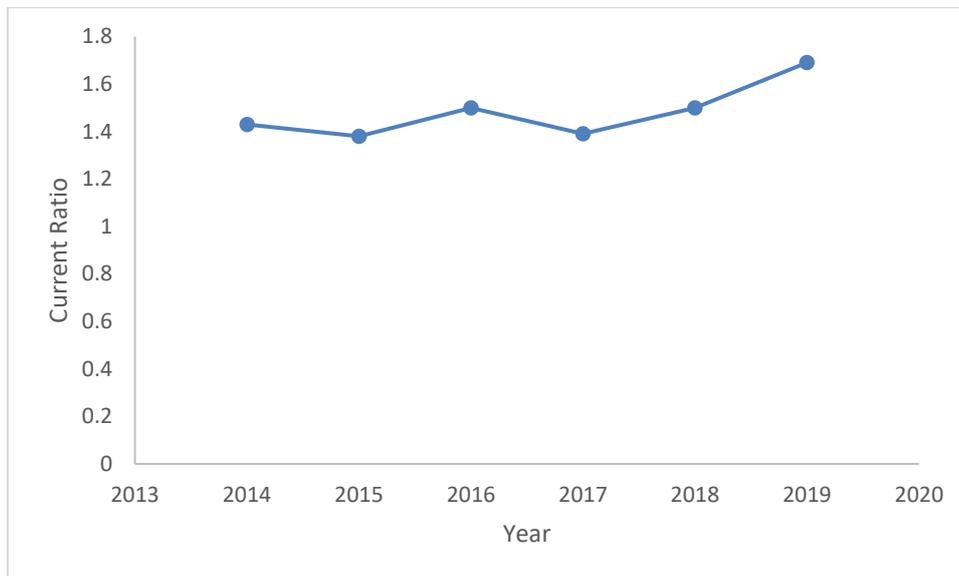
Figure 7:Liquidity analysis

In terms of profitability analysis in the context of return on equity within the six-year analysis, a gradual increase was witnessed from 2014 to 2019. This has been confirmed by the already discussed ratios, and indication that the firms listed on the Egyptian security market recorded positive ROE throughout the entire study period. An illustration of the RO analysis is depicted in Table 5 and Figure 8 below.

Table 5: ROE analysis across the 17 sectors

Year	2014	2015	2016	2017	2018	2019
ROE	0.18±0.49	0.16±0.58	0.26±0.84	0.16±0.42	0.12±1.95	0.19±0.99
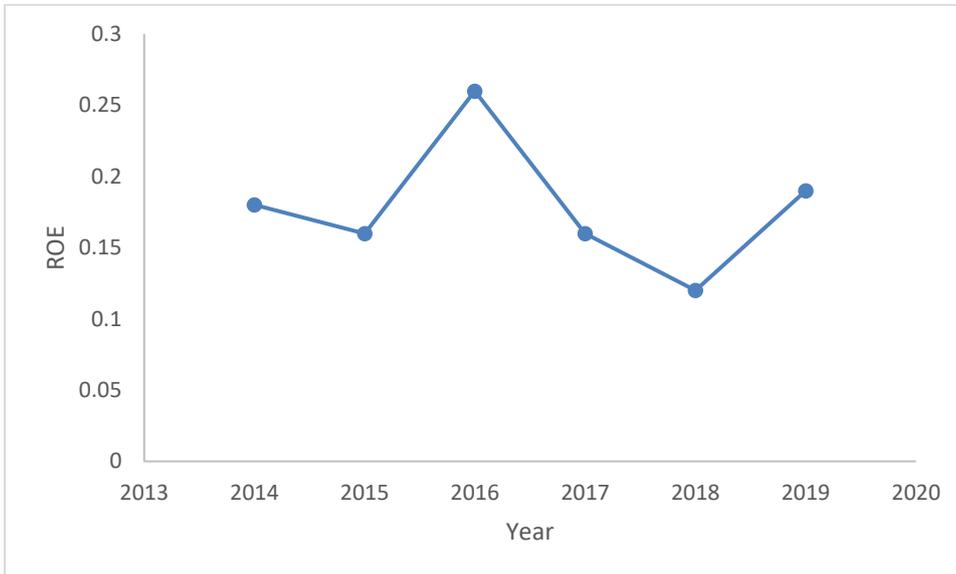
Figure 8:Profitability analysis

Finally, putting into perspective the above discussed ratios i.e., ROE, P/E ratio, liquidity, and obviously the dividend payout ratio, initially, a decrease in the value of the firm was registered from 1.47 in 2014 to 1.28 in 2015. Nonetheless, an increase in the value of the firms was later recorded from 2017 to 2018. This was short-lived due to the fact that in the following year, 2019, a drastic decrement was evident i.e., from 1.30 in 2018 to 1.15 in 2019, as represented in Table 6 and Figure 9 below. This could be due to political developments that rocked the country, possibly interfering with economic underpinnings.

Table 6: Value of the Firm analysis across the 17 sectors

Year	2014	2015	2016	2017	2018	2019
Value of the Firm	1.47±0.46	1.27±0.67	1.32±0.89	1.30±1.45	1.30±0.89	1.15±1.30
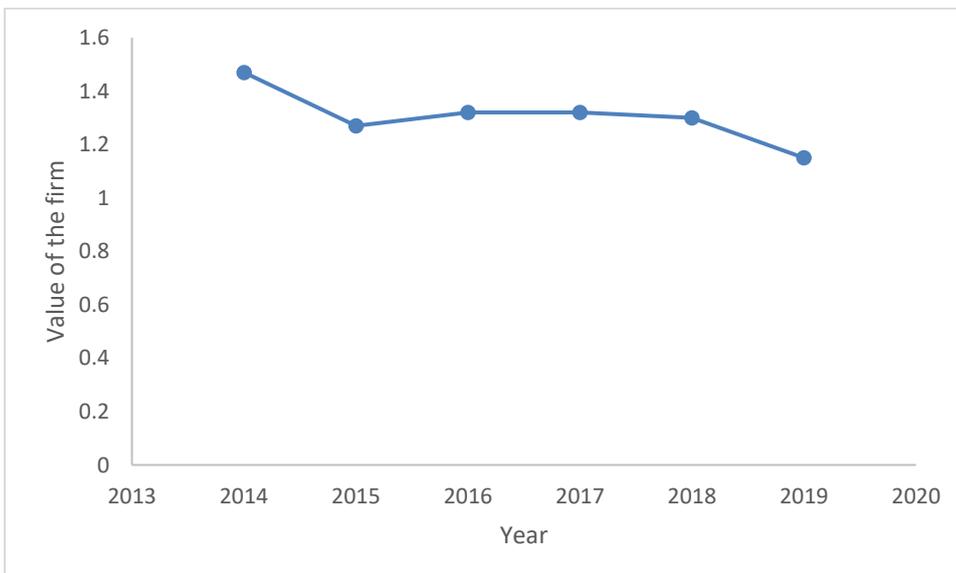
Figure 9:Analysis of the value of the firm

4.1.2 Change in Dividend/Dividend Payout Ratio

A yearly analysis indicates changes in dividend. This implies that the manner in which dividend are paid (dividend payments) have changed. To start with, in 2014, 4.4% decrease in dividend payments was evident across the sectors under analysis. Nonetheless, there was over 60% increase in dividend payment (i.e., 65.35%), whereas 30.22% of the companies kept the

same payments of dividend. Consequently, in 2015, much fewer companies (1.30%) decreased their dividend payments. On the flipside, 68.50% increase in payments of dividend was registered. Like in 2014, 30.22% of the companies remained unchanged in terms of their dividend payments. In 2016, the amount of dividend decrease was higher than the previous year i.e., 11.15% versus 1.30%. The rate of dividend increase, however, reduced slightly as compared to the previous year i.e., 63.62% versus 68.50%. The firms that had their dividends unchanged in the same year were represented by 25.3%. In 2017, there is a drastic change in dividend payments with the decrease being represented by 48.91% while the increase at 19.22%, which is quite different from the previous years. The dividend payments that were unchanged were at 32.20%. Interestingly, 2018 was the year in which the dividend payout that remained unchanged was the highest i.e., 48.12%. On the part of decrease in dividend payments, the representation was at 13.65%, whereas the increase was at 38.45%. Finally, in 2019, there was not much change in dividend payments in comparison to the previous year except the dividend payout that remain un-changed. The dividend payments' decrease was at 13.01%, while the increase was at 37.82%. Consequently, the dividend that remain unchanged was at 34.20%. The changes in dividend payments through the six years are represented in Figure 10 below.
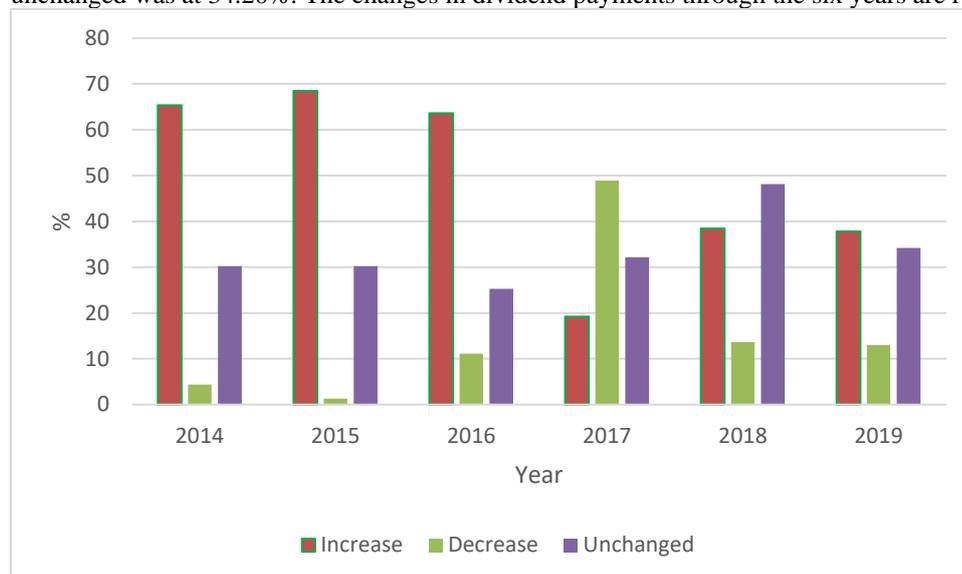
Figure 10: Yearly changes in dividend payments

4.1.3 Changes in Stock Prices

The trend in prices of stock was determined by changes in standard deviation and beta as already been indicated. Similar to the changes in dividend throughout the six years, changes in standard deviation and beta are also analysed within the same period. Ideally, the were significant changes in both standard deviation and beta from one year to the other. To begin with, in 2014, the changes in standard deviation in terms of increases were notably higher in comparison to beta. Particularly, in that particular year, increase in standard deviation was at 94% as compared to beta's 40%. However, beta led in decrement at 55% as compared to the 5% decrease in standard deviation. The following year, 2015, increases in both standard deviation and beta were not significant as compared to the previous year. In fact, increases in standard deviation and beta were 78% and 30% respectively. However, decrease in beta was higher than standard deviation i.e., 70% versus 25%. As compared to the previous year, there was a decrement in the increase of standard deviation, whereas an increment in the decrease of beta was observed. Consequently in 2016, there was a significant increment in the increase of beta as compared to both 2014 and 2015; the valued was at 70%. On the other hand, there was a significant decrement in the increase of standard deviation in comparison to the previous two years; 10%. Decrease in beta was at low i.e., 30%, whereas decrease in standard deviation was higher than in the past two years (90%). In 2017, there was increment in the increase of standard deviation to the value to similar in 2015 (78%), whereas an increment in beta was more of a decrease as compared to 2016 (50% versus 70%). In terms decrement in both parameters, decrease in beta was at 50% while that of standard deviation was at 20%. In the following year, 2018, the increment in both standard deviation and beta was minimal: 30% of increase in beta and 18% of increase in standard deviation. Nonetheless, the decrement in both standard deviation and beta was significant in comparison to the previous year: a decrease of 82% in standard deviation and a decrease of 70% in beta. Finally, in 2019, there was no much difference with 2018: an increase of 20% in standard deviation and 31% in beta; and a decrease of 80% in standard deviation

and 68% in beta. The trend in stock as represented by indicator variables (standard deviation and beta) is illustrated in Figure 11 below.
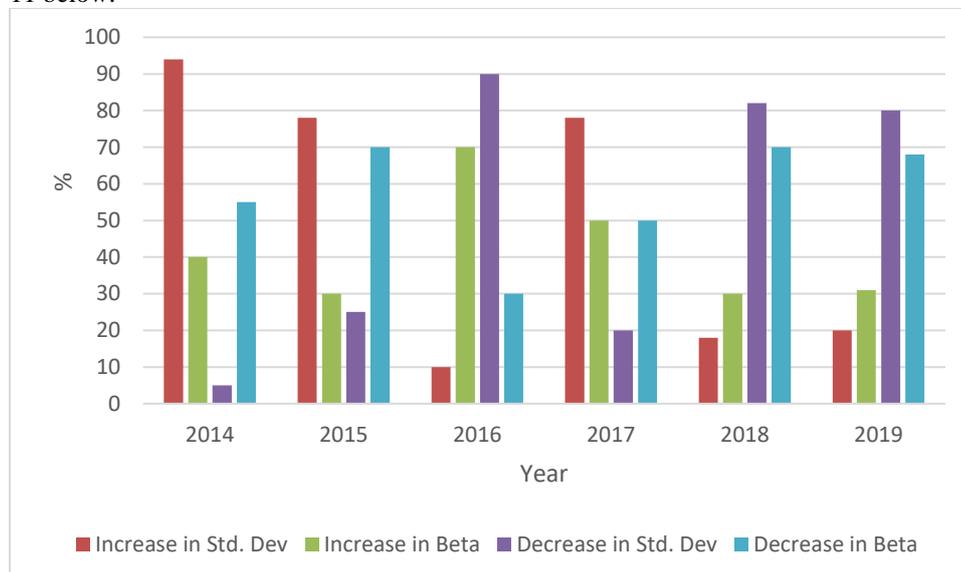

Figure 11:Yearly changes in stock prices

4.2 Normality Test

Test for normal distribution is key so that the efficacy of various statistical tests can be ascertained. For instance, correlation and linear regression tests can only tested when the data is normally distributed. In the event the data is not normally distributed, other tests will have to be carried out to confirm the accuracy of the results. In particular, this study carried out normality tests for changes in standard deviation, beta and dividend on a yearly basis. For the case of normal distribution tests, two tests were carried out and they include Shapiro-Wilk normality test and Kolmogorov-Smirnov normality test. To start with, as evident in Table 2 below, changes in beta across the six years were normally distributed. All the values were not significantly significant at $p<0.05$. Therefore, the changes in beta led to data which was normally distributed. In regard to standard deviation, the Kolmogorov-Smirnov test indicated instances of lack of significant difference i.e., rejecting the null hypothesis. In all the years, a consensus between the two tests revealed normal distribution of data in the changes of standard deviation. Lastly, both Shapiro-Wilk and Kolmogorov-Smirnov normality test revealed normal distribution in changes in dividend payments for each year ($p<0.05$) and, therefore, it was deduced that changes in dividend data did indicate normal distribution. Evident of normal data distribution is an indication that even if the two tests were to be carried out in the whole sample period coupled with combination of changes in beta, standard deviation, and dividend payments, the data could be still be normally distributed. Consequently, looking at changes in beta, standard deviation and dividend, correlation and regression analyses would suffice.

Table 7: Normality Testing

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Change in Beta 2014	0.498	128	0.000	0.062	128	0.007
Change in Beta 2015	0.266	128	0.000	0.412	128	0.023
Change in Beta 2016	0.355	128	0.040	0.485	128	0.010
Change in Beta 2017	0.241	128	0.001	0.543	128	0.021
Change in Beta 2018	0.175	128	0.003	0.792	128	0.045
Change in Beta 2019	0.189	128	0.002	0.685	128	0.002
Change in Std.Dev 2014	0.052	128	0.010	0.993	128	0.005
Change in Std.Dev 2015	0.129	128	0.000	0.895	128	0.001
Change in Std.Dev 2016	0.088	128	0.006	0.940	128	0.003
Change in Std.Dev 2017	0.067	128	0.003	0.958	128	0.005
Change in Std.Dev 2018	0.156	128	0.017	0.818	128	0.021
Change in Std.Dev 2019	0.098	128	0.050	0.867	128	0.004

Change in Dividend 2014	0.256	128	0.050	0.659	128	0.037
Change in Dividend 2015	0.311	128	0.006	0.485	128	0.049
Change in Dividend 2016	0.235	128	0.000	0.785	128	0.006
Change in Dividend 2017	0.182	128	0.000	0.902	128	0.000
Change in Dividend 2018	0.278	128	0.000	0.822	128	0.000
Change in Dividend 2019	0.237	128	0.010	0.859	128	0.000

a. Lilliefors Significance of Correction

4.3 Correlation

In relation to the correlation analysis, two tests were specifically done to make the results more reliable, and they include Pearson Correlation, which is a parametric test, and Spearman's rho, which is a non-parametric test. Both Pearson's Correlation and Spearman's rho show correlation coefficients that were relatively high indicating presence of correlation among the variables each year, from 2014 to 2019. On average, there was a positive correlation between the variables themselves, and the coefficients of correlation were approximately 50% and above, registering high level of correlation as evident in Table 3 below. Each variable was perfectly correlated with itself as indicated by the coefficient of 1.

Table 8:Correlation of changes in Beta, Standard Deviation, and Dividend

		Change in Beta 2014	Change in Beta 2015	Change in Beta 2016	Change in Beta 2017	Change in Beta 2018	Change in Beta 2019
Change in Beta 2014	Pearson Correlation Sig. (2-tailed)	1	.46	.67	.48	.76	.53
	Spearman's Correlation Sig. (2-tailed	1	.61	.59	.56	.69	.55
Change in Beta 2015	Pearson Correlation Sig. (2-tailed)	.47	1	.67	.48	.76	.53
	Spearman's Correlation Sig. (2-tailed	.58	1	.59	.56	.69	.55
Change in Beta 2016	Pearson Correlation Sig. (2-tailed)	-.36	.54	1	.56	.69	.55
	Spearman's Correlation Sig. (2-tailed	.48	.53	1	.48	.76	.53
Change in Beta 2017	Pearson Correlation Sig. (2-tailed)	.56	.69	.55	1	.37	.65
	Spearman's Correlation Sig. (2-tailed	.48	.76	.53	1	.40	.57
Change in Beta 2018	Pearson Correlation Sig. (2-tailed)	.37	.65	.50	.68	1	.65
	Spearman's Correlation Sig. (2-tailed	.40	.57	.49	.61	1	.57
Change in Beta 2019	Pearson Correlation Sig. (2-tailed)	-.26	.65	.50	.67	.53	1
	Spearman's Correlation Sig. (2-tailed	-.37	.57	.49	.63	.50	1
		Change in Std. Dev. 2014	Change in Std. Dev. 2015	Change in Std. Dev. 2016	Change in Std. Dev. 2017	Change in Std. Dev. 2018	Change in Std. Dev. 2019
Change in Std. Dev. 2014	Pearson Correlation Sig. (2-tailed)	1	.59	.56	.69	.55	.68

	Spearman's Correlation Sig. (2-tailed	1	.67	.48	.76	.53	.61
Change in Std. Dev. 2015	Pearson Correlation Sig. (2-tailed)	.65	1	.68	.65	.50	.68
	Spearman's Correlation Sig. (2-tailed	.59	1	.61	.57	.49	.61
Change in Std. Dev. 2016	Pearson Correlation Sig. (2-tailed)	.67	.48	1	.65	.50	.67
	Spearman's Correlation Sig. (2-tailed	.59	.56	1	.56	.49	.51
Change in Std. Dev. 2017	Pearson Correlation Sig. (2-tailed)	.67	.48	-.17	1	.68	.65
	Spearman's Correlation Sig. (2-tailed	.59	.56	-.18	1	.61	.57
Change in Std. Dev. 2018	Pearson Correlation Sig. (2-tailed)	.37	.65	.50	.68	1	.37
	Spearman's Correlation Sig. (2-tailed	.40	.57	.49	.61	1	.40
Change in Std. Dev. 2019	Pearson Correlation Sig. (2-tailed)	-.26	.65	.50	.67	-.25	1
	Spearman's Correlation Sig. (2-tailed	-.37	.57	.49	.63	-.19	1
		Change in Dividend 2014	Change in Dividend 2015	Change in Dividend 2016	Change in Dividend 2017	Change in Dividend 2018	Change in Dividend 2014
Change in Dividend 2014	Pearson Correlation Sig. (2-tailed)	1	.40	.57	.49	.61	.15
	Spearman's Correlation Sig. (2-tailed	1	-.26	.65	.50	.67	.27
Change in Dividend 2015	Pearson Correlation Sig. (2-tailed)	.39	1	.40	.57	.49	.61
	Spearman's Correlation Sig. (2-tailed	.48	1	.26	.65	.50	.67
Change in Dividend 2016	Pearson Correlation Sig. (2-tailed)	.57	.49	1	.57	.49	.61
	Spearman's Correlation Sig. (2-tailed	.65	.50	1	.65	.50	.67

Change in Dividend 2017	Pearson Correlation Sig. (2-tailed)	.40	.57	.30	1	-.13	.65
	Spearman's Correlation Sig. (2-tailed	.26	.65	.41	1	-.28	.40
Change in Dividend 2018	Pearson Correlation Sig. (2-tailed)	.37	.65	.50	.69	1	.26
	Spearman's Correlation Sig. (2-tailed	.56	.69	.55	.78	1	.39
Change in Dividend 2019	Pearson Correlation Sig. (2-tailed)	.48	.76	.53	.57	.23	1
	Spearman's Correlation Sig. (2-tailed	.37	.65	.50	.68	.34	1

N = 129

Regarding the corelation between changes in dividend versus changes in beta and standard deviation, high correlation coefficients were evident, indicating that changes in dividend and changes in beta and standard deviation were correlated. In other words, changes in stock prices as represented by beta and standard deviation corresponded to changes in dividend payments and, therefore, dividend policy. Generally, there was a positive correlation, and the coefficients of correlation were averagely 50 and above, registering a strong relationship, as evident in Table 4 below.

Table 9:Corelation of changes in Dividend versus changes in Beta and Standard Deviation

			Change in Beta 2014	Change in Beta 2015	Change in Beta 2016	Change in Beta 2017	Change in Beta 2018	Change in Beta 2019
Change in Dividend 2014	Pearson Correlation	Sig. (2-tailed)	.94	.63	.67	.48	.76	.53
	Spearman's Correlation	Sig. (2-tailed	.63	.50	.59	.56	.69	.55
Change in Dividend 2015	Pearson Correlation	Sig. (2-tailed)	.53	.47	.67	.48	.76	.53
	Spearman's Correlation	Sig. (2-tailed	.61	.59	.59	.56	.69	.55
Change in Dividend 2016	Pearson Correlation	Sig. (2-tailed)	.66	.54	.67	.56	.69	.55
	Spearman's Correlation	Sig. (2-tailed	.86	.53	.79	.48	.76	.53
Change in Dividend 2017	Pearson Correlation	Sig. (2-tailed)	.46	.69	.55	.69	.37	.65
	Spearman's Correlation	Sig. (2-tailed	.62	.76	.53	.59	.40	.57
Change in Dividend 2018	Pearson Correlation	Sig. (2-tailed)	.66	.65	.50	.68	.59	.65

Change in Dividend 2019	Spearman's Correlation (2-tailed	Sig.	.84	.57	.49	.61	.65	.57
	Pearson Correlation (2-tailed)	Sig.	.56	.65	.50	.67	.53	.58
	Spearman's Correlation (2-tailed	Sig.	.63	.57	.49	.63	.50	.67

			Change in Std. Dev. 2014	Change in Std. Dev. 2015	Change in Std. Dev. 2016	Change in Std. Dev. 2017	Change in Std. Dev. 2018	Change in Std. Dev. 2019
Change in Dividend 2014	Pearson Correlation (2-tailed)	Sig.	.59	.59	.56	.69	.55	.68
	Spearman's Correlation (2-tailed		.68	.67	.48	.76	.53	.61
Change in Dividend 2015	Pearson Correlation (2-tailed)	Sig.	.65	.60	.68	.65	.50	.68
	Spearman's Correlation (2-tailed	Sig.	.59	.57	.61	.57	.49	.61
Change in Dividend 2016	Pearson Correlation (2-tailed)	Sig.	.67	.48	.78	.65	.50	.67
	Spearman's Correlation (2-tailed	Sig.	.59	.56	.83	.56	.49	.51
Change in Dividend 2017	Pearson Correlation (2-tailed)	Sig.	.67	.48	.47	.89	.68	.65
	Spearman's Correlation (2-tailed	Sig.	.59	.56	.58	.91	.61	.57
Change in Dividend 2018	Pearson Correlation (2-tailed)	Sig.	.37	.65	.50	.68	.65	.37
	Spearman's Correlation (2-tailed	Sig.	.40	.57	.49	.61	.59	.40
Change in Dividend 2019	Pearson Correlation (2-tailed)	Sig.	.56	.65	.50	.67	.55	.78
	Spearman's Correlation (2-tailed	Sig.	.67	.57	.49	.63	.69	.64

Regarding the determinants of the value of the firm, the correlation analysis indicated relative high correlation coefficients between the variables. As represented in Table 5 below, each variable was perfectly correlated with itself as exemplified by the coefficient of 1. In terms of the relationships between individual independent variables, and the value of the firm, dependable variable, to start with, dividend payout ratio had a positive and significant correlation with the firm ($R = 0.67$),

and this was the highest correlation coefficient as compared with the remaining variables. This is indeed an indication that the dividend policy, dividend payout ratio, contributed to the change in the value of the firm. Additionally, Return on Equity (ROE), as well, had a positive correlation and a relatively high correlation coefficient, $R = 0.54$, in relation to the value of the firm. The growth opportunity represented by price-earnings ratio (P/E) also indicated a positive and high correlation coefficient almost similar to that of the dividend payout ratio, $R = 0.65$. This implies that the P/E ratio seconded the DPR in terms of contribution to the value of the firm. Finally, liquidity, though had a positive correlation coefficient, but it was minimal as far as the contribution to the value of the firm is concerned, $R = 0.02$. In other words, there was a little or no relationship between liquidity, current ratio (CR), and the value of the firm, represented by Tobin Q ratio (TQR).

Table 10: Correlation among variables

	TQR	DPR	P/E	ROE	CR
TQR	1	.67	.65	.54	.02
DPR	.67	1	.42	.28	.30
P/E	.65	.42	1	.24	.30
ROE	.54	.28	.24	1	.04
CR	.02	.30	.30	.04	1

4.4 Regression Analysis

Regression analysis is a confirmatory test to the correlation test i.e., a predictive ability. In this analysis, changes in dividend and predicted by changes in beta and standard deviation were carried out as represented in Table 6. The multiple regression between the independent variables (standard deviation and beta), and dependent variable (dividend) indicated a significant relationship and, therefore, it can be concluded that stock prices represented by changes in standard deviation and beta contributed to the change in dividend. As shown in the table below, change in standard deviation justified by relatively high t statistic values as compared those of change in beta.

Table 11:Regression analysis of change in Beta and Standard Deviation versus Dividend

Variable	Coefficient	Std. Error	t Statistic	p-value
Contant	0.155	0.269	0.657	0.009
Change in Beta 2014	0.141	0.272	0.560	0.010
Change in Beta 2015	0.132	0.165	1.010	0.000
Change in Beta 2016	0.140	0.321	1.790	0.023
Change in Beta 2017	0.121	0.092	1.981	0.000
Change in Beta 2018	0.110	0.240	2.043	0.000
Change in Beta 2019	0.131	0.390	2.542	0.000
Change in Std. Dev. 2014	0.119	0.310	2.067	0.012
Change in Std. Dev. 2015	0.143	0.180	1.951	0.022
Change in Std. Dev. 2016	0.101	0.210	2.87	0.000
Change in Std. Dev. 2017	0.135	0.220	3.050	0.000
Change in Std. Dev. 2018	0.123	0.231	2.750	0.000
Change in Std. Dev. 2019	0.147	0.142	3.011	0.000

Relating this to the value of the firm, regression analysis of the independent variables (DPR, P/E, ROE and CR) and their effect on the dependent variable (value of the firm, TBR), revealed significant difference at $P<0.05$ (see Table 7).

Table 12: Value of the firm analysis

Variable	Coefficient	Std. Error	t Statistic	p-value
Constant	0.176	0.306	0.658	0.009
Average DPR	2.333	0.742	4.010	0.007
Average ROE	1.082	0.499	2.782	0.024
Average CR	0.022	0.026	1.514	0.340
Average P/E	0.064	0.0274	3.208	0.005

From the details presented in the table above, a regression equation or model can be developed as shown:

TBQ = 0.176 + 2.333DPR + 1.082ROE + 0.022CR + 0.064P/E

Among the variables represented in the equation above, dividend payout ratio, growth opportunity and profitability are statistically significant in elaborating the value of the firm. On the other hand, the liquidity of the firm, otherwise referred to as current ratio, is not statistically different in explaining the value of the firm as showcased with a p-value beyond 0.05. By suing the above equation as the point of reference, a unit increase of dividend payout ratio will lead to 2.333 units increase in the value of the firm. On a similar note, a unit increase of return of equity or profitability will lead to 1.082 units increase in the value of the firm. Similarly, a unit increase of P/E, also known as the growth opportunity of the firm, will culminate into 0.064 units increase in the value of the firm. Finally, a unit increase of the liquidity or the value of the firm will lead to 0.022 units increase in the value of the firm, which is insignificant as confirmed by the hypothesis testing. However, combining the effect of the independent variables (i.e., dividend payout ratio, current ratio, return on equity, and growth opportunity of the firm) indicated a statistically significant influence on the value of the firm through the analysis of variance (ANOVA) test, as evident in Table 8. The calculate p-value if 0.003, which is below the acceptance limit of 0.05, and this further implies that the developed model is significant.

Table 13: ANOVA

	df	SS	MS	F	Sig.
Regression	21	0.901	0.780	10.702	0.003
Residual	107	1.312	0.816		
Total	28	2.124			

Additionally, extrapolating the model into the sector revealed that Textiles & Durables sector had the highest variation (87.6%) as contributed by independent variables. On the other hand, Industrial Goods, Services & Automobiles sector had the lowest variation (26.1%) as influenced by independent variables under study. Overall, 73.7% variation across all the sectors was caused by the independent or explanatory variables. Model summary by the sector is represented in Table 9 below.

Table 14: Summary of the model by sector

Sector	R^2	Adjusted R^2	Standard Error
Banks	0.791	0.707	0.278
Basic Resources	0.468	0.437	0.221
Building Materials	0.845	0.813	0.518
Contracting & Construction Engineering	0.746	0.733	1.445
Education Services	0.578	0.547	0.358
Energy & Support Services	0.657	0.625	0.358
Food, Beverages & Tobacco	0.543	0.459	0.258
Health Care & Pharmaceuticals	0.737	0.693	0.317
Industrial Goods, Services & Automobiles	0.261	0.259	0.128
IT, Media & Communication Services	0.763	0.712	0.556
Non-bank financial Services	0.736	0.684	0.124
Paper & Packaging	0.863	0.851	0.117
Real Estate	0.771	0.616	0.116
Shipping & Transportation Services	0.672	0.590	0.278
Textile & Durables	0.876	0.836	0.152
Trade & Distributors	0.567	0.555	0.187
Travel & Leisure	0.419	0.429	0.138
Mean	0.737	0.684	0.167

CHAPTER 5

DISCUSSION OF THE FINDINGS

The study has two hypotheses to be tested whether there is a relationship between dividend payout ratio and stock trend in the Egyptian security market, and whether there is a relationship between stock trend and the value of the firm. The answers are in the affirmative. This is because changes in dividend or dividend payout are affected by changes in stock prices or stock trend as informed by changes in the associated explanatory variables i.e., standard deviation and beta. Additionally, stock trend as informed by dividend payout ratio among other explanatory variables (current ratio, profitability, and growth opportunity) has a significant effect on the value of the firm. In other words, it is evident that the dividend payout ratio is positively correlated with the value of the firm. To further exemplify the relationship between dividend payout ratio and the

value of the firm, this study uses the theoretical frame of reference in facilitating the discussion of the results. In other words, the findings are discussed in light of the six theories of dividend payment or dividend policy, and they include: the bird-in-hand theory, the tax-preference theory, dividend irrelevance theory, signalling theory, the clientele effects, and agency cost.

5.1 Dividend Irrelevance Theory

The renowned statement by Miller and Modigliani's (1961) in supporting the dividend irrelevance theory that "...given a firm's investment policy, the dividend payout policy it chooses to follow will affect neither the current price of its shares nor the total return to its shareholders" (p.414), has been refuted by the findings of the current study. Measures of volatility in terms of beta and standard deviation as bases of trend in stock, confirm the evidence that changes in dividend payout ratio is dependent on these volatility measures. In other words, the dividend payout policy matter as far as shareholder wealth is concerned. To this end, the conclusion by Black and Scholes (1974) in their inability to prove that differences in dividend yield led to differences in stock return and, thus, incapable of proving that dividend policy affect stock prices, is refuted by the findings of the present study. The findings suggest that from the perspective of shareholders, there is need to be concerned with dividend payout policy of a firm. When aiming to diversify their portfolios, investors should both look at the volatility measures and dividend policy of the firm.

Particularly, Bake et al. (1985) in their study found the evidence that the dividend policy is positively related with the prices of stock while analysing 562 companies from three sectors in the economy (manufacturing, utilities and wholesalers and retailers) listed on the NYSE. This was supported by the findings by Baker and Powell (1999) and Casey and Dickens (2000). The investment culture of a firm is, indeed, a vital determinant of the value of the firm, which is grounded on the dividend policy. Therefore, Miller and Modigliani's arguments and idealistic assumptions of a perfect capital market, and rational investment decisions may not be practical. Assumptions supporting the dividend irrelevancy theory such as no differences between taxes on dividends and capital gains, no transaction costs and floatation incurred when dealing with trade on securities, all market participants are privileged with free and equal access to market information, absence of conflicts between managers and security holders, and all participants in the market are price takers (Miller & Modiglian, 1961), may not be practically achievable.

5.2 Signaling Theory

According to the signalling theory, dividend is useful in signalling the belief by a manager concerning the future performance of a firm (DeAngelo et al., 1996). In the present study, the findings reveal that there was a relationship between changes in dividend and changes in stock volatility, and indication that the signalling effect is present. The hypothesis that an increment in dividend results in a decrease in stock volatility, and vice-versa, may be true for the firms listed on the Egyptian security market. In other words, the findings of the study give a suggestion that dividend or particularly, the dividend payout ratio can be used as a signal by managers and/or investors in depicting the future outlook of individual companies used in the present research. Ideally, dividends consist of information concerning the current and future flows of cash about a firm, and since managers have higher access to the firm's private information concerning the market through dividend payments to close the information gap. Accordingly, investors infer the provided information concerning the future earnings of the firm through the signal emanating from the announcements of dividend in terms of stability and/changes. This line of thought is supported by Pettit (1972) who argues that dividend announcements are communicative of valuable information, and indicate positive market reaction to the same announcements especially on increase of dividends. Equally, negative announcements are associated with decrease in dividends. The same findings are corroborated by Aharony and Swary (1980), and Woolridge (1983). Asquith and Mullins (1983) in their study in testing the relationship between market reaction and dividend announcements, found a positive correlation. The same results are supported by Michaely et al. (1995). Lastly, Amihud and Murgia (1997) found a correlation between changes in dividend and values of firms in the context of Frankfurt Stock Exchange. Therefore, the present study has confirmed the preposition by the signalling theory. Firms use dividend policy to communicate information concerning the future market prospects, and this is important in further supporting the payment of dividends by firms. In other words, the signalling hypothesis is instrumental in determining the dividend policy and its value to firms.

5.3 Agency Costs

The agency theory basically examines the different problems that may arise between an agent and a principal, and the costs of solving them. Regarding business, the shareholders are seen as principals whereas the agents are the managers that are hired by the shareholders to act in their interest. (Jensen and Meckling, 1976). The fact that firms nowadays usually distribute dividends on a regular basis. In that case one explanation for the lowering of agency costs could be Easterbrook's findings (1984). He argued that firms are more scrutinized by professional institutions as they approach the capital markets to raise new capital, which us unlikely. Subsequently, causing managers to act more in the interest of shareholders thus lowering agency costs. (Easterbrook, 1984). It can also be interesting to discuss whether overall, monitoring and scrutinizing from all kinds of institutions, such as by governmental regulatory agencies, have increased in the last two decades. There are now more strict rules and regulation on the conduction of business., which may be localised in some contexts. Which is

presumably true, then it could also mean that agency costs have decreased during the last two decades in line with increasing monitoring by these institutions.

5.4 Bird-in-the-Hand Theory

This theory holds that, increasing dividend payments equally increases the value of the firm. If the current dividend is high, it reduces the uncertainty of future cash flows and, therefore, it means that a higher pay-out has the probability of reducing the effect of the cost of capital thereby increasing the value of the share price. To this end, the bird-in-hand theory supports the fact that increased dividend pay-out ratio maximises the value of the firm. This preposition is supported by the current study: the dividend pay-out ratio is positively related with the value of firms listed in the Egyptian security market. This stand augers well with other studies (Gordon & Shapiro,1956; Gordon, 1959; Linter, 1962; Walter, 1963). Indeed, higher dividend payment increases the value if the value of the firm. As reported by Frankfurter (2002), "the sole purpose for the existence of the corporation is to pay dividends" (p.202), and companies paying higher dividends are guaranteed of selling their shares at higher prices. To this end, investors show preference to dividend payments over larger capital gains in the future. This has confirmed in the findings of the study by the positive relationship between changes in dividend and changes in the explanatory variables i.e., standard deviation and beta. Accordingly, Shwert (1990) found a significant relationship between volatility of stock prices and the amount of trading activity. This, therefore, means, as based by the present study's findings, that changes in dividend play a critical role making the bird-in-hand preposition to be the possible explanation as to why changes in stock prices are defined by changes in dividend. In other words, in the event dividend decreases, for instance, probably the investors would be preferring dividends to capital gains in an attempt to begin trading since they prefer to obtain dividends on a yearly basis as compared to getting a huge capital once in the future. Consequently, the trading amount would then increase making the stock volatility to increase and, thus, a change in stock price should be associated with change in dividend. On the other hand, if the dividend is stabilised meaning that no changes have been effected, the trading activity would be low making the volatility of stock to be low as well. As much as there is information at the disposal of investors in the current age, the bird-in-hand hypothesis could be applicable in using dividend as a "market security."

5.5 Clientele Effect

The clientele effect of dividend is based on the premise that investors are capable of forming different clienteles that are informed by preference for dividend. Accordingly, the clientele effect is evident in the findings of the study since the stock volatility change is due to change in dividend. This is so because clienteles show preference to a particular payout rate or ratio and, therefore, they begin to trade since changes in dividend sometimes may be unsatisfying or undesirable. By the fact that a clientele comprises of several investors, there is a guarantee that trading would be robust and, therefore, leading to changes in stock prices as dividend changes as well. As such, most studies support the clientele effect hypothesis with Pettit (1997), to begin with, finding a significant and positive relationship between the investor's age and the dividend yield's portfolio. Further, Petit found that investors possessing low systematic-risk portfolios showed preference to high payout stocks and, thus, the tax-induced clientele effect.

3.6 Tax Effect Theory

Practically, taxes exist in every market, and they have a significant influence on the dividend policy and the value of the firm. Accordingly, taxes affect the supply of dividends: at a low dividend payout ratio, tax lowers the effect of capital while at the same time increasing the price of stock. In other words, low dividend payout ratio is geared towards realising the maximum value of the firm, and this is possible since dividend payments are highly taxed in comparison to the capital gains. This stand is supported by other studies such as Brenna (1970) who found that pre-tax returns of stock were positively and linearly correlated to the associated yield of dividend; higher pre-tax returns' adjustment was connected to higher dividend payments in compensating investors via the tax disadvantages' returns. Similarly, a study by Litzenberger and Ramaswamy (1979) found that companies were able to increase their share prices by reducing dividend payments. Morgan and Thomas (1998) also found a positive relationship between dividend yields and stock returns as moderated by the tax-effect.

CHAPTER SIX

6.1 Conclusion

The objective of the study was to establish the relationship between dividend payout ratio and the value of the firm for firms listed at the Egyptian security market. In meeting this aim, the research was guided by the following two objectives: (i) to establish the relationship between the dividend payout ratio and the stock trend in the Egyptian security market, and (ii) to determine the effect of stock trend on the value of the firm. A total of 129 firms were used in this study by examining their financial statements and ascertaining their participation in the Egyptian security market.

Regarding the first objective, the findings revealed a positive relationship between dividend payout ratio and the stock trend in the Egyptian security market. In particular, change in dividend (i.e., dividend payout ratio policy) was a result of changes in Beta and standard deviation, as exploratory variables of stock trend, across the firms appearing in the 17 sectors as listed in the Egyptian Stock Exchange. This was confirmed by both correlation and regression statistics.

Consequently, the stock trend had a positive influence on the value of the firm. In terms of the relationships between individual independent variables, and the value of the firm, dependable variable, to start with, dividend payout ratio had a positive and significant correlation with the firm. Other variables also had a positive impact on the value of the firm: ROE) had a positive correlation and a relatively high correlation coefficient, in relation to the value of the firm; The P/E ratio also indicated a positive and high correlation coefficient.

Previous researches on this study found a positive relationship between dividend policy and the value of the firm. This study is in line with the previous studies having established that dividend payout has a positive influence on the value of the firm for companies listed at Egyptian Stock Exchange. Accordingly, the research findings established that the 17 sectors in the Egyptian security market confirmed the influence of stock trend on the value of the firm. This study therefore contradicts the Modigliani and Miller (1961) dividend irrelevance theory. Therefore it matters how net earnings are divided between dividend payments to shareholders and retention. Gordon and Linter in their bird in hand theory of 1962 argue that dividend policy is not passive residue determined by the firm's need for investment funds. Therefore, dividend policy adopted by a certain firm has an effect on its value. This means that an optimal dividend policy exists among the individual companies emanating from the 17 sectors.

6.2 Recommendations

Dividend policy has an effect on the value of the firms quoted at the Egyptian security market, thus, companies should pay dividends to maintain a high value. This is consistent with the dividend

theories of the bird in hand theory and signalling theory. According to these theories dividend policy is relevant to the value of the firm contrary to the dividend irrelevance theory which argues that dividend policy has no impact on the value of the firm. Miller and Modigliani (1961) believe that firm's value is dependent on the income produced from its assets rather than from the income distribution between dividends and retained earnings. Despite paying dividends consistently and having a clear dividend policy, the management should also consider other factors such as liquidity, growth opportunities, current ratio etc. since they have an impact on the value of the firm.

6.3 Suggestions for Further Research

First, this study focused on 129 listed companies in the Egyptian Security Market. It is therefore, recommended that a narrow-based study covering a specific segment or company be done to find out the relationship between dividend payout ratio and the value of the firm. A further research should be done on the entire companies quoted at the Egyptian Security Market to find if similar results will be obtained. Due to the shortcomings of regression models, other models such as the Vector Error Correction Model can be employed into use in explaining the various relationships between the variables. The unquoted firms should also be incorporated in future researches to determine whether similar results would be generated.

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