DETERMINANT OF DIVIDEND PAYOUT RATIO: EVIDENCE FROM PUBLIC LISTED COMPANY IN MALAYSIA

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By

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ABSTRACT

This dissertation examines the determinants of dividend payout ratio of 139 public listed companies in Malaysia over the period 2001 to 2014. Data are collected from DataStream database and analysed using Ordinary Least Squares (OLS). Dividend payout ratio is measured by dividend value divided by total asset, while the determinant variables are size, profitability, cash flow, sales growth, leverage ratio and historical growth.

The findings demonstrate that size, profitability, leverage ratio and historical growth influence the dividend payout ratio of Malaysian public listed companies in the period studied. Size negatively influence dividend payout ratio, profitability positively influence dividend payout ratio, leverage ratio has a positive relationship with the dividend payout ratio and lastly historical growth negatively determine dividend payout ratio. This implies that in Malaysia, bigger size companies pays less dividend, more profitable companies pay more dividend, higher leverage companies pay more dividend and finally, lower growth companies pay higher dividend.

Keywords: Dividend Payout Ratio, Malaysia

ABSTRAK

Disertasi ini mengkaji penentu nisbah pembayaran dividen bagi 139 syarikat tersenarai awam di Malaysia sejak 2001 hingga 2014. Data yang dikumpul diperolehi daripada pangkatan data "DataStream" dan dianalisis menggunakan "Ordinary Least Squares". Nisbah pembayaran dividen yang diukur adalah berdasarkan nilai dividen dibahagikan dengan jumlah aset. Manakala pembolehubah bebas adalah saiz, keuntungan, aliran tunai, pertumbuhan jualan, nisbah hutang dan sejarah pertumbuhan.

Hasil kajian menunjukkan bahawa saiz, keuntungan, nisbah hutang dan sejarah pertumbuhan mempengaruhi nisbah pembayaran dividen bagi syarikat tersenarai awam di Malaysia dalam tempoh tersebut. Saiz mempengaruhi nisbah pembayaran dividen secara negatif, keuntungan mempengaruhi nisbah pembayaran dividen secara positif, nisbah hutang mempunyai hubungan yang positif dengan nisbah pembayaran dividen dan akhir sekali, sejarah pertumbuhan mempunyai hubungan yang negatif dengan nisbah pembayaran dividen. Hal ini menunjukkan bahawa syarikat-syarikat yang lebih besar membayar sedikit dividen, syarikat-syarikat yang lebih menguntungkan membayar dividen lebih banyak, syarikat-syarikat yang memiliki hutang yang lebih banyak membayar lebih banyak dividen dan akhir sekali syarikat-syarikat yang bertumbuh dengan kadar yang lebih rendah membayar dividen yang lebih tinggi.

Kata kunci: Nisbah Pembayaran Dividen, Malaysia

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LIST OF ABBREVIATIONS

DPAYOUT   Dividend payout ratio

SZ   Size

PROFT   Profitability

CFLOW   Cash flow

SGRWOTH   Sales growth

DERATIO   Debt to equity ratio

HGROWTH   Historical growth

CHAPTER ONE: INTRODUCTION

1.1. Background of study

The term of dividend usually refers to a cash distribution of earnings. If a distribution is made from sources other than current or accumulated retained earnings, the term distribution rather than dividend is used. However, it is acceptable to refer to a distribution from earnings as a dividend and a distribution from capital as a liquidating dividend.

The most common type of dividend is in the form of cash. When public companies pay dividends, they usually pay regular cash dividend four times a year. Sometimes company will pay a regular cash dividend and an extra cash dividend. Paying a cash dividend reduces corporate cash and retained earnings (except in the case of a liquidating dividend – where paid-in capital may reduce).

Another type of dividend is paid out in shares of stock. This dividend is referred to as a stock dividend. It is not a true dividend because no cash leaves the company. Rather, a stock dividend increases the number of shares outstanding, thereby reducing the value of each share. A stock dividend is commonly expressed as a ratio; for example, with 2 percent stock dividend a shareholder receives 1 new share for every 50 currently owned Ross, Westerfield and Jaffe (2010).

However, Damadoran (1997) states that dividends have traditionally been considered the primary approach for publicly traded company to return cash or assets to their stockholders, but they comprise only one of many ways available to the firm to accomplish this objective. In particular, companies can return cash to stockholders

through equity repurchases, by which the cash is used to buy back outstanding stock in the company and reduces the number of shares outstanding, or through forward contracts, by which the firm commits to buying back its own stock in future periods at a fixed price. In addition, companies can return some their assets to their stockholders in the form of spin offs and split offs.

There are several interesting findings emerged from a study of dividend policies adopted by companies in the United States in the last 50 years. First, dividends tend to lag revenue; an increase in revenue follows by an increase in dividend and reduction in income from dividend cuts. Second, companies are reluctant to change dividend; this hesitancy is magnified when it comes to making a dividend cut to "sticky" dividend policy. Third, dividends tent to follow the path than income. Finally, there are distinct differences in dividend payout over the life cycle of a firm, driven by changes in growth rates, cash flows and project availability (Damodaran, 1997).

Johd Lintner (1956) conducts an analysis of how much company to pay dividend and conclude that companies has three important concerns. First, they set target dividend payout ratios, whereby they decide on the fraction of their income that they willing to pay in the run. Second, they change the dividend to match long-term and sustainable change in income, but they increase dividends only if they feel they can sustain a higher dividend. As a result of this concern over having to cut dividends, dividend incomes lag and have a smoother path. Finally, managers are more concerned about the change in the dividend rather than about leverage of dividends.

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Damodaran (1997) highlights that company dividend should be determined by the following features: investment opportunities, stability in earning, alternative sources of capital, degree of financial leverage, signalling incentives and stockholder characteristic.

1.2. Problem statement

There are a number of studies investigate the determinants of dividend payout ratio in Malaysia (Eng, Yahya and Hadi, 2013; Few, Abdul Mutalip, Shahrin and Othman, 2008; Mohamed et al., 2014; Pandey, 2001; Rehman and Takumi, 2012; Wan Tahir, 2009) and other countries over the world (Abreu and Gulamhussen, 2013; Amidu and Abor, 2007; Gill, Biger and Tibrewala, 2010; Rafique, 2012). The findings of previous studies regarding dividends payout ratios are mixed.

Al Shabibi et al. (2011), Osman et al. (2010), Abreu and Gulamhussen (2013) and Al-Kuwari (2009) suggest that size have a positive effect on dividend payment. On the contrary, Kangarlouei et al. (2012) and Wang et al. (2011) indicate that size has a negative impact on dividend payout ratio.

In the aspect of profitability, Jensen et al. (1992), Kowalewski et al. (2007), Wan Tahir (2009), Guizani and Mondher (2012), Amidu and Abor (2006), Anil and Kapoor (2008) and Musiega et al. (2013) suggest that profitability have a positive effect on dividend payment. On the other hand, Murray (1981), Kania and Bacon (2005), and Gill, Biger and Tibrewala (2010) indicate that profitability has a negative impact on dividend payout ratio.

In the aspect of cash flow, a number of studies conclude that there is a positive relationship between cash flow and dividend payout ratio (Jensen, 1989; Abor, 2006;

Kapoor, 2008; Wan Tahir, 2009; Musiega et al. 2013; and Guizani et al. 2012). In contrast, Kania and Bacon (2015) and Adi, Zafar and Yaseen (2011) find that the cash flow is negatively related to the dividend payout ratio.

Previous studies also indicate that sales growth can influence the dividend payment of a company. Higgin (1972), Rozeff (1982), Lloyd (1985), Collins (1996), Amidu and Abor (2006), and Gill et al. (2010) conclude that sales growth negatively influence the dividend payout ratio. On the contrary, Kania and Bacon (2005) find that sales growth positively influence the dividend payout ratio.

Leverage ratio of the company can also influence the dividend payout ratio. Dillon (1986) suggests that leverage ratio positively influences the dividend payment. However, Rozeff (1982), Lloyd (1985), Collins (1999) and D' Souza (1999) conclude that leverage ratio has a negative relationship with the dividend payout ratio.

In Malaysian context, Few et al. (2008) examine the dividend payout ratio of Malaysian public listed companies for year 2002 to 2005. The findings conclude that dividend payment has a positive correlation with the past earning, while profitability has a stronger positive linear relationship with dividend payout ratio as compared to growth opportunities factor. On the other aspect, firm leverage and firm risk show a negative relationship with dividend payout ratio. This dissertation differs from Few at al. (2008) in two ways. First, this dissertation adds industry dummy to control for industry effect in the analysis. Second, this dissertation employs a longer period of analysis, which is from year 2001 to 2014.

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1.3. Objective of study

To examine the determinant of dividend payout ratio of Malaysian public listed companies for year 2001 to 2014. The specific objectives of the study are to examine whether the (1) size, (2) profitability, (3) cash flow, (4) sales growth, (5) leverage ratio, and (6) historical growth determine the dividend payout ratio.

1.4 Significant of study

First, this study provides empirical evidence on determinants of dividend payout ratio toward Malaysian public listed companies. This study uses the latest period of analysis which is from year 2001 to 2014.

Second, this study adds the industry dummy to control for industry effect on dividend payout ratio in Malaysia. Hence, these finding will help investor and other relevant information seekers on determinant of dividend payout ratio to choose the right industry sector for investment.

1.5 Scope of study

The main objective of this dissertation is to determine the determinants factor that affect the dividend payout ratio for public listed companies in Malaysia. The determinants factor of dividend payout ratio tested in this study is size, profitability, cash flow, sales growth, leverage ratio and the historical growth by using a sample of 139 public listed companies on Bursa Malaysia for the year 2001 to 2014. Data for this study are collected from DataStream database.

1.6 Dissertation outline

This dissertation is structured as follows. Chapter two discusses the relevant literature on dividends payout. Chapter three outlines model with the dependent and independent variable used in this dissertation and describes the data sample and methodology used. Chapter four present the results of this dissertation and Chapter five presents conclusions, limitations and suggestion.

CHAPTER TWO: LITERATURE REVIEW AND HYPOTHESES

2.1 Introduction

This chapter reviews the previous literature to provide the best perceptive of determining dividend payout ratio. Section 2.1 discusses the theoretical basis on dividend payout ratio. Section 2.2 describes the empirical studies on size. Section 2.3 describes the empirical studies on profitability, Section 2.4 describes the empirical studies on cash flow, Section 2.5 describes the empirical studies on sales growth, Section 2.6 describes the empirical studies on leverage ratio and Section 2.7 describes the empirical studies on historical growth. Section 2.8 develops the hypotheses for this dissertation.

2.2 Theories on Dividend Policy

Besnik et al. (2014) stated that the theories related to dividend policy as "Fraco Modigliani, Merton Miller, John Gordon, and Lintler. However, Merton Miller Franco Modigliani (known as the theory of M&M) disagreed with the theory of Gordon and Lintner. They find the dividend policy is irrelevant; dividend policy has no impact on the rate required of returns (ks). M&M prove that investor is different to dividend policies. According to M&M rate required of return is not affected by dividend policy. This means that investors are indifferent to the size of DI/Po and 'g'. They consider Lintner and Gordon theory as a theory of bird in the hand. According to Miller and Modigliani many investors are planning to reinvest their dividends in common shares or related companies, and any risk of occurrence have been determined only by the risk of investment income compare to the dividend policy.

Miller and Modigliani assumption can we present in the following graph. Based on the graph in question shows that the corporation has DI/Po + ks = g = constant of 13 % for each type of dividend policy. So, assume a balance ks whether it comes entirely from dividend yield of 13% on the ordinate axis when g = 0, or entirely by the growth rate of 13% in the DI/Po axis is zero or combination of the both. M&M assumption were not challenged under the conditions of existence of a perfect capital market.

Two authors conclude that corporate value depends only on profits from investment made by corporation and not by their degree of risk and the manner of distribution of retained earnings in dividend. According to M&M "No matter how the pie was divided, it was important that it exist". Miller and Modigliani emphasize that the degree of risk was not associated with the dividend policy, but with the investment policy in the respective policy in the respective corporation.

To add to their theory an analytical proof, the author start from hypothesis that a corporation has made its investment program, which was estimated to have her level of debt that can be used to finance these investment and intends to fund the rest of retained earnings. If financial manager decide to increase the level of dividends, compared with the previous hypothesis, without changing the investment decisions and the debt have to invest new shares. The new shareholders agree to sign only if the value of the shares shall be at least equal to their cost. Here there are transfers of value from the old shareholders to new ones. Each share was worth less now than it was worth before the dividend distribution. The old shareholders, on the one hand take extra dividend, but on the other hand suffer loss equity, for a more equal exactly. State of the shareholders was the same as the previous one. Thus, the shareholder as to obtain profits from its investment in the

form of dividend or in the forms of capital gain was the same. So, according to M&M corporates value was not jeopardized by decisions on distributing dividend.

According to the Brennan theory (1970) shareholders prefer low dividends due to the fact that dividend re taxed at a higher rate than capital gain (this was especially based in U.S. 1986).According to this theory, shareholder prefer to receive a lower income and capital gains on financial securities they possess, than to be accept the dividend income. In favour of this theory are some fiscal systems that promote non-payment of dividends and reinvest it to stimulate the corporation and remains in the form of retained earnings.

When it comes to this theory they should not forget one fact: taxes on dividend are paid in the year when dividends are paid, while taxes on capital gains are paid at the time of resale of shares. So, there was a potential over retained earnings.

Supporters of this theory were Lintner (1962) and Gordon (1963).Theory on paying the high dividend was based on the fact that shareholders prefer a safe return, respectively they have risk aversion. So, a quick dividends received was less than a potential profit from capital gain, which be taken in the future more or less distant. Consequently, shareholders seek return of their shares as high as possible and also can make to increase the value of shares of a corporation capital market, delivering high demands. This line of though, basically belonged to the widespread opinion in the United States of America and the United Kingdom, at least for a certain period of time. Rubner (1965) had given the opinion that if the entire retained earnings be paid out as dividends, it double or even triple the value of their respective shares of the corporation. This theory can be presented graphically to have a clear idea of Gordon and Lintner as below.

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Figure 2.1: Gordan and Litner Theory
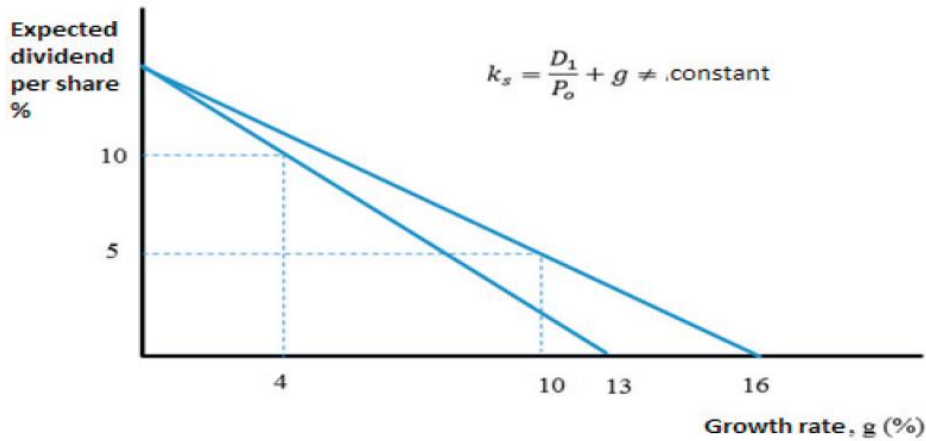
As Gordon and Lintner argued that dividends from shareholders is less than the profit that can be realized from their investment of profit in corporation to get a capital gain realization, therefore investors demands greater returns (ks) and only when the return has as its component (g), which was greater than DI/Po. According to Gordon and Lintner to offset 1% dividend reduction, company need more than 1% growth rate. In our case the rate of return or cost of capital be 13% if the corporation pays dividends the entire retained earnings. By lowering the dividend payment ratio, the cost of the own an equity increase. In concrete example was being a 15% at payment rate 0%, in example when the dividend yield was zero. As Gordon Lintner also noted that the value of one euro from expected dividends is higher than what is expected from capital gain, because DI/Po risk is less than the (g) in the total returns (ks).

2.3 Size

Baskin (1989) shows that operating income, company size, leverage, dividend payout ratio and growth has an impact on the share price. The important factors that influence on dividend decision is the level of current and expected future income, size of firm, stable earnings, and the dividend patterns ago.

Imran (2011) studied 36 firms are listed under Pakistan's engineering sector between year 1996 -2008. The result show, he found that previous dividend payout yield, earning per share, sales growth, profitability and the size of the firm is the most important determinants of dividend payout.

Al Shabibi et al. (2011) studied sample of on-financial firms in UK, they found that the board's independence, profitability, firm size and risk significantly correlated with the results of a dividend policy in UK. In addition, the variables characteristic of the firm is profitability, risk and firm size considering these factors as determinant of dividend policy in the UK financial companies. .

Osman et al. (2010) found that the most factors have influence on dividend decision in Saudi Arabia they are namely as profitability, company size and business risks. Government ownership, leverage and age have major (significant) impact on dividend policy of non-financial companies.

Fama and French (2001) identified three of the same features of dividend payers; the test in this study is using the variable size, profitability and growth opportunities. Large companies are expected to be more difficult to monitor, and more prone to raising capital in equity markets, therefore a positive relationship between the size and dividends payout was expected by Abreu and Gulamhussen (2013).To determine the size of the

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company, measured by the natural log of the average of total assets for the year of reference.

According to agency theory, shareholders are not able to monitor the operation of the company because of the spread ownership in large companies. Therefore, large companies must distribute dividends to block the agency cost (Jensen and Meckling, 1976). Other that, Holder, Langrehr, and Hextar (1998) show that large firms were able to gain access to capital market more easily and to raise funds from external financing at a lower cost than small firms do. Therefore, large firms prefer pay a dividends of small companies.

Al-Kuwari (2009) reviewed the determinant dividend policies for listed in the Stock Exchanges of the Gulf Cooperation Council (GCC) countries in range of the year in 1999 and 2003. His results show that firm size has positive related to the dividend payout ratio. Furthermore, Al-Shubiri (2011) pointed out that large Jordan companies tend to be more diversified than smaller company. As the firms grow in size it has the ability to pay a higher ratio of earning to shareholders. Large firms are more mature so that they have the ability to pay dividend payout ratio is higher that act as a tool to reduce agency problem. The natural logarithm of sales has been used as a proxy for firm size. The natural logarithm of sales has been used in other studies to mitigate the effects of scale in the final regression and to remove any traces of the size of other variables used in the positive relationship model. The positive relationship between firm size and dividend payout ratio is already expected (Musiega, Alala, Douglas, Christopher, and Robert, 2013).

Anupam Mehta (2012) stated that the large company's size pay higher dividends and smaller companies size pay less dividends, because they find it difficult to raise fund, as compared with large companies that have easier access to the capital market and by it is less dependent on internal funds, leading to a greater ability to pay dividends.

Kangarlouei, Motavassel, Azizi, and Farahani (2012) stated that size and market of the firm had a negative effect on dividend policy. This can indicate that the company prefers to invest in their asset from paying dividends to their shareholders. Wang, Ke, Liu, and Huang (2011) also found a negative correlation between size and dividend.

Hashemijoo, Mahdavi Ardekani and Younesi (2012) study the impact of dividend policy on share price volatility in the Malaysia stock market also found negative relationship with firms size and dividend payment.

Table 2.1: Summary of findings on firm size

Author	Findings
Imran (2011)	Previous dividend payout yield and the size of the firm is the most important determinant of dividend payout.
Al Shabibi et al. (2011)	Size of firm has a significant relationship with the dividend policy decision in UK.
Osman et al. (2010)	The factors have an influence on dividend decision in Saudi Arabia, namely company size have a major impact on dividend policy of non-financial companies.
Fama and French (2001)	Feature dividend payers, which in this study: firm size, profitability and the growth opportunities.
Abreu and Gulamhussen, 2013	Therefore a positive correlation between size and dividends payout.

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Jensen and Meckling, 1976)	Large companies must distribute dividends to prevent the agency cost.
Holder, Langrehr, and Hextar (1998)	Large firms are able to gain access to the capital market more easily and raise funds from external funding.
Al-Kuwari (2009)	Firm size was positively related to dividend payout ratio.
Al-Shubiri (2011)	The firm grew in size it has the ability to pay a higher ratio of earnings.
Musiega, Alala, Douglas, Christopher, and Robert, 2013	They are positive relationship between firm size and dividend payout ratio.
Anupam Mehta (2012)	Large size companies pay higher dividends and small-size companies pay less dividend.
Kangarlouei, Motavassel, Azizi, and Farahani (2012)	They found a negative effect on dividend policy.
Wang, Ke, Liu, and Huang (2011)	The negative correlation between size and dividend.
Hashemijoo, Mahdavi Ardekani and Younesi (2012)	Firms size and dividend payment have negative significant.

2.4 Profitability

Profitability companies are expected to pay out higher dividends, therefore, positive relationship between the profitability and dividend payout ratio was expected. In this study, profitability is measured by earnings before interest and tax divided to total-assets. Companies with high growth opportunities are expected to plowback theirs income to avoid expensive equity and debt financing. This study captures the effect of the annual rate of growth in total assets during the reference period (historical growth).

Profitability has long been regarded as the most determining a firm ability to pay dividends. Lintner (1956) and H. Kent and Gary E. Powell (2000) investigated the cooperation between dividend income distribution, incomes, and taxes collected. They found a pattern of a firm dividend payment affected by current income and past dividends. Linter (1956) conducted a classic study of how U.S. managers make decision on dividend. He developed a mathematical model based on intensive of 28 US companies are well-established industrial, which regarded as the classic financing. According to his, the dividend payment pattern tends to earnings in the current year earnings and the previous year dividends.

Farrelly, Baker and Edelman in year 1986 surveyed 318 New York stock exchange firms and concluded that the main factor is the level of dividend income and dividend pattern projected for future past. Pruitt and Gitman (1991) asked the finance manager in 1000 largest US and reported that profit in the current year and past are important factors that affect the payment of dividend. Baker and Powell (2000) concluded from their study of the companies listed on the NYSE as a determinant of dividend is a certain level and the industry's expectations of future income is a major determinant. Fama and Babiak (1968) and Fama (1974) results support the Lintner's of view that managers prefer a stable dividend policy, and refuse to increase the dividends to a level that cannot be sustained. Thus, the dissertationers concluded that changes in the dividend per share are mostly a function of the target dividend payout and dividend based revenues last period.

Murray (1981), using data of non-capital market data examine the theoretical implication of the theory that dividend payout negatively correlated with income

uncertainty. Murray concluded that no steady income is a determinant of dividend policy.

Ling et al. (2008) investigated as a function of the profitability and the sample consists of 100 companies listed on Bursa Malaysia; he used the return on assets and return on equity as parameters. ROE and ROA shows a strong relationship with dividend payout ratio.

Jensen et al. (1992), Kowalewski et al. (2007) and Guizani and Mondher (2012) study the relationship between return on assets and dividend payout ratio. Finding a place to show there is a positive association between dividend payouts and return on assets, moreover firms that generate more earning on their assets with having important cash flow, consequently pay higher dividend. Al-Kuwari (2010) also found that the government ownership and profitability of firms raise the possibility of paying dividends.

Li Ji-ming et al. (2009) investigate the relationship between corporate dividend policy and the financial performance of Chinese listed companies. The result show that there is a strong relationship between dividend, return on equity and earning per share, additionally more paying dividend boost the firm performance and thus increase profit.

DeAngelo et al. (2004) indicates that the growing concentration of dividends can lead to increased concentration of income. They found that in 2000 approximately half of the industrial firms recorded losses and just a few of them paid dividends. Income in both 1978 and 2000 from a sample of firms is concentrated among relatively few firms in the top end of the distribution, and that the concentration was significantly higher in

2000 than it was in 1978.There was also a significant correlation between the loss and damage that pay dividends.

Amidu and Abor (2006) found a positive relationship between the profitability and dividend payout ratio. The samples of firms listed on the GSE they use in the last six year, recently 1998-2003.These studies consisted of 22 companies eligible to use. Anil and Kapoor (2008) also found a positive correlation among the profitability and dividend payout ratio.

Profitability was treated as a key indicator of the ability of firms' revenue. Aivavian et al. (2003) examined the relationship between dividend payout ratio and the profitability. They found that the payment of dividend for firms in emerging markets and in the US can be explained the profitability. Other than that, Kim and Gu (2009) investigated the characteristics of the firms pay a dividend and non-dividend firms in hospital industry in the US by using logistic regression analysis. The finding shows that the firms large and profitable will distribute profits as dividends. On the other hand, many dissertationers have found that the profitability were negatively related to dividend payout. Naceur et al (2006) reviewed the dividend policy of 48 companies listed on the Tunisian Stock Exchange during 1996-2002. The results show that the company is very profitable with stable income capable of free cash flow is higher and thus pay higher dividends, and fast growing company set aside greater dividends in order to attract investors.

Kania and Bacon (2005) try to uncover the company to issue cash dividend. They took a sample of 542 companies from Multex Investor Database and using Ordinary Least Square (OLS) regression method. The result show that the profitability related

negatively correlated to dividend payout at the 1% level of significance. This means that firms with higher profit pay lower dividends. In addition, Gill, Biger, and Tibrewala (2010) found different results in each dividend payout industry relation in the US. The analysis showed that the dividend payout ratio was negatively related to the profitability in the whole sample and particularly in manufacturing industry.

Omar (2009) explain that the factors affecting changes in cash dividend in companies which are listed on the Bahrain Stock Exchange. The sample consisted of thirty five companies Bahraini been tested. Descriptive and statistical tests were used to estimate data. Changes in cash dividend in companies in Bahraini been tested with regard to four specific characteristics, namely: the dividend of the previous year; financial leverage, profitability; and size of the firm. Adil et al. (2011) reported the regression of a regression model explain that cash dividends policy has a significant associated to the profitability with changes in dividends last year, and the size of the Bahraini companies listed on Bahrain Stock Exchange, but not for financial leverage.

Companies with more stable income payout, higher rates of income as dividends from a company with variable income. To proxy for the profitability in this study, the return on shareholders' equity has a positive relationship between the profitability of the firm. The positive correlation between company and the profitability to dividend payout ratio was expected (Musiega et al., 2013).

Table 2.2: Summary of findings on profitability

Author	Findings
Linter (1956) and H. Kent and Gary E. Powell (2000)	The dividend payment pattern of a firm was affected by the current earning and past dividends
Farrelly, Baker and Edelman (1986)	The major determinant is the level of dividend income and patterns of the past for future dividend expected
Pruitt and Gitman (1991)	Profit for the current and past year are important factors that affect the payment of dividends
Baker and Powell (2000)	Industry specific and anticipated level of income is a major determinant of dividend payout
Fama and Babiak (1968) and Fama (1974)	Stable dividend policy, and refuse to increase the dividends to a level that cannot be maintained
Murray (1981)	Dividend payout negatively correlated with income uncertainty
Ling et al. (2008)	ROE and ROA have strong relationship with dividend payout ratio.
Jensen et al. (1992), Kowalewski et al. (2007), and Guizani and Mondher (2012)	There is a positive association between return on assets (ROA) and dividend payments
Al-Kuwari (2010)	Government ownership and profitability of firms raise the possibility of paying dividends.
Li Ji-ming et al. (2009)	Strong relationship between Dividend payout ad return on equity and earning per share.
DeAngelo et al. (2004)	Increasing dividend concentration may lead to increasing earning concentration.
Amidu and Abor (2006) and Anil and Kapoor (2008)	Found the positive relationship between profitability and dividend payout ratios.

Aivavian et al. (2003)	Dividend payout for firms in emerging markets and in the US can be explained the profitability
Kim and Gu (2009)	Large and profitable firms will distribute the profits as dividends.
Naceur et al (2006)	Very profitable company with a more stable income capable free cash flows and dividend greater the bigger payouts
Kania and Bacon (2005)	Profitability relates negatively to findings indicated that profitability relates negatively to the dividend payout ratio
Gill, Biger, and Tibrewala (2010)	Dividend payout ratio is negatively related to the profitability
Adil et al. (2011)	Dividends policy was significantly associated with the changes in the profitability in previous year dividends,
(Musiega et al., 2013).	The positive relationship between the profitability of the company and dividend payout ratio

2.5 Cash Flow

Jensen (1989), free cash flow is defined as the excess cash flow required to finance all project with positive net present value. He figured that the increased free cash flow, it leads to increased conflict between the interest of the agency insider and outsider, and then it declines the performance of the company. While shareholders desire maximum value of shares, the insiders are inclined to their interest.

An important determinant of the dividend payout is cash flow position of the firm. Pour liquidity position referring to a less generous dividends due to lack of cash, argue that dividend payments are more dependent on cash flow, reflecting the company ability to pay dividend, rather than on current income, which is less affected by accounting

practices (Ali and Ramirez G, 1993).They claim that current income is not totally reflect the firm's ability to pay dividend. (Abor J, 2006) Report that there is a positive correlation between cash flow and dividend payout ratio. (Kapoor S, 2008) Show that cash flow is important in determining the dividend payout ratio.

Liquidity measures the extent to which a firm can meet its payment obligations. Jensen (1986) argues that manager can benefit themselves with surplus cash; therefore the firm should pay a dividend to reduce the free cash flow and protect managers to spend more useless projects. Paying dividend has mechanisms to control the agency problems. Alli, Khan, and Ramirez (1993) study the determinants of corporate dividend policy with a sample of 105 of all firms listed on the New York Stock Exchange, except for companies that are regulated utilities and banking sectors. Using factor analysis, their findings show that the firms with high cash flow have low systematic risk, a high-quality signal to pay more dividends. Conversely, a firm with less cash deficit is likely to pay dividend.

In addition, Anil and Kapoor (2008) investigate the determinants of the dividend payout ratio in Information Technology sector in India in 2000 – 2006. They found a positive significant relationship between liquidity, is measured by cash flow and dividend payout ratio. However, Kania and Bacon (2005) present the opposite result because they found a negative relationship between cash flow and dividend payout. Other than that, Adi, Zafar and Yaseen (2011) tried to identify the determinants of a dividend payout of 100 companies listed on the Karachi Stock Exchange using operating cash flow as proxy of liquidity; they discovered that the increase in operating cash flow to reduce the level of dividend payout. However, adding confusion to the existing

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literature, Kim and Gu (2009), Al-Kuwari (2009), Gill et al. (2010), Marfo-Yiadom and Agyei (2011), Al-Shubiri (2011) found that cash flow does not affect the dividend payout.

Assessing the liquidity and solvency of corporation have been repeated in the UK standard FRS1 (para.1b). Future cash flows of course are a potentially important input for stock assessment models and a matter of concern for corporate creditors. Dividend policies are not only used to signal the level of income but also the possibility of fluctuation in earnings. Given the level of cash flow, the companies with more volatile earnings promise a less dividend. Here an important consideration dividend varies with the amount of fluctuation in future cash flows and only by risk related to market (Bradley, Capozza, Seguin, 1998). Since the dividend is payable in cash, companies with insufficient cash could be enforced to reduce their dividends. Therefore, it is expected that firms reduce liquidity ample dividends in years. They also expect to make dissertation on (a) a dividend payout ratios corresponds to a higher cash flows is higher and (b) the firms continue to generate more cash flow from the operation may have more dividend payout ratios (Ingram and Lee, 1997); Andreas Charitou (2000) and Barker (1999) found that the use of price-earnings ratio and price-cash flow ratio is widespread in the investment community. Cash flow data is also used in discounted cash flow valuation models, but this is less popular among analysts. Despite much debate about the relative use of cash flows versus revenue of about stock valuation range, it must not be forgotten that the future corporate cash flows of concern to creditors (Adil et al., 2011).

The liquidity position of the firm is important to determine whether the company could meet its short-term assets highlight the difficulties of the cash flow that normally

occurs when the current liability is greater than current assets if the company liquidity

position is sufficient even it is profitable, not in a position to pay cash dividends. This

study uses the current ratio as a proxy for determining the dividend payout ratio for the

liquidity of the firm. The positive relationship between cash flow and payout was

expected (Musiega et al., 2013).

Guizani et al. (2012) studied a sample of 44 companies in Tunisia from 1998 to

2007. They concluded that free cash flow and profitability impact on the company's

dividend decision, pay higher payouts when they have significant free cash flow and

have a high profitability.

Table 2.3: Summary of findings on cash flow

Author	Findings
Jensen (1986)	Free cash flow as cash flow excess of that required to fund all projects with positive net present value (NPV).
Ali and Ramirez G, (1993)	The company's ability to pay dividends, rather than on current income, which is less affected by accounting practices.
Abor J (2006)	There are positive relationship between dividend payout ratio and cash flow
Kapoor S (2008)	Cash flow is an important determinant of the dividend payout ratio.
Jensen (1986)	Firm should pay a dividend to reduce the free cash flow and protect managers to spend more cash in wasted projects.
Alli, Khan, and Ramirez (1993)	Firms with high cash flow have low systematic risk, a high-quality signal to pay more dividends.

Kapoor (2008)	There is significant positive relationship between liquidity, measured by cash flow and dividend payout ratio.
Kania and Bacon (2005)	There is a negative relationship between cash flow and dividend payout.
Kim and Gu (2009), Gill et al. (2010), Al-Kuwari (2009), Marfo-Yiadom and Agyei (2011) and Al-Shubiri (2011)	Found that cash flow does not affect the dividend payout.
Bradley, Capozza, Seguin (1998)	The dividends amount varies with fluctuations in future cash flows and the market risk associated.
Ingram and Lee (1997)	Persistently to generate more cash flow from operating income may have more dividend payout ratio.
Andreas Charitou, (2000)	Price-earnings ratios and price-cash flow ratios was widespread within the investment community.
Barker (1999)	Price-earnings ratios and price-cash flow ratios was widespread within the investment community.
Adil et al. (2011)	Future corporate cash flows of concern to the creditors of the company.
Musiega et al. (2013)	The positive relationship between dividend payout and cash flow.
Guizani et al. (2012) Support by Kowalewski et al. (2007) and Adjaoud et al. (2010)	Free cash flow and profitability have an impact on the result of the firm dividend in Tunisian; they pay a higher payout when they have significant free cash flow and have a high profitability.

2.6 Sales Growth

Al-Najjar and Hussainey (2009) determine the growth is the ability of the firm to remain at the same level of development at a certain rate is higher than the growth rate compared with other firms.

La Porta et al. (2000) explored country with a high level of protection and found that rapid growth firms paid lower payment, as shareholders were legally protected, allowing them to wait to receive their dividends when investment opportunities are good. In addition, in countries with low legal protection for shareholders, the firm maintains a high dividend payout, to develop and sustain a strong reputation, even if they have better investment opportunities.

Sales growth can affect the level of dividend payout ratios. Dividend not at all decided after investment and financing decisions firm decision has been made, otherwise the dividend decision was taken together decisions. Partington (1983), investment and financing showed that the use of the firm's target dividend payout ratios, motives for the dividend paying, and the extent to which dividends the dividend is determined independent of the underlying investment.

Higgins (1981) shows a direct correlation between growth and financing needs of the firm. Rapidly growing firm's need external financing for working requirement typically exceed cash flow from new sales. In paper earlier Higgins (1972) argues that the payout ratio was negatively related to firm's need for funds to finance growth opportunities. Rozeff (1982), Lloyd (1985), Collins (1996) noted that a significant negative relationship between dividend payout and sales growth.

The sales growth stage companies showing positive signs of ongoing company-wide operation. Increasing sales growth in a consistent way means that the firms that have the potential to enter the expansion phase of the business cycle and expects positive cash earning power in the future year. A company with high growth, it requires a significant amount of funding to invest in in projects. Rozeff (1982) found that firm tries to maintain the growth of internal financial and limit the payment of dividend following the use of external borrowing costs that are generally higher than the cost of using internal funds.

Gill et al. (2010) investigated 500 annually financial report published by the public company in 2007 in USA. They found a negative relationship between the historical sales growth and dividend payout for the entire sample and particularly in industry. In addition, Marfo-Yiadom and Agyei (2011) stressed that sales growth was negatively related to dividend payment because they find that bank with high growth in Ghana and not use funds from financing to develop their project. In same sense, they tend to keep large amount of money for future investment and not to dividend payment. While, Imran (2011) found that dividend per share was associated positively with sales growth. Instead, Kania and Bacon (2005) also show that sales growth is a key factor for dividend payout. When a company has a higher profits growth, they distribute a higher dividend payment to satisfy by shareholders. Nevertheless, Kim and Gu (2009), Anil and Kapoor (2008) and Al-Kuwaari (2009) reported an insignificant relationship between sales growth and dividend payouts.

Table 2.4: Summary of findings on sales growth

Author	Findings
Al-Najjar and Hussainey (2009)	The growth is the ability of the firm to remain at the same level of development at a certain rate is higher than the growth rate compared with other firms.
La Porta et al. (2000)	Firm maintains a high dividend payout, to develop and maintain a strong reputation.
Partington (1983)	Firm's use targeted payout ratios as a motive to pay dividends.
Higgins (1972)	Dividend policy is associated negatively with firms need to fund top a growth opportunities.
Rozeff (1982), Lloyd et al. (1985), Collins et al. (1996), and Amidu and Abor (2006)	Historical sales growth and dividend payout are related significantly and negatively.
Gill et al. (2010)	Negative relationship between historical sales growth and dividend payout.
Marfo-Yiadom and Agyei (2011)	Sales growth have negatively related to dividend payment.
Kania and Bacon (2005)	When the firms have higher profits growth, they distribute higher dividend payment to make shareholders be satisfied.
Kim and Gu (2009)	Insignificant relationship between sales growth and dividend payout.
Anil and Kapoor (2008)	Insignificant relationship between sales growth and dividend payout.
Al-Kuwaari (2009)	Insignificant relationship between sales growth and dividend payout.

2.7 Leverage ratio

The debt-to-equity ratio was a financial ratio that indicates the relative proportion of equity and debt used to finance a company's assets. This ratio is also known as risk, gearing or leverage. Pruitt and Gitman (1991) indicate that risk affects firm's dividend policy. Firms with high growth rates and high dividend payout ratios utilize debt financing and firms with high leverage compare to their respective industry. However, Dhillon (1986) found conflicting evidence for the relationship between dividend payout ratios and leverage. In some industries payout and leverage ratios are positively related while in other industries the relationship was a negative. Rozeff (1982), Lloyd (1985), and Collins (1996) found statistically significant and negative relationship between firm's risk and the dividends payout ratios. Their findings suggest that firm's having a higher level of risk was pay out dividends at lower rate. D'Souza (1999) also finds statistically significant and negative relationship between risk and dividend payout.

In summary, the literature review points out to the fact that corporate profitability, cash flow, tax, sales growth, market-to-book ratio, and debt-to-equity ratio may impact upon the dividend payout ratio. Previous dissertationers concentrated on the determinants of standard ratio of dividend to earnings, or the 'standard dividend payout ratio. This study examines the determinants of the 'standard dividend payout ratio' and also the extended payout ratio whereby the denominator of the ratio includes net income and depreciation. The difference between the two ratios was grater for the manufacturing industry that usually has relatively high levels of depreciation in comparison to the service industry. Clearly depreciation costs may have an impact on the dividend payout ratios.

Table 2.5: Summary of findings on leverage ratio

Author	Findings
Pruitt and Gitman (1991)	High growth rates and high dividend payout ratios utilize debt financing
Dhillon (1986)	Some industries payout and leverage ratios are positively related while in other industries the relationship was a negative
Rozeff (1982),	Significant and negative relationship between firm's risk and the dividends payout ratios
Lloyd (1985)	Significant and negative relationship between firm's risk and the dividends payout ratios
Collins (1996)	Significant and negative relationship between firm's risk and the dividends payout ratios
D'Souza (1999)	Statistically significant and negative relationship between risk and dividend payout

2.8 Historical Growth

The evidence regarding the Fama and French (2001) characteristic of dividend payers (size, profitability and historical growth opportunities) was mixed. Theis and Dutta (2009) did not find support for the positive relationship between size and dividend payouts in a sample of 99 U.S. bank holding companies. Collins et al. (1994) found a statistically significant inverse relationship between growth opportunities and dividend

payouts in a sample of 104 U.S. bank holding companies, while Theis and Dutta (2009) did not find a statistically significant relationship between these two elements.

Abreu and Gulamhussen (2013) found historical growth negatively related to dividend payout. Companies with high growth opportunities are expected to plowback their earning to avoid costly equity and debt financing. They capture this effect through the annualized rate of growth of total assets throughout the reference period.

Table 2.6: Summary of findings on historical growth

Author	Findings
Fama and French (2001)	Characteristic of dividend payers (size, profitability and historical growth opportunities) was mixed.
Theis and Dutta (2009)	Did not find support for the positive relationship between size and dividend payouts.
Collins et al. (1994)	Statistically significant inverse relationship between growth opportunities and dividend payouts.
Theis and Dutta (2009)	Did not find a statistically significant relationship.
Abreu and Gulamhussen, (2013)	Historical growth negatively related to dividend payout.

2.9 Hypotheses

Based on the findings of previous studies, the hypotheses are as follow:

Hypothesis 1   :   Size of the company has a positive effect on the dividend payout ratio.

Hypothesis 2   :   Profitability has a positive effect on the dividend payout ratio

Hypothesis 3   :   Cash flow has a positive effect on the dividend payout ratio

Hypothesis 4   :   Sales growth has a negative effect on the dividend payout ratio

Hypothesis 5   :   Leverage ratio has a negative effect on the dividend payout ratio

Hypothesis 6   :   Historical growth has a negative effect on the dividend payout ratio
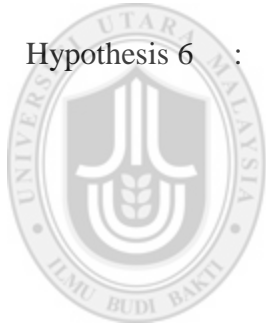
CHAPTER THREE: DISSERTATION METHODOLOGY

3.1 Introduction

The critical part for any dissertation is to determine the data and to identify a proper and well-justified method of statistical analysis to properly test the hypothesis. In this regard, careful consideration has been given to the data and methodology employed in this dissertation in order to test the hypothesis. Section 3.1 describes the dissertation framework. Section 3.2 explains the model used in this dissertation. Section 3.3 discusses about the operational variable used in this dissertation. Section 3.4 explains the technical analysis used in this study and Section 3.5 describes the selected sample used in this dissertation. Section 3.6 defines the data used in this dissertation.

3.2 Dissertation Framework

Figure 3.1: Dissertation Framework

Independents Variables (IV)
1. Size
2. Profitability
3. Cash Flow
4. Sales Growth
5. Leverage Ratio
6. Historical Growth

→

Dependent Variable (DV)
Dividend Payout Ratios
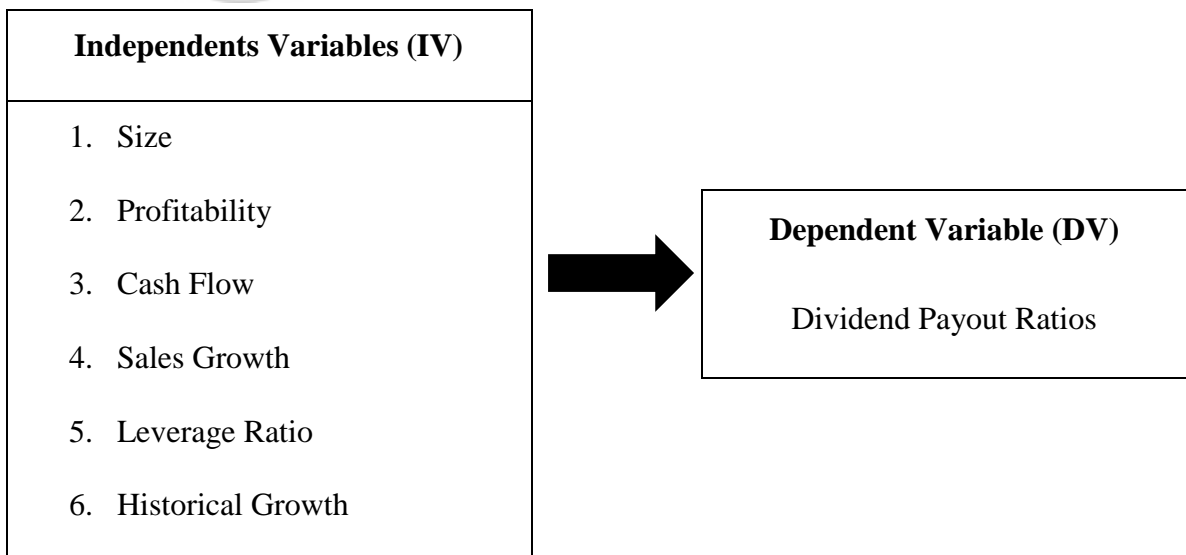
3.3 Model

With some modification, this dissertation follows the basic model developed by Abreu and Gulamhussen (2013) and Amarjit Gill, Nahum Biger and Rajendra Tibrewala (2010) to test the determinants of dividend payout ratio of Malaysian public listed companies in year 2001- 2014. The model for this dissertation as follow:

Model used for this dissertation:

Model 1

$$DPAYOUT = \beta_0 + \beta_1 SIZE_i + \beta_2 PROFIT_i + \beta_3 CFLOW_i + \beta_4 SGROWTH_i + \beta_5 LEVERAGE_i + \beta_6 GROWTH_i + \beta_7 INDUSTRY_i + \varepsilon$$

<u>**Variable explanation**</u>

Where:

Dividend payout ratio (DPAYOUT)	=	The dividends-to-total asset ratio for the reference period
Size (SIZE)	=	The natural logarithm of the average of total asset for the reference period
Profitability (PROFIT)	=	Earnings before interest and taxes divided by total asset
Cash flow (CFLOW)	=	Log of cash flow from operating activities
Sales growth (SGROWTH)	=	(Current sales – Previous sales)/Previous sales
Leverage (LEVERAGE)	=	Total liabilities /Shareholders' equity

Historical growth (GROWTH)	=	The annualized growth rate of total asset for the reference period
Industry	=	Industry dummy represented by sector, which are construction, consumer product, finance, hotels, industrial product, IPC, plantation, properties, REITs, technology and trading-services

3.4 Operational Definitions

The operational definitions of the variables used in this study are as follows:

Table 3.1: Variable definition

No.	Variables	Definition	Expected sign
1.	Dividend payout ratios (DPAYOUT)	The of the dividends-to-total asset ratio for the reference period.	
2.	Size (SIZE)	The natural logarithm of the average of total assets for the reference period.	+
3.	Profitability (PROFIT)	Earnings before interest and taxes are divided by total assets	+
4.	Cash flow (CFLOW)	Log of cash flow from operating activities	+
5.	Sales growth (SGROWTH)	The value of Current Sales minus Previous Sales and then divided by Previous Sales	-
6.	Leverage ratio (LEV)	The total liabilities are divided by Shareholders equity	-
7.	Historical growth (HGROWTH)	The annualized growth rate of total assets for the reference period.	-

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3.4.1 Dependent Variable

DPAYOUT   =   The of the dividends-to-total asset ratio for

the reference period.

In this dissertation, DPAYOUT has been selected to measure the ratio of dividend. The DPAYOUT was defined as the of the dividends-to-total asset ratio for the reference period. DPAYOUT was chosen over the total asset to scale dividends to ensure that the results were not driven by stock price and earning volatility. This dissertation focuses on the characteristic of regular dividend payouts rather than on the prediction of the next year's dividend. Therefore, this dissertation use an averaging period that was longer than one year.

The DPAYOUT reflect the ability of companies to paid dividend from the profit. The payout ratio reflecting the percentage of net income (available for shareholders) can follow different policies. Some companies prefer fixed (or semi-fixed) payout ratios while some others choose to pay fixed amounts (with a small annual increase) regardless of the gained net income.

Adil, Zafar, and Yaseen (2011) point that there are a few characteristics that have been found to be related to dividend policy such as firms, profitability, liquidity, size, financial leverage, growth opportunities, investment opportunities, information asymmetry, agency costs, ownership structure and stock exchange Status. Among all factors profitability and liquidity are very important determinants of dividend payment. Cash flow which mainly determines the liquidity of the firm has also been argued to be

able to assess firms' performance, although the results are questionable throughout countries and time.

3.4.2   Independent Variables

This section describes the independent variables that are used to analyzed factors that may be instrumental in effecting the dividend payout decision.

3.4.2.1 Size

SIZE   =   The natural logarithm of the average of

total assets for the reference period

Size was measure by the natural logarithm of the average of total asset based on the reference period. The period of this study used in this study is from year 2001 until 2014. Fama and French (2001) identified three common characteristic of dividend payers, which I test in this study: size, profitability and growth opportunities.

Abreu and Gulamhussen (2013), Al-Kuwari (2009), Al-Shubiri (2011) and Musiega, Alala, Douglas, Christopher, and Robert (2013) stated positive relationship between size and dividend payout. In other hand, Kangarlouei, Motavassel, Azizi, and Farahani (2012) and Wang, Ke, Liu, and Huang (2011) found a negative relationship between size and dividend payout.

3.4.2.2 Profitability

PROFIT   =   Earnings before interest and taxes / total

assets

In this study, profitability was measure by earnings before interest and taxes divided with total assets. Profitability companies are expected to pay out higher dividends, therefore, a positive relationship between profitability and dividend payout was expected. On these studies, I measure profitability by the average of the net-income-to-total-assets (returns on assets) ratio. Companies with high growth opportunities are expected to plowback theirs earnings to avoid costly equity and debt financing. This dissertation captures effect through the annualized rate of growth of total assets throughout the reference period (historical growth).

Jensen et al. (1992), Kowalewski et al. (2007), Guizani and Mondher (2012), Amidu and Abor (2006), Anil and Kapoor (2008) and Musiega et al., (2013) found a positive relationship between profitability and dividend payout. In contrast, Murray (1981), Kania and Bacon (2005) and Gill, Biger, and Tibrewala (2010) found a negative relationship.

3.4.2.3 Cash Flow

CFLOW   =   Log of cash flow from operating activities

The important determinant of dividend payouts is the cash flow position of a firm where a pour liquidity position referring to less generous dividend due to shortage of cash. Cash flow in this study was measure by using log of cash flow from operating activities.

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Jensen (1989), Abor J (2006), Kapoor (2008), Musiega et al., 2013) and Guizani et al. (2012) found a positive relationship between cash flow and dividend payout. However, Kania and Bacon (2005) and Adi, Zafar and Yaseen (2011) found a negative relationship.

3.4.2.4 Sales Growth

$$\text{SGROWTH} = (\text{Current Sales} - \text{Previous Sales}) / \text{Previous Sales}$$

Sales growth may impact on dividend payout ratios. Dividend payout levels are not totally decided after a firm's investment and financing decisions have been made; rather, the dividend decision was taken along investment and financing decisions. To measure sales growth, this study used current sales minus the previous sales before divided with previous sales.

Higgins (1972), Rozeff (1982), Lloyd (1985), Collins (1996), Amidu and Abor (2006), Gill et al. (2010) and Kania and Bacon (2005) found a negative relationship between sales growth and dividend payout.

3.4.2.5 Leverage Ratio

$$\text{LEVERAGE} = \text{Total Liabilities} / \text{Shareholders equity}$$

The leverage ratio was a financial ratio that indicates the relative proportion of equity and debt used to finance a company's assets. This ratio was also known as debt to equity

ratio. Firms with high growth rates and high dividend payout ratios utilize debt financing and firms with high leverage compare to their respective industry.

Dhillon (1986), however, found conflicting evidence for the relationship between dividend payout ratios and leverage. In some industries payout and leverage ratios are positively related while in other industries the relationship was a negative. Rozeff (1982), Lloyd (1985), Collins (1996) and D'Souza (1999) found a negative relationship between leverage ratio and dividend payout.

3.4.2.6 Historical Growth

GROWTH   =   The annualized growth rate of total assets

for the reference period.

Historical growth was measured by using annualized growth rate of total asset. The total asset used in this study based on the reference period from year 2001 until 2014. Theis and Dutta (2009) and Abreu and Gulamhussen, (2013) found a negative relationship between historical growth and dividend payout.

3.5 Sample

The sample of this study consists of all companies listed in the Bursa Malaysia (Kuala Lumpur Stock Exchange) of Malaysia during 2001 – 2014. A total of 139 firms were employed after excluding companies having incomplete data. All data were retrieved from DataStream database. In addition, to reduce the number of companies, this study focus to dividend information to get the company involved in paying dividend. The

samples of data are categorized into 11 industries consisting of construction, consumer product, finance, hotels, industrial product, IPC, plantation, properties, REITs, technology and trading-services. Time period of this study focus on 14 years starting from 2001 until 2014.

Table 3.2: Number of company by sector

SECTOR	NUMBER OF COMPANY
Construction	8
Consumer product	25
Finance	11
Hotels	2
Industrial Product	30
IPC	1
Plantation	13
Properties	14
REITs	1
Technology	5
Trading-Services	29

3.6 Data

This dissertation uses the companies data extracted from consolidated income statement and balance sheets of the selected companies. Companies' financial information was obtained primarily from the DataStream database. DataStream is a database provided by Thomson Reuters, which contains comprehensive financial information on companies

across the globe. This database has been widely used in other dissertation that uses companies' data.

The period of analysis is from 2001 to 2014. This dissertation utilizes and strongly balances panel data set. This refers to a sample in which some cross-sectional units have an unequal number of time-series observation.

CHAPTER FOUR: FINDINGS

4.1 Introduction

This section provides emperical result on the determinants of dividend payout ratios in Malaysian companies. This section briefly explain the tests and measurement that carry out the data that had been collected from 139 companies involved in dividend payment during year 2001 until 2014.

4.2 Descriptive statistic

Table 4.1 presents the descriptive statistic of the variables used in this study. It is shown mean, standard deviation (SD), minimun and maximun value. This sample companies has DPAYOUT of 3.4 for the time period from 2001 to 2014 on average. The standard deviation of DPAYOUT is 5.9, minimum and maximum values is 0.6% and 64.3 respectively. The mean of company size (SIZE) which was one of the important factors for the dividend is 13.88 on average. The standard deviation of company size is 1.8, the minimum value is 10.5 and maximum value is 20.2. Profitability is approximately 6.2%, while the minimum and maximum of the variable is -13.8% and 66.1%.

This table also report about cash flow (CFLOW), sales growth (SGROWTH), leverage ratio (LEVERAGE) and historical growth (GROWTH). Mean of CFLOW is 4.8. The minimum and maximum of the variable is 1.6 and 7.2 respectively. The standard deviation for CFLOW is 83%. The mean of SGROWTH show 15.2%, while the minimum and maximum value is -98.2% and 30.76. The standard deviation is 95.9%. However, the mean for LEVERAGE is 1.57 and the minimum value is 0.19% while the maximum value is 118.02. The standard deviation for leverage ratio is 4.0. Meanwhile,

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the historical growth is 11.35% (minimum -97.29% in year 2001 and maximum 37.85 in year 2014).

Table 4.1: Descriptive statistic

Variable	Mean	SD	Minimum	Maximum
DPAYOUT	3.406162	5.901305	.0058702	64.3338
SIZE	13.88469	1.816794	10.48796	20.21092
PROFIT	.0628079	.0633829	-.1387656	.6611032
CFLOW	4.809015	.8350079	1.612784	7.196854
SALES	.1518653	.9594132	-.9820168	30.76483
LEVERAGE	1.574623	4.004533	.0019224	118.0228
GROWTH	.113511	.8841549	-.97295	37.85518

4.3 Correlation matrix

Correlation matrix of variables is presented in Table 4.2. The correlation coefficient was obtained by examining the null hypothesis of no correlation between explanatory variables. Baltagi (1995) considers 0.8 as the limit value of the correlation coefficient to confirm the null hypothesis. If correlations between two variables are above 0.8, this dissertation has to reject the null hypothesis. As suggested that it was not probable to put two variables in same model.

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Table 4.2: Cross-correlation matrix of variables

	SIZE	PROFIT	CFLOW	SGROWTH	LEVERAGE	HGROWTH	DPAYOUT
SIZE	1.0000						
PROFIT	-0.1407	1.0000					
CFLOW	**0.8453**	0.1332	1.0000				
SGROWTH	0.0229	-0.0172	0.0285	1.0000			
LEVERAGE	0.4962	-0.1989	0.3472	0.0944	1.0000		
HGROWTH	0.0604	-0.0296	0.0587	0.2109	0.6450	1.0000	
DPAYOUT	-0.0760	0.8550	0.1504	-0/0314	-0.1001	-0.0373	1.0000

4.4 Variance Inflation Factor (VIF)

In statistics, the variance inflation factor (VIF) quantifies the severity of multicollinearity in an ordinary least squares regression analysis. It provides an index that measures how much the variance (the square of the estimate's standard deviation) of an estimated regression coefficient was increased because of collinearity. This varience use to describe how much multicollinearity,mean problematic because it can increase the variance of the regression coefficiect on making unstable and difficult to intepret.

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Table 4.3: Variance Inflation Factor

Variable	VIF	1/VIF
Size	5.68	0.175962
Cash Flow	4.67	0.214159
Leverage	2.87	0.348152
Historical growth	2.18	0.458319
Profitability	1.33	0.749553
Sales	1.05	0.949027
Mean VIF	2.97	

Table 4.3 show that the all variables used in this dissertation do not have multicollinearity problems as shown by mean VIF of 2.97. As rule of thumb, a variable whose VIF values less than 10 no need to do futher investigation. Multicollinearity (also collinearity) have a phenomenon in which two or more predictor variables in a multiple regression model are highly correlated, meaning that one can be linearly predicted from the others with a substantial degree of accuracy. In this situation the coefficient estimates of the multiple regression may change erratically in response to small changes in the model or the data. Multicollinearity does not reduce the predictive power or reliability of the model as a whole, at least within the sample data set; it only affects calculations regarding individual predictors. That was a multiple regression model with correlated predictors can indicate how well the entire bundle of predictors predicts the outcome variable, but it may not give valid results about any individual predictor, or about which predictors are redundant with respect to others.

4.5 Regression Analysis

Table 4.4 present the regression results obtained from OLS estimation by using DPAYOUT as the dependent variable. To analyze the factor relate to dividend payout ratio in public listed companies in Malaysian from year 2001 until 2014, the result is regressed and present through the 3 model. The first model is where all dependent variables and indipendent variables analyzed by OLS regression. Model 2 is where all the variables are regressed including industries dummy by using OLS regression analysis. However, based on cross correlation matrix in Table 4.2, the cash flow variable is dropped to see wether cash flow have an impact on dividend payout ratio or not.

Table 4.4: Regression results using OLS

	MODEL 1	MODEL 2	MODEL 3
Constant	-0.6976	-1.1196	-0.9194
	-1.03	-1.05	-1.44
SIZE	-0.1517	-0.0535	-0.0787
	-1.70*	-0.58	-1.68*
PROFIT	81.3752	80.6282	81.9144
	65.68***	63.22***	74.16***
CFLOW	0.1696	0.06353	-
	0.96	0.35	
SGROWTH	-0.0453	-0.0229	-0.04475
	-0.62	-0.32	-0.62
LEVERAGE	0.2352	0.02830	0.2307
	8.31***	7.12***	8.26***
GROWTH	-0.7552	-0.8883	-0.7404
	-6.65***	-6.33***	-6.58***
CONSTRUCTION		-0.8320	
		-0.99	
CONSUMER PRODUCT		0.2695	
		0.33	
FINANCE		-1.4310	
		-1.65*	
HOTELS		0.7246	
		0.74	
INDUSTRIAL PRODUCT		-0.7167	
		-0.89	
PLANTATION		-1.1612	
		-1.40	
PROPERTIES		-0.1780	
		-0.22	
REITS		1.4039	
		1.24	
TECHNOLOGY		0.5280	
		0.61	
TRADINGSERVICES		-0.4383	
		-0.54	
R2	0.7426	0.7501	0.7425
Adjusted R2	0.7418	0.7481	0.7418
F-statistic	932.36	361.97	1118.69
No. of observation	1946	1946	1946

Notes: $DPAYOUT = \beta_0 + \beta_1 SIZE_i + \beta_2 PROFIT_i + \beta_3 CFLOW_i + \beta_4 SGROWTH_i + \beta_5 LEVERAGE_i + \beta_6 GROWTH_i + \beta_7 INDUSTRY_i + u_{it}$

The dependent variables are DPAYOUT calculated as the average of the dividends-to-total asset ratio for the reference period (%); SIZE culculated as natural logarithm of the average of total asset for the reference period; PROFIT culculated the value of earnings before interest and taxes are divided by total assets; CFLOW was measure by log of cash flow from operating activities; SGROWTH culculated as Current sales minus Previous sales and then devide by previous sales; LEVERAGE culculated as the total

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liabilities devide by shareholders' equity; HGROWTH was measure by annualized growth rate of total asset for the reference period (%); and industry uese company was assigned value one if company based on sector and zero otherwise. Values in parentheses are t-statistics. ***, ** and * indicate significance at 1%, 5% and 10% level.

The result from Model 1 suggests that profitability (PROFIT), leverage ratio (LEVERAGE) and historical growth (GROWTH) strongly influence the dividend payout ratio at 1 per cent level. The result also shows that SIZE of company negatively influences the DPAYOUT at 10 per cent level. PROFIT positively influences the DPAYOUT at 1 per cent level. These results are consistent with Jensen et al. (1992), Kowalewski et al. (2007), Wan Tahir (2009), Guizani and Mondher (2012), Amidu and Abor (2006), Anil and Kapoor (2008) and Musiega et al. (2013).

The result indicates LEVERAGE strongly and positively influences the DPAYOUT 1 per cent level. The finding on leverage ratio (LEVERAGE) confirms the study done by Dhillon (1986). He finds conflicting evidence for the relationship between dividend payout ratios and leverage.

HGROWTH significantly and negatively influence the DPAYOUT at 1 per cent level. This result confirms the findings by Theis and Dutta (2009) and Abreu and Gulamhussen, (2013). Size (SIZE) has a negative relationship with dividend payout ratio and statistically significant at 10 per cent level. The result confirms the findings by Kangarlouei et al. (2012) and Hashemijoo et al. (2012) where they highlight that size usually has a negative relationship with the dividend payout ratio because large-sized firms are usually more diversified and small firms may have less public information, larger firms are expected to be less risky and have less share price volatility.

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On the other hand, the result shows that cash flow (CFLOW) and sales growth (SGROWTH) are not statistically significant. This means that cash and number of sales do not influence the Malaysian public listed companies' decision in giving out dividend.

Model 2 presents the regression result that includes the industries dummy. The results show that the profitability, leverage ratio and historical growth deterrmine the dividend payout ratio of Malaysian public listed companies. Profitability and leverage ratio have a positive relationship with the dividend payout ratio, while the historical growth has a negative relationship with the dividend payout ratio. The industry dummy indicates that finance sector significantly and negatively influence the dividend payout ratio. This implies that finance sector pays lower dividend than other sectors in the Bursa Malaysia.

Model 3 is run by dropping the CASH FLOW due to its high correlation with the SIZE. The results is similar to Model 1 where size, profitability, leverage ratio and historical growth determine the dividend paypout ratio of Malaysian public listed companies.

CHAPTER FIVE: CONCLUSION, LIMITATION AND RECOMMENDATION

5.1 Conclusion

This dissertation analyses the determinant of dividend payout ratio of 139 Malaysian public listed companies during 2001 to 2014. The data are analysed using OLS estimation technique. This dissertation follows the work done by Abreu and Gulamhussen (2013) and Gill, Biger, and Tibrewala (2010).

The previous studies are conducted mostly in developed and developing countries but less attention has been given to Malaysia. Thus, this dissertation fills the gap by examining the determinants of dividend payout ratio of Malaysian public listed companies covering year 2001 to 2014.

The results indicate that size, profitability, leverage ratio and historical growth influence the dividend payout ratio of Malaysian public listed companies in the period studied. Size negatively influence dividend payout ratio, profitability positively influence dividend payout ratio, leverage ratio has a positive relationship with the dividend payout ratio and lastly historical growth negatively determine dividend payout ratio. This implies that bigger size companies pays less dividend, more profitable companies pay more dividend, higher leverage companies pay more dividend and finally lower growth companies pay higher dividend.

The regression analyses have provided the answer for the Hypotheses 1,2,3,4,5, and 6 of this dissertation. The first hypothesis proposes that size of the company positively influence the dividend payout ratio. The empirical test shows that size influences the dividend payout ratio but in the opposite relationship. With the

reference to the argument that profitability positively influences the dividend payout ratio in hypothesis 2, the results indicate that profitability positively determine the dividend payout ratio. As for hypothesis 3, the finding of this dissertation has not found any evidence that cash flow influence the dividend payout ratio. In addition, the regression results do not find any evidence that sales growth influence the dividend payout ratio in the period studied. Hypothesis 5 is supported,where leverage ratio influences the dividend payout ratio and has a negative relationship. Lastly, the results for regression analysis show that historical growth influences the dividend payout ratio and support the hypothesis 6.

5.2 Limitation

This dissertation has some limitations. First, this dissertation only employs companies that have dividend payout data on DataStream database. Thus, only 139 companies are used in this study out of 1852 companies listed in Bursa Malaysia. Second, this dissertation does not cover all sectors in Bursa Malaysia because of the unavailability of the data.

5.3 Recommendation

It would be interesting to study the determinant of dividend payout ratio by increasing the sample size, as this would permit researchers to see the influence of dividend payout ratio on a wider range of companies. The finding may vary when using larger sample size as this would increase the number of observations and, thus, provide better findings.

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