



The Determinants of Dividend Policy for Non-financial Companies in Jordan

Bassam Jaara¹, Hikmat Alashhab², Osama Omar Jaara^{3*}

¹Al Ahliyya Amman University, Jordan, ²Coventry University, UK, ³American University of Madaba, Jordan, *Email: o.jaara@aum.edu.jo

ABSTRACT

This research investigates the determinant of dividend policy for a sample of non-financial companies in Jordan over the period 2005–2016. This study concentrates on some variables that effect the dividend pay-out ratio and the dividend yield such as: Company size, risk, investment opportunities, historical dividend, profitability and leverage. This study used the panel dataset of non-financial companies in Jordan. The results show that company size showed significant positive impact, which could solve the free cash flow problem, mature and large companies were paying more and consistent dividends. The return on equity was positive and significant, that firms with high profitability were paying larger consistent dividend pay-outs. The impact of historical dividends always positive and significant and signposts that firms trend of dividend payout rather than the random paying. Risk has a negative impact on the payout levels. The analysis was depending on some theories that affect the dividend policy such as: Dividends irrelevance theory, bird in hand theory, pecking order theory, agency problems and signaling theory.

Keywords: Dividend Policy, Corporate Pay-out, Jordan

JEL Classifications: G1, G3, G23

1. INTRODUCTION

The relationship between dividend policy and firm decisions was debated by many financial literature studies. There are a series of academic explanations and models have developed, in order to examine the main aspects that manager should consider in making decisions for dividend policy. Notably, the term dividend refers to a company's profits distributed to its shareholders through dividends, since the amount of a dividend depends on the value of the company's own shares.

After the main findings of dividend policy by Miller and Modigliani (1961) and Lintner (1956), the dividend policy became one of the biggest critical concerns in corporate finance. Over the last few decades, many studies adopted the firm's dividend policy. These studies directed to different controversial theoretical and empirical findings for dividend policy. Black (1976) illustrated the puzzle of dividend policy and quoted "*the harder we look at the concept of dividend policy the more it seems like an ending puzzle, with pieces that just do not fit together.*" However, this quote did not cover many issues in dividend. Some uncovered

issues include: The impact of dividend policy on firm value, the determinants of dividend policy and the determinants of dividend policy (independent or dependent).

Many prior studies have tried to cover these issues in the dividend world. Importantly, there is no common opinion or finding about the decision of dividend policy until now. Lintner (1956) reported that dividend pay-out ratio target in developed markets is linked to the current earnings of firms and historical dividend records.

Miller and Modigliani (1961) criticised Lintner (1956) reported the market perfections for dividend policy in financial markets, markets without tax, transaction cost and indifferent behavior of investors. On the other hand, the vast majority of researches, about the determinants of dividend policy are done in developed countries. There are series of agreements have developed about the theoretical approaches in determine the decision of dividend pay-out. Therefore, this research this research aims to critically analyse the determinants of dividend policy for the non-financial companies in Jordan. In addition, this research aims to examine the impact of profitability, previous dividends, leverage, and company

size and investment opportunities and risk on the dividend policy using a panel dataset of non-financial companies in Jordan.

Nowadays, the examination of emerging markets and the economy is worthier than other markets, and became the best knowledge for researchers because of, the limitation of studies, which are done in these markets and the high fluctuation in these markets. To achieve these objectives, this research will try to fill the gap of previous findings by analysing the determinants of dividend policy for the non-financial companies in Jordan, by using different tools of research.

The World Bank classified Jordan in the upper middle income country's level. In accordance with the Heritage Foundation's Index of Economic Freedom, the third freest economy country in Middle East and North Africa is Jordan. The market in Jordan is one of the most advanced Arab markets except the markets in the Gulf States. In 2012, the Global Retail Development Index which list the most 30 attractive retail markets in the world classified Jordan in the rank 18th. The Non-financial sector in Jordan has attracted great attention on the part of regional investors in the GCC and Lebanon. In spite of it is regarded as small sector by the global standards. The new regulations that were introduced by the Central Bank of Jordan and the political stability, favourable investment environment was created. And that's helped Jordan to avoid the global financial crisis of 2009, the financial and non-financial companies in Jordan were one of the only countries that earned profit in 2009.

2. LITERATURE REVIEW

2.1. Background

The dividend payment is one of the most vital issues for any firm. The main aim for any firm is to increase its net profit, in order to increase shareholder earnings. In addition, the dividend decision is considered to be one of the most debated issues in financial literature and previous researchers and academics have established several theoretical models to illustrate the factors that managers should take into account when making a decision on dividend distribution. Furthermore, a large number of previous academic studies have highlighted the importance of the determinants of dividend policies. In addition, previous academics and researchers have asserted that dividend policy is one of the top ten unsolved issues in financial research.

2.2. A Review of Dividend Policy Theories

The main aim of any company is to increase their profit and increase their shareholders' wealth. Importantly, a large number of previous academic studies have identified three main contradictory dividend theories. Some researchers claim that a stable increase in the payment of dividends contributes to increasing a company's value.

Another point of view argues that dividend payments have an inverse influence on a company value. In addition, another view state that dividends must be irrelevant and all effort spent on the dividend decision is wasted (Al-Malkawi et al., 2010). These different points of views are incorporated in five major theories,

namely: The irrelevance theory; bird in the hand theory; pecking order hypothesis; dividend policy and agency problems; and dividend and asymmetric information. Therefore, the following subsection provides a detailed discussion on these dividend theories.

2.2.1. Dividends irrelevance theory

The dividend irrelevance theory was first presented by Miller and Modigliani in 1961; they stated that "in perfect capital market, where there is no transaction cost, no taxes, no bankruptcy cost, investors are rational, all investors have the same opportunities and information asymmetry is there, dividend policy is irrelevant" (p. 412).

The cost of capital and the market value of any firm are not affected by dividend policy. It means that retain cash or paying a dividend does not matter. Nevertheless, there is no model of a perfect capital market, there are investors, transaction costs and firms have to pay taxes and there is an information asymmetry. This type of theory is the basis of modern corporate finance. Miller and Modigliani's irrelevance theory proposes that the value of firms depends on their future and present cash flows and that dividends have no effect on the value of the firm. Importantly, Black and Scholes (1974) and Miller and Scholes (1978) have the same view as Miller and Modigliani (1961).

2.2.2. Bird in the hand theory

The bird in hand theory was presented by Gordon (1959). This theory states that dividends are related to and have a significant influence on the value of a firm. As the name of the theory can be guessed from the adage, "A bird in hand is worth more than two in the Bush." However, the reason behind investors preferring cash in hand rather than future capital gains is that most investors are risk averse. In this theory, the bush refers to future capital gains and the bird in hand to cash dividends. Furthermore, Gordon (1959) suggests that firms paying dividend are giving the impression of generating a lot of profit and consequently have easy access to capital markets and their valuation is affected by paying dividends.

2.2.3. Pecking order theory

The pecking order theory states that some firms prefer to generate their investment opportunities from internal funds and by announcing dividends. Likewise, firms prefer debt rather than external equity if the internally generated funds are less. However, a large number of previous academic studies have argued that there are two different points of view about why some firms prefer the pecking order theory; the first point of view was given by Donaldson and Preston in 1961. The authors argue that firms prefer internally generated funds over debt because these firms want to avoid the costs related to debt and floatation. In addition, some firms increase funds by debt instead of external equity because the cost of debt is less than the external financing costs.

On the other hand, Myers and Majluf (1984) and Myers (1984) gave the second point of view. Their own point of view states that the benefits of the costs related to debt and floatation are less than the total benefits of debt financing from the part of the financial

distress risk and tax shield. They also argue that firms want to maximize the wealth of their current shareholders.

In addition, their point of view about external funds is that some firms prefer to raise funds by debt instead of external funds. This is because the sale of new shares will negatively influence the price of current shares, which is against the interests of the current shareholders. In addition, they have another view, which is that risk free debt has no effect on shareholder wealth.

2.2.4. Dividend policy and agency problem

The management representatives implement the level of dividend payment as a level determined by shareholders preference. However, the effects of dividend payment are borne by managers, suppliers and the variety of stakeholders as well as the debt holders. The agency relationship is between a debt holder's conflicts versus shareholders, and the management conflict versus shareholders. The shareholder is the only receipt of a dividend, and these are preferably large dividend distributions, all else being equal.

On the contrary, the creditors prefer to restrict dividends to maximize the firm's available resources to pay their claims. The experimental evidence discussed in the literature is reliable with the view that dividends transfer a firm's assets from a corporate pool to exclusive ownership, which has a negative effect on the safety of the claims of the debt holders.

On the one hand, in terms of shareholders relations with the managers of the company they own, everything being equal, managers, whose compensation (financial and otherwise) is linked to a fixed profitability and size, are interested in ensuring dividend pay-outs at a low level. The distribution of low dividends increases the size of the assets under management control, giving management more flexibility in choosing investment, and reducing the requirement of capital markets to finance the company's investments. Shareholders desire to manage the necessity of capital markets to finance investment.

Shareholders need a degree of managerial efficiency for investment decisions; they prefer to keep a little estimated cash with the management and to let managers access the capital markets to fund investment. This market provides services that adjust managers. Therefore, dividend policy can be used by shareholders to encourage managers to act in their investors' best interests; a high pay-out provides more managerial discipline and more observation by capital markets.

2.2.5. Dividends and asymmetric information

In a symmetric information market, all the interested participants have similar information about the firm, such as shareholders, managers, bankers, and others. Informational asymmetry exists when one of these has a superior amount of information about the current situation or future prospects of a firm. Financial practitioners and most academics believe that managers of firms have superior information about their companies than other interested parties. Any changes of dividend, such as increases or decreases, or the initiation of dividends such as the resumption

of a dividend after lengthy pause or first time dividends, should be regularly announced in the financial media.

Responding to these announcements, dividend initiations and an increase in dividend usually increase the share price, and dividend eliminations and decreasing dividends usually decrease the share price. The idea financial markets take from a dividend pay-out can be that it is a signal of a firm's future prospects. The idea that dividend pay-outs can be a signal for a firm's prospects seems to be well accepted between the chief financial officers of large US corporations (Kapoor, 2006).

Future investment opportunities and a firm's current projects may be one of the items of information that give an indication of the prospects of any firm. Empirical studies done by many researchers, such as the Miller and Rock model (1985), John and Williams model (1985) and the work of Kale et al. (1990) indicate that a firm's dividend policy, whether it is combination with other signals or exclusively, such as trading by insiders or the announcement of capital expenditure, may connect this information to market with less information.

2.2.6. Signalling theory

The signalling theory proposes that dividends transfer information about the future or current level of earnings. In this respect, Ghosh and Woolridge (1988) argue that dividends convey information, while Kale et al. (1990) state that dividends can be considered to be a signal of the stability of a firm's future cash flows. Therefore, cash flow variability can be used to examine the relationship between dividends and the stability of cash flows.

Signalling theory was first presented in the 1980s, and is designed to reflect the importance of asymmetric information between managers and shareholders. Healy and Palepu (1988); Kalay and Loewenstein (1985); Asquith and Mullins (1986); and Aharney and Swary (1980) state that signalling theory reveals how dividends act as a leak of private information signal about the company and its performance and could be used as a tool. Besides that, investors care about how the information they are able to collect from the signals that have been obtained from dividend announcements foretell the company's future profit, dividend policy and stability. Importantly, some assumptions should be held for this to be true.

2.3. Empirical Studies on the Determinants of Dividend Policies

A large number of previous academic studies have introduced detailed evidence on the determinants of dividend policies in different countries and regions. For example, Tsuji (2010), Singhania and Gupta (2012), and Asad and Yousef (2014) examined the determinants of dividend policies in Asia. The authors claim that dividend payments, a firm's growth, and its investment opportunities have significant impact on dividend policy. On the other hand, other researchers have concluded contradictory findings. For example, Baah et al. (2014) and Nuhu et al. (2014) both state that profitability and company leverage are the main determinants of dividend policy. In the same context, Ow-Yong et al. (2012) and Vaihekoski et al. (2014) examined the determinants of dividend policies in the Euro zone. In addition,

Alzomaia and Al-Khadhiri (2013), Al-Amarneh (2013) and Al-Kuwari (2009) examined dividend policy in the Middle Eastern Countries.

The empirical literature on the ratios of the dividend pay-out offers firms with no generally accepted description for the dividend payment level that the share value will be maximized. In 1976, Black asked “*what should the corporation do about dividend policy? We don't know.*” It has been said that dividend policy does not have any impact on any company's share price or cost of capital. If a dividend policy does not have any significant effects, it would be unrelated. Miller and Modigliani (1961) said that dividend pay-out is only determined by the value of the company by the earning power and the risk of the business.

A number of factors have been mentioned in previous empirical studies regarding the effect of corporate earnings ratios on dividend distribution, including risk, profitability, agency cost, cash flow and growth (Alli et al., 1993; Rozeff, 1982; Higgins, 1972; Lloyd et al., 1985; Jensen et al., 1992). For a long time profits were considered to be the key indicator of a company's ability to pay dividends. In their study, Alli et al. (1993) state that the past year and current year's profits are also important factors influencing the dividend payments. Also, Baker et al. (2012) found that the major determinant of dividend policy was the expected level of earnings in the future.

In the same regard, Singhania and Gupta (2012) employed Tobit regression model on 50 Indian companies to examine the validity of different points of views on the determinants of dividend policy in India during the period 1990–2000 and 2009–2010. In addition, several diagnostic tests were employed, in order to examine the validity of the results. The empirical findings showed that a firm's growth, investment opportunities and market capitalization (firm size) were significant determinants of company dividend policy in India. On the other hand, profitability levels and the firm's debt structure showed an insignificant relationship in the Indian companies surveyed.

In addition, Soondur et al. (2016) employed panel regression for 30 companies from the Stock Exchange of Mauritius during the period 2009–2013, The empirical results indicate there is a significant negative relationship between firms “dividend policy and their retained earnings. In addition, the findings show that there is no meaningful connection between the firm cash flow and debt to equity ratio and dividend policy.”

In another recent study, Asad and Yousef (2014) examined the impact of company leverage on dividend payment using simple OLS techniques for four manufacturing firms in Pakistan during the period 2006–2011. The results indicate that company leverage had a significant negative effect on dividend payments. Moreover, other variables being used to detect the leverage specific impact on dividend payments revealed that the effect of leverage on the distribution of dividends in the textile and sugar industries performed differently as compared with other sectors. Consequently, the findings of the study support the view that

firms' managers should decide the level of leverage and dividend policy by illuminating the interaction between dividend payment patterns and leverage. This in turn guarantees the stability of the equity market.

In the same context, Leon and Putra (2014) analyzed the determinants of dividend policy in the Indonesian Stock Exchange during the period 2006–2009, using ordinary least square regression. In their study cash flow, profitability, debt equity ratio and sales growth were the independent variables, whereas the dividend payout ratio was the dependent variable. The empirical findings suggest that profitability level and sales growth had a significant impact on the dividend payout. On the other hand, debt to equity ratio and cash flow had an insignificant impact on the dividend payout ratio.

In another line of research, previous academic studies have examined the determinants of dividend policies in African countries. For example, Nuhu et al. (2014) studied the consistency of the determinants of payout policy in non-financial and financial companies in Ghana. Using squares panel regression for companies listed on the Ghana stock exchange during the period 2000–2009, the results indicated that board size had an insignificant relationship with dividend payout. On the other hand, profitability level, taxes and company leverage had a significant relationship with dividend payout ratio.

In addition, Baah et al. (2014) examined the determinants of dividend policy for 12 companies listed on the Ghanaian stock market during the period 2006–2011. The researcher employed several independent variables to examine the determinants of dividend policy, which were: Profit after tax, liquidity, price volatility, size, earnings per share (EPS), return on equity (ROE), and growth in assets. On the other hand, dividend payout ratio was employed as a dependent variable. The results indicate that ROE, size of the company and profit after tax were the main determinants of dividend policy in the listed companies in Ghana. In addition, there was an insignificant relationship between share price and dividend payout.

Importantly, a limited number of previous academic studies have analysed the determinants of dividend policy in Middle Eastern countries. For example, Alzomaia and Al-Khadhiri (2013) studied the main factors that determine the dividend, which they represent by the dividend per share (DPS) for firms listed on the Saudi Arabian stock exchanges (TASI). A regression model was used to analyze the panel data for the 105 non-financial listed companies over the period 2004–2010. The model examined the impact of the previous dividend (DPS) for the previous year, debt to equity (D/E) ratio, growth, EPS, capital size and beta on DPS. The findings support the finding that the Saudi non-financial listed firms depend on the current EPS and the past DPS of the firm to determine their dividend payments.

Labhane and Mahakud (2016) examined the determinants of the dividend policy of Indian firms during the period 1994–2013 A regression model was used to analyse the panel data

for companies that were continuously paying dividend, The empirical results from the panel regression analysis propose that financial leverage, investment opportunity, firm size, business risk, company life cycle, profitability level, liquidity and tax are the main determinants of the dividend policy for Indian companies. These findings were robust across the period also. The results are consistent with signaling and firm life cycle theories of the dividend policy, the pecking order theory and transaction cost.

3. RESEARCH METHODOLOGY

In this research, secondary data will be used, such as articles, books and journals that are related to dividend policy. In addition, all the necessary data for the financial statements of the companies will be collected from their annual reports, Reuter's database, and the publications of the Amman stock market.

In accordance with the aims of this research, this research will critically analyse the determinants of dividend policy for non-financial companies in Jordan. In the same regard, this research will examine the impact of profitability, previous dividends, leverage, company size, and investment opportunities and risk on dividend policy using a panel dataset of non-financial companies in Jordan. Therefore, this research will attempt to collect the financial data of 100 non-financial companies in Jordan for the period covering the years 2005–2016.

3.1. Regressions Analysis

$DDy = B_0 + B_1 \text{ size} + B_2 \text{ risk} + B_3 \text{ investment opportunities} + B_4 \text{ historical dividend} + B_5 \text{ Profitability} + B_6 \text{ Leverage}$

3.1.1. Variable

Dividend pay-out ratio is defined as the percentage of earnings distributed to shareholders or the money left over after meeting all the necessary costs such as interest, taxes and devaluations, to mention some that the organizations give to their stakeholders. However, many scholars have employed dividend pay-out ratio as a dependent variable, in order to examine the determinants of dividend policies; these researchers include: Rozeff (1982); Lloyd et al. (1985); Jensen et al. (1992); Dempsey and Laber (1992); Alli et al. (1993); Moh'd et al. (1995); Holder et al. (1998); Chen et al. (1999); Saxena (1999); Mollah et al. (2002); Manos (2002); and Travlos et al. (2002). Importantly, this research will employ dividend yield and DPS as a robustness test for independent variables. Therefore, the following equations show the dependent and independent variables for each statistical model.

$D\% = B_0 + B_1 \text{ size} + B_2 \text{ risk} + B_3 \text{ investment opportunities} + B_4 \text{ historical dividend} + B_5 \text{ Profitability} + B_6 \text{ Leverage}$

$DPS = B_0 + B_1 \text{ size} + B_2 \text{ risk} + B_3 \text{ investment opportunities} + B_4 \text{ historical dividend} + B_5 \text{ Profitability} + B_6 \text{ Leverage}$

$DY = B_0 + B_1 \text{ size} + B_2 \text{ risk} + B_3 \text{ investment opportunities} + B_4 \text{ historical dividend} + B_5 \text{ Profitability} + B_6 \text{ Leverage}$

3.1.2. Independent variables

3.1.2.1. Company size

The size of a company plays a big role in the decision of what type of dividend policy to be used. Most studies have suggested that the size of a company has a propositional relationship to the amount of dividend paid. In general, the larger the company the higher and more frequent are its cash flows, leading to a better return on investment and a less volatile company. It also indicates that the external and internal reach of markets is larger and more expanded. Therefore, the hypothesis of company size is formulated as follows:

H0: Company size has an insignificant relationship with dividend pay-out.

H1: Company size has significant relationship with dividend pay-out.

Company size = $\text{Log}(\text{Total Assets})$

3.1.2.2. Profitability

Al-Kuwari (2009) suggests that the profitability of a company is a primary indicator that has an effect on the dividend policy of the business. Some researchers have suggested that there is a positive relationship between dividend policy and the profitability of a firm; this relationship is considered an important predictor of the signalling theory. This is mean that the positive signs are the firm will pay dividend when it is making profits. Therefore, the hypothesis of profitability is formulated as follows:

H0: Profitability level has a positive impact on the dividend pay-out.

H1: Profitability level has a negative impact on the dividend pay-out.

$ROE = \frac{\text{Net income after tax}}{\text{Total equity}}$

3.1.2.3. Historical dividend

The continuity or pattern of past dividends is another factor. Most directors and managers in the real world are certain that companies, which pay stable dividend streams in the short-term, are preferable because shareholders prefer the steady dividend, and it is more significant than changes in dividend. Therefore, the hypothesis of historical dividend is formulated as follows:

H0: Dividend payouts have a positive/negative relationship with the previous year's dividend.

H1: Dividend payouts have an insignificant relationship with the previous year's dividend.

3.1.2.4. Financial leverage

Several empirical studies have argued the impact of financial leverage on dividend policy and they found that financial leverage had a negative impact on dividend policy (Al-Kuwari, 2009). Their argument is based on the theory that highly leveraged companies aim to preserve their internal financial resources in order to

cover their obligations, instead of giving cash dividends to their shareholders. Therefore, the hypothesis of financial leverage is formulated as follows:

H0: Leverage has a positive/negative relationship with the dividend pay-out ratio.

H1: Leverage has insignificant relationship with the dividend pay-out ratio.

$$\text{Company leverage} = \frac{\text{Total debt}}{\text{Total assets}}$$

3.1.2.5. Company risk

Rozeff (1982) stated that business risk is one of the factors that has an effect on dividend policy when a company does not have enough cash to cover their liabilities, such as their dividend pay-out. The relationship between expected profit and actual profit will be uncertain if the risks of the business are high. Therefore, the obligation of paying a high dividend will be avoided by the firm. Therefore, the hypothesis of company risk is formulated as follows:

H0: Company risk has a positive/negative relationship with dividend pay-out.

H1: Company risk has an insignificant relationship with dividend pay-out ratio.

$$\text{Company risk} = \text{STD (ROA)}$$

3.1.2.6. Growth opportunities

Another indicator of dividend policy is related to the expansion and growth opportunities of firms. Chang and Rhee (2003) stated that there is an inverse relationship between growth opportunities and dividend earnings as companies tend to retain and keep the profits gained because they will be used as funds for further finance enlargements and growth. Therefore, the hypothesis of growth opportunity is formulated as follows:

H0: Company growth opportunity has a positive impact on the dividend pay-out

H1: Company growth opportunity has a negative impact on the dividend pay-out.

$$\text{Market to book ratio} = \frac{\text{Book value per share}}{\text{Market value per share}}$$

4. FINDINGS

4.1. Descriptive Analysis

Table 1 shows all the variables this work uses in the dynamic model developed later. There are various theoretical underpinnings here, e.g., signalling theory, agency theory, life cycle theory, partial adjustment theory, etc. The variables are chosen so as to incorporate all these variables. EPS is the proxy for expected future earnings, negative figure for EPS means loss making for

the firms, and if this variable is found to be positively correlated with dividend pay-out this might support signalling theory. DPS is the direct measure of dividend pay-out level, and this is widely used in the literature. There are other dividend pay-out variables; namely, dividend yield, and dividend pay-out ratio; these variables are used to make the model more robust, which determines whether the same results can be obtained if the dependent variables for the models are changed. ROA is again a proxy for profitability and this might also hint at the signalling model.

Gearing is mainly the proxy for the long term debt level, and therefore it also reflects the level of the default risk, since the standard theories suggest that the greater the debt level is the higher the default risk, and the impact of default risk on dividend level is debatable as will be clarified later. There are direct risk measures too, which are used in a way similar to standard deviation of ROA, and the impact of this measure on dividend pay-out will be analysed in the regression models. One statistics of interest is that the standard deviation for the last year's dividend figure is the lowest among all the other variables, and this hints at the trend of dividend pay-out or shows that there is always an adjustment process taking place, rather than random pay outs. Another variable of interest is the log of the total assets of firms, which reflects the size and the impact of size on dividend pay-outs and certainly reflects the free cash flow hypothesis, which means that if the maturity of firms increase with their size there is a problem of less investment opportunity and then firms may increase dividend pay-out.

Specifically, in this work three main strands of literature will be studied:

1. Signalling theory; which holds that under adverse selection problem good and solvent firms can send a signal of quality earnings via dividend pay-outs. Hence, there needs to be robust analysis of the impact of factors like profitability on dividend pay-out, and if there is an indication of positive significant impact then there can be a good evidence of signalling (Kale et al., 1990).
2. Dividend life cycle theory: This theory holds that dividends can be used to solve agency conflicts that might arise in various phases of a company's life cycle; here the word life cycle is used to signify financial life cycle, which means that the capital structure of firms keeps changing over the life cycle and so do the dividend pay-out. The impact of dividends is mainly important when there is a free cash flow problem, i.e. when firms are mature and have less good investment opportunities it might be better to pay out more rather than retaining so that managers cannot get involved in misusing the free cash flow. Hence, there should be life cycle variables whose impact should be tested on the dividend pay-out; if the impacts are positive and significant then this theory is valid.
3. Partial adjustment theory: It is a well-documented fact that dividends are paid out following a certain target ratio, i.e. firms based on some intrinsic factors set the target pay-out ratio and then adjust towards the same, and the speed of adjustment varies across firms, sectors, and even countries. Hence, overall the pay-out is certainly not random, and one simply needs to test if the past dividends impact strongly on the current dividend pay-out levels.

Table 1: Descriptive statistics

Descriptive statistics						
Variables	N	Minimum	Maximum	Mean		Std. deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
EPS	1033	-110.0403	11.7972	-0.191308	0.1367284	4.3944928
DPS	1033	0	3	0.06	0.006	0.185
Div pay-out ratio	1032	0.000%	147.896%	26.951%	1.270%	40.789%
Div yield	852	0		0.02	0.001	0.030
ROA	1033	-96.87%	84.01%	1.49%	0.35%	11.20%
Gearing	1033	0.00%	227.53%	32.06%	0.74%	23.67%
Company size (log assets)	1033	5.3636	9.2469	7.2806	0.0191	0.6144
Last year dividend	906	0	3	0.07	0.006	0.190
Risk (SD ROA)	906	0.0021%	69.7335%	4.0837%	0.2227%	6.7026%
Valid N (listwise)	721					

SD: Standard deviation, ROE: Return on equity, DPS: Dividend per share, EPS: Earnings per share

For the purpose of analysis some relevant proxy variables are chosen (as listed above in the summary statistics table), again for robustness to check various regression models that are run. The expectation is that if the results are significant and valid in all these models the results can be considered strong and robust. Certainly, there are some limitations; for example, the best model to run may be system GMM, which is suitable to test the partial adjustment model. However, since the objectives here are more basic, standard dynamic panel data models are used with three variants, namely: Pooled, fixed effect, and random effect.

4.2. Correlation Analysis

Table 2 is the detailed output for Pearson correlation among the variables used in the regression models. Specifically interesting is the correlation between the dividend variables with others, e.g.: Size, gearing, ROE etc. These factors, which were later used as the explanatory variables, were life cycle variables; for example, size reflects the maturity level of the firms. This factor has a strong positive significant correlation with DPS, which is in accordance with the life cycle theory of dividends. Gearing, which represents the debt to equity ratio, mainly the long-term debt, was found to be significantly negatively correlated with the DPS; this may be related to the default risk factor, since as gearing increases the cost of capital increases too after a certain level, which was again reflected on the pay-out policy. Other variables, such as EPS, are positively correlated with the DPS variable and this was more related to signalling theory since DPS can be used to signal future EPS. Risk measure was not found to be significantly related with the DPS variable; however, there are various alternative risk measures that can be used to verify further.

Since there are some significant correlation values further panel data regression was undertaken. The panel data regression models were made dynamic since lagged dependent variables were used. Another important variable is the lagged DPS, which also had a significant correlation with DPS, and this hints that there was a partial adjustment of dividends which the firms preferred to follow rather than paying dividends randomly, and hence the dividends are correlated across time.

In the empirical literature, there are many studies, which analyse dividend adjustments; these studies suggest that dividends are

adjusted according to target levels, and target levels again are a function of various unobserved firm level variables. In the regression model section a dynamic panel model was built which sought to capture the adjustment process. Gearing had the maximum negative correlation with EPS, which means that profitability and leverage were negatively correlated, which again supports the trade-off theory. This suggests that when the debt level was enhanced the cost of capital fell to some extent and then started rising again, which had a negative impact on profitability. Mehta et al. (2014) found that Gearing had a significant influence on dividend payment in Pakistan's commercial banks.

The previous year's dividend pay-out was positively correlated with all the dividend variables (Pruitt and Lawrence, 1991). For example, with dividend pay-out ratio, which means that every period there was a steady flow of dividend from the free cash flow, and this again may hint at a partial adjustment process of the dividend pay-out, which suggest that dividend pay-out followed a certain set pattern rather than being erratic. Pearson correlation analysis provides a guideline for further regression based analysis, and since the correlation levels are significant this means that regression models were relevant here. However, since the nature of the data was dynamic and panel, simple OLS regression would have biased the results, hence panel data regression was required; again three different panel data models were used: Pooled; fixed effect; and random effects, to test the robustness of results. Specifically the fixed effect model was important since it captured the firm specific impacts on the dependent variables.

4.3. Panel Regression Analysis

4.3.1. Dependent variable: Dividend pay-out ratio

Table 3 is the first model for the panel data regression, which has dividend pay-out ratio as the dependent variables, and among the explanatory variables are the life cycle variables. There are three results shown: One from the pooled regression model; one from the random effects model; and the last from the fixed effects model. Across all the models most of the life cycle variables had strong significant impacts; size had a positive impact, ROE had a positive impact, gearing had a negative impact, lagged DPS had a positive significant impact, and risk had a negative impact. All these impacts were in accordance with the life cycle model (Grullon et al. 2002). Since size was the proxy for maturity the impact of larger size was larger dividends and this can be rooted

Table 2: Correlation analysis

Correlations									
	DPS	Div Pay %	Div Y	EPS	ROE	Gearing	Co Size Assets	Last Year Div	Risk (SD ROA)
DPS									
Pearson correlation	1	0.446**	0.515**	0.078*	0.014	-0.070*	0.337**	0.814**	-0.049
Sig. (2-tailed)		0.000	0.000	0.012	0.655	0.024	0.000	0.000	0.139
N	1033	1032	852	1033	1033	1033	1033	906	906
Div Pay %									
Pearson correlation	0.446**	1	0.833**	0.064*	0.021	-0.152**	0.253**	0.331**	-0.218**
Sig. (2-tailed)	0.000		0.000	0.039	0.490	0.000	0.000	0.000	0.000
N	1032	1032	851	1032	1032	1032	1032	905	905
Div Y									
Pearson correlation	0.515**	0.833**	1	0.081*	0.029	-0.086*	0.264**	0.349**	-0.174**
Sig. (2-tailed)	0.000	0.000		0.017	0.403	0.013	0.000	0.000	0.000
N	852	851	852	852	852	852	852	760	760
EPS									
Pearson	0.078*	0.064*	0.081*	1	-0.050	-0.176**	-0.039	0.100**	-0.163**
Correlation									
Sig. (2-tailed)	0.012	0.039	0.017		0.108	0.000	0.206	0.003	0.000
N	1033	1032	852	1033	1033	1033	1033	906	906
ROE									
Pearson correlation	0.014	0.021	0.029	-0.050	1	-0.071*	0.021	0.014	-0.043
Sig. (2-tailed)	0.655	0.490	0.403	0.108		0.023	0.490	0.680	0.197
N	1033	1032	852	1033	1033	1033	1033	906	906
Gearing									
Pearson correlation	-0.070*	-0.152**	-0.086*	-0.176**	-0.071*	1	0.309**	-0.073*	0.082*
Sig. (2-tailed)	0.024	0.000	0.013	0.000	0.023		0.000	0.028	0.013
N	1033	1032	852	1033	1033	1033	1033	906	906
Co Size Assets									
Pearson correlation	0.337**	0.253**	0.264**	-0.039	0.021	0.309**	1	0.320**	-0.175**
Sig. (2-tailed)	0.000	0.000	0.000	0.206	0.490	0.000		0.000	0.000
N	1033	1032	852	1033	1033	1033	1033	906	906
Last Year Div									
Pearson correlation	0.814**	0.331**	0.349**	0.100**	0.014	-0.073*	0.320**	1	-0.033
Sig. (2-tailed)	0.000	0.000	0.000	0.003	0.680	0.028	0.000		0.316
N	906	905	760	906	906	906	906	906	906
Risk (SD ROA)									
Pearson correlation	-0.049	-0.218**	-0.174**	-0.163**	-0.043	0.082*	-0.175**	-0.033	1
Sig. (2-tailed)	0.139	0.000	0.000	0.000	0.197	0.013	0.000	0.316	
N	906	905	760	906	906	906	906	906	906

**Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed). SD: Standard deviation, ROE: Return on equity, DPS: Dividend per share, EPS: Earnings per share

Table 3: Panel regression analysis-dependent variable: Dividend pay-out ratio

Dependent variable	Pooled OLS			Random-effects (GLS)			Fixed-effects		
	Coefficient	P value		Coefficient	P value		Coefficient	P value	
Dividend pay-out ratio									
Const	-0.793	0.000	***	-0.904	0.001	***	-0.060	0.930	
Co_Size_Assets	0.162	0.000	***	0.175	0.000	***	0.058	0.539	
ROE	0.066	0.000	***	0.043	0.022	**	0.017	0.434	
Last_Year_Div	0.336	0.000	***	0.280	0.000	***	0.226	0.007	***
Gearing	-0.471	0.000	***	-0.415	0.000	***	-0.275	0.043	**
Risk_SD_ROA_	-1.095	0.000	***	-0.486	0.017	**	-0.328	0.129	
Hist_Price_Tang	0.046	0.000	***	0.030	0.020	**	0.012	0.417	
R ² and Adj R ²	0.228	0.222					0.599	0.518	
F (6, 749), P value (F)	36.926	0.000					7.383	0.000	
Hausman test and P value				29.4396	0.000				

SD: Standard deviation, ROE: Return on equity, OLS: Ordinary least squares, GLS: Generalized least squares

in the agency theory explanation (Raei et al., 2012) found the same analysis in his study.

The impact of ROE is also to be explained by the fact that profitable firms prefer to pay greater dividends to signal their future earnings

to the market. Gearing had a negative impact, which also implicitly shows the impact of default risk on the dividend pay-out. There were two time variables, one the lagged pay-out and the other the historical price, and both seems to have had a positive significant effect and this may be related to adjustment theories.

Recent papers have shown that in comparison to signalling theories, life cycle theories are stronger in predicting future dividend patterns; along with this partial adjustment theory have also been proved to be very reliable. However, one thing worth noting is that even for partial adjustment theories the factors which help firms to set target pay-out levels are also guided by life cycle factors and signalling factors such as information asymmetry. Hence, the above results can be taken as providing support for all these major arguments, and the results are almost always significant.

Overall R^2 was 23% and may be improved upon in the later models; since in the later models where more direct measures were used, R^2 improved. Another important feature of payout ratio was that it was roughly the proxy for the ratio between retained earnings and the payout from free cash flow as dividends; hence this is a good variable for testing the lifecycle hypothesis. Again the results show that there were strong impacts of lifecycle, i.e. for the large and mature firms it was always better to pay out dividends to solve agency problems arising from the free cash flow hypothesis. Pooled regression analysis does not take in consideration the firm specific effects, hence the fixed effect model was run alongside; however, since the results obtained were significant throughout it is possible to draw general inferences. These findings are quite similar to the results of Arshad et al. (2013) research in Pakistan.

4.3.2. Dependent variable: DPS

DPS is the most standard variable used in the literature. DPS can directly measure the impact of factors on pay-out policies. The first significant impact across all the models was that of firm size, which directly supports the life cycle theory. Large and mature firms suffered from the free cash flow problem, and hence to mitigate the agency conflict paid out dividends, which the market also accepted as a positive signal that the shareholders wealth was not being destroyed (Table 4).

ROE also had a significant positive impact on the DPS, which means that firms that were more profitable paid higher dividends, and this can be related to the signalling theory, which states that firms that are more profitable prefer to signal their profitability via paying steady dividends. The previous year's dividends again had a significant positive impact on DPS for the current period, and this means that there was a trend in the pay-out rather than random pay-out, and this is again related to the phenomenon known as dividend smoothing.

In addition, gearing (or the level of long-term debt) had a negative significant impact on the pay-out, and this reflects that underlying default risk. There are some contradictions here, since the mainstream literature also holds that when default risk is very high firms may try to pay large dividends to their shareholders since shareholders prefer large dividends; this is known as risk shifting. Here however, a negative significant impact did not give support to this suggestion. The market to book ratio variable was positively correlated with the DPS of the current period; as this ratio measured growth opportunity, this reflects signalling since profitable firms might signal dividends to their market participants, whereby firms with higher growth need more funds to cover their financial growth, which reduces their dividend payments.

Overall, the R^2 was 69% and can be considered high, so a high goodness of fit, F values are highly significant across the models, corresponding P values too are highly significant. Three models were built to test for the robustness of the results, and across all the models significant and similar nature of impacts were observed, which clarifies the impact of life cycle theory. One limitation with DPS is that it is a matter of fact that large firms pay larger absolute dividends, hence this biasness can interact with the life cycle factor influences.

4.4. Dependent Variable: Dividend Yield

In the Table 5 model, dividend yield was used as the dependent variable, keeping the explanatory variables the same; the nature of significance remains similar. Size had a large positive impact, though the significance level reduced for the fixed effect model, which means that there were firm specific variables which may not be reflected in the model.

ROW in this case was not significant for the random effect and fixed effect models, which hints at the fact that there were firm specific variables that had greater impact than ROE on the dividend yield. Hence, from the perspective of signalling DPS was a better candidate. Lagged dividend had a strong positive significant role to play in this time too, which supports the adjustment effect.

Gearing had a very consistent negative impact on the yield across all the models. Gearing had perhaps the most consistent impact among all the variables on the dependent variables, and this strongly suggest that the greater the default risk is, the lower the pay-out. This is further supported by the negative significant impact of the risk measure, which was the volatility measure of the ROA. Hence, greater volatility means lower dividend pay-out. Dividend yield

Table 4: Panel regression analysis-dependent variable: Dividend per share

Dependent variable	Pooled OLS			Random-effects (GLS)			Fixed-effects		
	Coefficient	P value		Coefficient	P value		Coefficient	P value	
DPS									
Const	-0.262	0.000	***	-0.262	0.001	***	-0.506	0.049	**
Co_Size_Assets	0.037	0.000	***	0.037	0.000	***	0.079	0.026	**
ROE	0.026	0.000	***	0.026	0.022	***	0.009	0.277	
Last_Year_Div	0.762	0.000	***	0.762	0.000	***	0.494	0.000	***
Gearing	-0.060	0.006	***	-0.060	0.00583	***	-0.141	0.006	***
Risk_SD_ROA_	0.015	0.826		0.015	0.8262		0.016	0.847	
Hist_Price_Tang	0.018	0.000	***	0.018	0.020	***	0.006	0.259	
R ² and Adj R ²	0.696	0.693					0.771	0.724	
F (6, 749), P value (F)	285.538	0.000					16.642	0.000	
Hausman test and P value				173.075	0.000				

SD: Standard deviation, ROE: Return on equity, OLS: Ordinary least squares, GLS: Generalized least squares

Table 5: Panel regression analysis-dependent variable: Dividend yield

Dependent variable	Pooled OLS			Random-effects (GLS)			Fixed-effects	
	Coefficient	P value		Coefficient	P value		Coefficient	P value
Dividend yield								
Const	-0.045	0.001	***	-0.071	0.001	***	-0.066	0.179
Co_Size_Assets	0.009	0.000	***	0.013	0.000	***	0.013	0.058 *
ROE	0.003	0.020	**	0.001	0.428		-0.001	0.519
Last_Year_Div	0.035	0.000	***	0.021	0.000	***	0.012	0.057 *
Gearing	-0.020	0.000	***	-0.022	0.00172	***	-0.025	0.012 **
Risk_SD_ROA_	-0.063	0.000	***	-0.019	0.2055		-0.005	0.753
Hist_Price_Tang	0.002	0.019	**	0.001	0.417		-0.001	0.537
R ² and Adj R ²	0.188	0.181					0.605	0.526
F (6, 749), P value (F)	28.886	0.000					7.600	0.000
Hausman test and P value				32.1506	0.000			

SD: Standard deviation, ROE: Return on equity, OLS: Ordinary least squares, GLS: Generalized least squares

also had the same impact as that of the dividend pay-out ratio, since this helped to indicate whether there was a steady pay-out pattern, since the dividend yield was based on the profit after taxation.

This finding may be related to the lifecycle theory too, since greater volatility of ROA might mean that the firm is not mature enough to have a steady cash flow, hence it is better not to pay large dividends and rather to reinvest. Here the goodness of fit was in the range of 20%, which was lower than the earlier models, even though the F values and p values were highly significant. R square value increased significantly for the fixed effect model though, which may hint at the fact that fixed effect is the most suitable model here to capture firm specific effects. A more sophisticated modelling would have been system (GMM) model, which is appropriate for dynamic panel data modelling.

5. DISCUSSION AND POLICY IMPLICATIONS

The results show that there is evidence in support of three main theories: One, life cycle theory: Two, signalling theory: And three partial adjustment theory. The implications of these theories as obtained from the results of the analysis. For example; company size showed significant positive impact on the dividend pay-out, whereas the company ROE showed mostly significant and positive. In addition, the lagged DPS always had a significant and positive impact on the dividend pay-out.

The results show that there is evidence in support of three main theories: One, life cycle theory: Two, signalling theory: And three partial adjustment theory. The implications of these theories as obtained from the results are as follows:

1. The impact of size was robust and positive, which shows that to solve the free cash flow problem large and mature firms were paying greater and more consistent dividends.
2. The impact of ROE was mostly significant and positive, which hints that the profitable firms signalled profitability via larger and more consistent dividend pay-outs
3. Lagged DPS always had a significant and positive impact on pay-out levels, and this indicates that there was a trend of dividend pay-outs rather than random paying, which can be related to the partial adjustment models.

4. Risk measures, whether via gearing levels or via risk measures, were always significantly negatively correlated with pay-out levels, and this shows that the so called risk shifting may not have been happening for the firms chosen.
5. However, there was certainly scope to improve the basic model by introducing some firm specific variables; namely, the information asymmetry measure between the insider managers and the shareholders. This variable is very crucial since both agency conflict as well as life cycle models are based on the assumption of information asymmetry. Hence, if information asymmetry had a positive impact on the dividend pay-outs this should confirm the theories. In the analysis so far there are some hints of this and this is most reflected in the size variable, since in other empirical studies size has been used as the information asymmetry proxy. Therefore, greater size may reflect greater information asymmetry, and since there is always a positive significant impact of the same on dividend pay outs this can be taken as evidence of support for both signalling and lifecycle theories.

Overall the paper gives robust evidence for the relevant theories, and is also based on the unique atmosphere of Jordan, whose economic environment is significantly different from that of the developed economies, mainly referring to the tax regime. There are strong arguments that when tax regimes are different the dividend pay-out strategies are also significantly different. However, the basic results obtained here show that the impact of basic theories was even stronger and even if regimes change, the impacts remain of the same nature.

Dynamic panel data analysis was undertaken here by following robust fixed effects and random effects models, and comparatively fixed effects models were more significant, which shows that the firm level specific effects were a more important determinant of the dividend levels. This paper hopes to have laid down the platform for more detailed future work, which might be related to risk shifting, partial adjustment, or more in depth signalling theories.

REFERENCES

- Aharnoy, J., Swary, I. (1980), Quarterly dividend and earnings announcements and stockholders returns: An empirical analysis. *Journal of Finance*, 35, 1-12.

- Al-Amameh, A. (2013), Why do Jordanian firms hold cash? An empirical examination of the industrial companies listed in ASE. *International Journal of Academic Research*, 5(1), 103-111.
- Al-Kuwari, D. (2009), Determinants of the dividend policy in emerging stock exchange: The case of GCC countries. *Global Economy and Finance Journal*, 2, 38-63.
- Alli, K., Khan, A., Ramirez, G. (1993), Determinants of corporate dividend policy: A factorial analysis. *The Financial Review*, 42, 321-343.
- Al-Malkawi, H., Rafferty, M., Pillai, R. (2010), Dividend policy: A review of theories and empirical evidence. *International Bulletin of Business Administration*, 9(9), 171-200.
- Alzomaia, T., Al-Khadhiri, A. (2013), Determination of dividend policy: The evidence from Saudi Arabia. *International Journal of Business and Social Science*, 4(1), 181-192.
- Arshad, U., Zameer, H., Rasool, S., Iqbal, S. (2013), Determinants of dividend policy: A case of banking sector in Pakistan. *Middle East Journal of Scientific Research*, 18(3), 410-424.
- Asad, M., Yousef, S. (2014), Impact of leverage on dividend payment behavior of Pakistani manufacturing firms. *International Journal of Innovation and Applied Studies*, 6(2), 216-21.
- Asquith, P., Mullins, D. (1986), Signalling with dividends, stock repurchases and equity issues. *Financial Management*, 15, 27-44.
- Baah, B., Tawiah, R., Eric, O. (2014), Industry sector determinants of dividend policy and its effect on share prices in Ghana. *International Journal of Economics, Business and Finance*, 2(5), 1-19.
- Baker, H.K., Chang, B., Dutta, S., Saadi, S. (2012), Why firms do not pay dividends: The Canadian experience. *Journal of Business Finance and Accounting*, 39(9-10), 1330-1356.
- Black, F. (1976), The dividend puzzle. *Journal of Portfolio Management*, 2, 5-8.
- Black, F., Scholes, M. (1974), The effects of dividend yield and dividend policy on common stock prices and returns. *Journal of Financial Economics*, 1, 1-22.
- Chang, R.P., Rhee, S.G. (2003), The impact of personal taxes on corporate dividend and capital structure decisions. *Financial Management*, 19(2), 21-31.
- Chen, C.R., Steiner, T.L. (1999), Managerial ownership and agency conflicts: A nonlinear simultaneous equation analysis of managerial ownership, risk taking, debt policy, and dividend policy. *Financial Review*, 34(1), 119-136.
- Dempsey, S., Laber, G. (1992), Effects of agency and transition costs on dividend payout ratios: Further evidence of the agency-transaction cost hypothesis. *Journal Financial Research*, 15, 317-321.
- Donaldson, G. (1961), *Corporate Debt Capacity: A Study of Corporate Debt Policy and the Determination of Corporate Debt Capacity*. Boston: Harvard University, Graduate School of Business Administration, Division of Research.
- Easterbrook, F. (1984), Two agency-cost explanations of dividends. *American Economic Review*, 74, 220-230.
- Fama, E., Blasiak, H. (1968), Dividend policy: An empirical analysis. *Journal of the American Statistical Association*, 63, 1132-1161.
- Fearnley, S., Beattie, V.A., Brandt, R. (2005), Auditor independence and audit risk: A reconceptualization. *Journal of International Accounting Research*, 4(1), 39-71.
- Ghosh, C., Woolridge, J.R. (1988), Stock-market reaction to growth induced dividend cuts: Are investors myopic? *Managerial and Decision Economic*, 10(1), 25-35.
- Gordon, M. (1959), Osmotic and ionic regulation in Scottish brown trout and sea trout (*Salmo trutta* L.). *Journal of Experimental Biology*, 36(2), 253-260.
- Grullon, G., Michaely, R., Swaminathan, B. (2002), Are dividend changes a sign of firm maturity? *Journal of Business*, 75, 387-424.
- Hausman, J.A. (1978), Specification tests in econometrics. *Econometrica*, 46(6), 1251-1271.
- Healy, P., Palepu, K. (1988), Earning information conveyed by dividend initiation and omissions. *Journal of Financial Economics*, 21, 149-176.
- Higgins, R. (1972), The corporate dividend-saving decision. *Journal of Financial and Quantitative Analysis*, 6, 1527-1541.
- Holder, M., Langrehr, F., Hexter, J. (1998), Dividend policy determinants: An investigation of the influences of stakeholder theory. *Financial Management*, 27, 73-82.
- Jensen, G., Solberg, D., Zorn, T. (1992), Simultaneous determination of insider ownership, debt, and dividend policies. *Journal of Financial and Quantitative Analysis*, 27, 247-263.
- John, K., Williams, J. (1985), Dividends, dilution, and taxes: A signalling equilibrium. *Journal of Finance*, 40, 1053-1070.
- Kalay, A., Loewenstein, U. (1985), Predictable events and excess returns: The case of dividend announcements. *Journal of Financial Economics*, 14, 423-449.
- Kale, A., Jayant, R., Thomas, H., Noe, M. (1990), Dividends, uncertainty and underwriting costs under asymmetric information. *The Journal of Financial Research*, 13, 265-277.
- Kapoor, S. (2006), *Impact of Dividend Policy on Shareholders' Value: A Study of Indian Firms*. Synopsis of the Thesis to be Submitted in Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Management.
- Labhane, N.B., Mahakud, J. (2016), Determinants of dividend policy of Indian companies. *Paradigm*, 20(1), 36-55.
- Leon, F., Putra, P. (2014), The determinant factor of dividend policy at non-finance listed companies. *International Journal of Engineering, Business and Enterprise Applications (IJEBA)*, 7(1), 14-113.
- Lintner, J. (1956), Distribution of incomes of corporations among dividends, retained earnings, and taxes. *American Economic Review*, 46, 97-113.
- Lloyd, W., Jahera, J., Page, D. (1985), Agency costs and dividend Payout ratio. *Quarterly Journal of Business and Economics*, 24, 19-29.
- Manos, R. (2002), *Dividend Policy and Agency Theory: Evidence on Indian Firms*. Working Paper. Institute for Development Policy and Management, University of Manchester.
- Mehta, A., Hashmi, I., Irshad, A. (2014), Determinants of corporate dividend policy: An empirical study of banking sector of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 5(11), 360-369.
- Miller, H., Scholes, M. (1978), Dividends and taxes. *Journal of Financial Economics*, 6, 333-364.
- Miller, M., Modigliani, F. (1961), Dividend policy, growth and the valuation of shares. *Journal of Business*, 34, 411-433.
- Miller, M., Rock, K. (1985), Dividend policy under asymmetric information. *Journal of Finance*, 40, 1031-1051.
- Moh'd, M., Larry, P., James, R. (1995), An investigation of dynamic relationship between agency theory and dividend policy. *The Financial Review*, 30, 367-385.
- Mollah, S., Keasey, K., Short, H. (2002), *The Influence of Agency Costs on Dividend policy in an Emerging Market: Evidence from the Dhaka Stock Exchange*, Working Paper.
- Myers, S., Majluf, N. (1984), Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13, 187-224.
- Myers, S.C. (1984), The capital structure puzzle. *Journal of Finance*, 39(3), 575-592.
- Nuhu, E., Musah, A., Senyo, D. (2014), Determinants of dividend Payout of financial firms and non-financial firms in Ghana. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(3), 109-118.

- Ow-Yong, K., Poshakwale, S., Patra, T. (2012), Determinants of corporate dividend policy in Greece. *Applied Financial Economics*, 22(13), 1079-1087.
- Pruitt, S.W., Lawrence, J.G. (1991), The interaction between investment, financing and dividend decisions of Major US firms. *Financial Review*, 26(3), 409-430.
- Raei, R., Moradi, M., Eskander, H. (2012), Do dividend policies signal corporate operating characteristics? *Journal of Applied Finance and Banking*, 2, 13-24.
- Rozeff, M. (1982), Growth beta and agency costs as determinants of dividend payout ratios. *The Journal of Financial Research*, 5, 249-259.
- Saxena, A. (1999), Determinates of Dividend Policy: Regulated Versus Unregulated Firms. Financial Management Association Conference.
- Singhania, M., Gupta, A. (2012), Determinants of corporate dividend policy: A tobit model approach. *The Journal of Business Perspective*, 16(3), 153-162.
- Soondur, S., Maunick, D., Sewak, S. (2016), Determinants of the Dividend Policy of Companies Listed on the Stock Exchange of Mauritius. *Proceedings of the Fifth Asia-Pacific Conference on Global Business, Economics, Finance and Social Sciences*.
- Travlos, N., Murinde, V., Naser, K. (2002), Dividend Policy of Companies Listed on Young Stock Exchanges: Evidence from the Muscat Stock Exchange. Working Paper.
- Vaihekoski, M., Löflund, A., Liljeblom, E., Brunzell, T. (2014), Dividend policy in Nordic listed firms. *Global Finance Journal*, 25, 124-135.