

## **CHAPTER 1: RESEARCH OVERVIEW**

### **1.0 Introduction**

The introduction of dividend in the business world is now being a practice of most firms. However, the increasing trend of share repurchase also becomes a questionable new movement to the investors. In Chapter 1, we are going to define the background of dividend and share repurchase, the problem statement, objectives, hypothesis, and significance of our research.

### **1.1 Research Background**

In the business world today, the companies often compensate their shareholders by distributing dividend as a current income to them. However, there is a trend of increasing share repurchase in the business battle world (Errol Oh, 2010). Thus, we would like to know what are the variables that will affect the firms' decision on dividend payout and the motive of share repurchase by the companies.

Share repurchase and dividend payout are two forms of earnings distribution from the company to its investors, and also aimed to maximizing shareholder wealth (Harold Bierman, Jr., 2001). Both methods are implemented by the companies which aimed to attract new investors and keep the existing investors. Besides, companies also may issue preferred shares or selling common shares in order to raise fund to finance expansion, for development and invest in foreseeable projects (U. S. Department of State). These companies can be unlisted companies, or in a more common form, listed companies in the financial market.

Nevertheless, these companies will also be rated by Credit Rating Agency to rank the company's overall performance in order to determine its stock price. When the stock is firstly issued, it is known as the Initial Public Offering (IPO). The transactions or trading of shares after the IPO is called the secondary market, and the share price fluctuation is determined by the supply and demand of the shares. The issued shares help the companies to increase their capital, as return, the companies will need to pay dividend to the shareholders.

### **1.1.1 Dividend**

Share or so-called stock is a type of financial securities. Shares can be categorized into various types, such as equity shares, deferred shares, bonus share, and the most general and well known by the public are the preferred stock and common stock (Mohammed Julfekar Haider, 2010). There are some differences between preferred stock and common stock although they have similarities (Investopedia, 2010). Preferred stock usually pays its holders fixed interest whereas common stockholders receive floating dividend. Common stock does not have a maturity date. It can be traded anytime by the holders in the market. It also gives its holders an opportunity to get capital gain when the selling price is higher than the purchasing price. It is known as the capital gain. Besides that, it also gives the holders to get periodical dividend which is known as the current income.

Dividend is come from a Latin word, *dividendum*, a word that means “the thing which is to be divided among all” (Independent Stock Investing LLC, 2009). Dividend payout was famous since 1800s. Dividend is a form of compensation from the company to the investors for holding their shares. It is the distribution of excess cash to its shareholders. There are generally few types of dividend models, which included stock dividend, cash dividend, stock split, extra dividend, and property dividend (Rebecca Tait, 2008). However,

dividend will only be paid when the company is in good position, and its Board of Directors is willing to distribute it instead of retaining the earnings. Somehow, holding share represents the partial ownership of the company, the company will need to compensate its owners or they will stop investing to the company. The most common payout is the cash dividend. Dividend is taxable, and is usually double taxed before it reaches the hand of the investors. Firstly, the company will pay the dividend because they are making profit, the government will charge the corporate tax on the company. Secondly, the dividend is a form of extra income to the investors, thus, it will be charged for income tax. The taxes are not desirable for both parties.

### **1.1.2 History of Dividend**

In Frankfurter et. al. (1997), dividend payment as a compensation to the shareholders has began for more than 300 years. In their research, the early joint stock companies origins to 1720. In the first half of the 16<sup>th</sup> century, there are successful sailing captains started to make trading by selling the parts in their voyages to the investors. The general denomination of shares was 1/32 of the ships' property and the interest are 1/8, 1/16, 1/48, and 1/56, depend on the condition. Joint stock company dividends is a dividend is allocated as a fixed amount per share. Therefore, a shareholder receives a dividend in proportion to their shareholding. The investors also practice to purchase shares from more than one captain to diversify their risks. By that time, the captains played a role as the manager, whereas the investors are like modern shareholder nowadays.

The Eastland Trading Company was the first joint stock company organized in Great Britain (Frankfurter et. al., 1997). It originally chartered in the 15<sup>th</sup> century and granted monopoly trading rights to the Baltic countries. In the 16<sup>th</sup> century, the Muscovy Company and the Levant Company, chartered for trade

with Russia and with Turkey respectively also followed the path of the Eastland Trading Company. Without exception, these trading companies produced significant profits for their owners.

On the other hand, (Frankfurter et. al., 1997) also has the similar opinion on the Dutch East India Company which was formed in Holland in 1602 and was granted a monopoly for trading with India. This enterprise was the first permanently organized joint stock company. It is also the first company that issued shares after the Middle Ages in the year 1606. From research, the company paid 75% high dividends to the investors, and averaged of 25% dividend during its first 15 years.

### **1.1.3 Pros and Cons of Dividend**

There is certainly some benefits make paying dividend such a favorable method to compensate the shareholders. Paying dividend helps to shows the company's stability, give the investors the realize gains, and also to show some short term results and long term opportunities.

Before doing any investment, all the investors will sure look for the company's stability firstly by the consistent dividend payout of the company. It gives the investors more confidence if the company is able to pay a consistent dividend. Conversely, if a company that is consistently paying dividends fails to do so in a sudden, it will not only spoil the image of the company to the investors, it will also affect its share price. First, on investors' point of view, dividend gives another form of income to them (Watkis, 2009). The investors receive current income without having to sell the stock he owns. If the company do not pay dividend, most the investors will proceed to sell off his shares in order to get realize gain. It gives the investors an opportunity to get profit and even regular return while retaining his ownership in the company. Receiving the dividend payments is a short term result for the

investor as a reward of holding the stock, but in long term, it will be a long term opportunity to gain more as long as the investors hold it (Helfert, 2008).

However, things do have two-sided. Despite of the benefits given by the dividend payout, there are a few disadvantages where both the dividend distributors and investors try to get rid of. The most undesirable fact is the double taxation (Leung, 2008). Watkis (2009) also agreed with Leung under this statement. When the company pays dividends, it is required to pay the taxes, which is known as the corporate tax in Malaysia. As for the investors, they will need to pay the personal income tax on the dividend as dividend is a kind of income for an individual. This condition is known as the double taxation. Thus, most of the investors will rather the company to reinvest the dividend to make the company grow, and at the same time, increase the stock price, where give the investors to get higher capital gain. Reinvesting the dividend will not caused double taxation and makes it more preferable to both the company and the investors.

Beside double taxation, paying dividend will also cause stock devaluation. This is because paying the dividend to the investors will make the company to hold less cash in hand and devalue the company's stock. This often changes investors' impression on the company because the shares seem to have less value due to lower stock price.

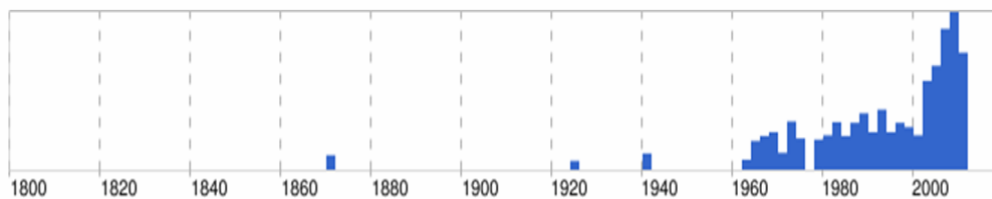
Last but not least, the decision of whether the company is paying dividend is held in the hand of the Board of Directors of the company (Helfert, 2008). It means that even though the company is making a huge profit, it has no obligation to pay dividend. The situation in which the dividend is not universally available makes it less attractive to those who prefer current income on stocks.

### 1.1.4 Dividend Background in Malaysia

Figure 1.1: Timeline of dividend background in Malaysia from 1800 - 2010.

#### Timeline

#### 1800-2011

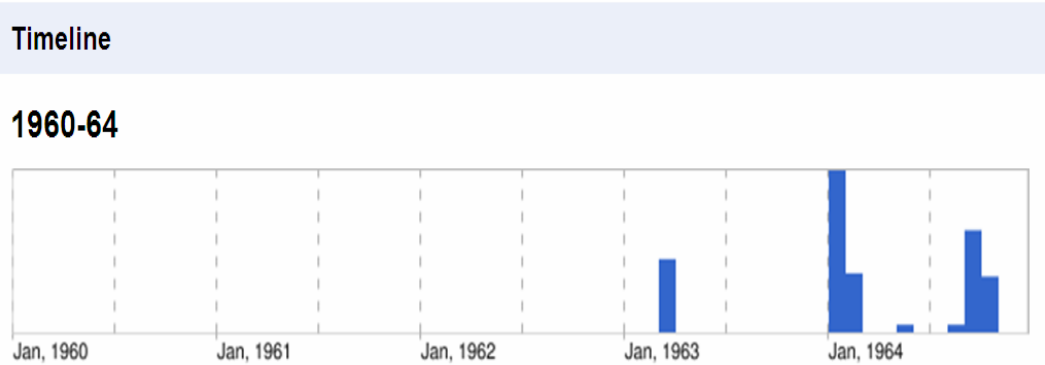


Source: Google, 2011

From the timeline, we can see that the first occurrence of dividend in Malaysia is in around year 1871, a company named Tongkah Harbour Tin. Dredging Berhad was incorporated in Malaysia. It had declared in an interim dividend of 10 cents per share on account of the profit for the year ended 30<sup>th</sup> June 1871, and this news was published in The Straits Time on 22 November 1871. This was a record of the activity that had happened about 100 years ago. Tongkah Harbour Tin. Dredging Berhad was a United Kingdom company, and Malaysia was known as Malaya by that time under the British colonial.

This action is the pioneer but the dividend payment was not popular. There were two other occurrence of dividend payments happened in the 1920s and 1940s, and there were limited records of it. The trend of paying dividend becomes more popular since 1960, which was after the independence of Malaysia.

Figure 1.2: Timeline of dividend background in Malaysia from 1960-1964.



Source: Google, 2011

From The Sydney Morning Herald newspaper, it had published the news about the distribution of bonus by the Hume Industries (Far East) on 20 March 1963. Then, the next dividend occurrence was in 1964, and the heat of dividend distribution started. In addition, Malaysia first formal securities business organization was establish in 1930 and then re-registered as Malayan Stockbrokers' Association in 1937 (Bursa Malaysia, 2010). This has created a platform for the investors to trade.

However, it was still before the independence of Malaysia. After the independence of Malaysia, the organization was then changed its name to the Stock Exchange of Malaysia in 1964, and recently to Bursa Malaysia Berhad in April 2004. It is the start of the practice of paying dividend.

Figure 1.3: Timeline of dividend background in Malaysia from 2004-2008.

## Timeline

2004-08



Source: Google, 2011

There is a simple summarized of the trend of the dividend payment in figure 1.3. From the figure above, we observed that the trend of dividend distribution is well accepted in Malaysia market in the year 2004 to 2008. Besides that, this practice seems not to be affected by the global financial crisis 2007 as we can see the practice is stimulated especially after 2007. This is also another interested part where we like to study of.

In order to be more efficient and effective, all listed companies will be implementing e-dividend initiatives from April 2010 onward (The Star, 2010). Thus, the share market is expected to be well-organized.

### 1.1.5 Share Repurchase

Another method that is frequently used by company is the buying back stock method. Share repurchase, or in another name, share buyback, is meant to reduce a company's outstanding share in the financial market (Investopedia, 2010). Buying back the stock is a way that the company distributes its excess cash to its investors without having to increase the dividend. After the



buyback of the stock, the earnings are then divided among fewer outstanding shares, and the investors are then to earn higher dividends. When a company decides to repurchase, it is also believed to have an aim to stabilize the supply and demand of its outstanding shares. Generally, companies prefer to buy back stock because buyback news will raise the stock price (Vermaelen, Theo, 2005) which is further beneficial to the senior management of the company.

It is believed that this can bring benefit to the company as share repurchase helps to buy back the company's shares, give the company an opportunity to pay the compensation to those investors that are willing to sell their shares back to the company, and it reduces the total costs as buyback does not require to pay taxes as what is incurred if the company wants to pay dividends. There is a trend of changing from purchase to dividend ratio or 8.44% to 113.11% in 2000 (Grullon and Michaely, 2002). And if their competitors are making share repurchase, it will drive them to do the same too.

### **1.1.6 Pros and Cons of Share Repurchase**

There are also advantages and disadvantages for a firm to offer shares buyback. First, when a firm announces to buy back their shares in the outstanding market, it will boost in the share price. This share repurchase program gives a short-term bonus for investors as this reduces the total outstanding shares in the public markets. It will tend to strengthen the share price and make the in-hand shares more valuable (Maranjian, 2009). Second, it will raise the dividend payment. When a company bought back certain number of shares, the market will have lesser outstanding shares in the amount, and thus increase the dividend payment amounts to the investors respectively.

Besides, it will also give the company an image with better earnings per share (EPS) because when a company is announcing their profit, the investors will look at the earnings per share value. Since the number of share is lesser, the EPS of the company will be more attractive to the investors (Gurufocus, 2008). This will show a better performance of the company and gain the confidence of the investors which in turn drive up the company share price. Additionally, when a company offers share buyback, it helps to reduce the excess cash of the company by doing a more profitable activities rather than letting the excess cash in the money market. Last but not least, announcing shares buyback will also give a positive psychology of the company to the public. The investors will believe that the company is in a good performance and expect the share price will rise.

However, there are also some disadvantages of offering share buyback which firms that doing this may want to be concerned. The first thing to be concerned is about the poor predictions of the market. The company usually takes decision to repurchase their shares when the shares are undervalued. However, nobody can predict the stock market precisely end up sometimes company is purchasing their shares at a higher price and misusing the capital of the company (Tice, 2010). Besides that, after the company spent huge amount of money to buy back shares, it will has lesser money in hand and will decide to cut down the dividend to investors which known as the sinking dividends. This will also make the investors to stop supporting the company by holding their shares.

Third, some companies will also take the share repurchase program to manipulate their financial ratios which makes the investors and market observers to suppose that their company is in good financial position even though it is having a poor performance. Lastly, company also has their management self-interest in offering share repurchase (Staff, 2009). Generally, company managers holding the share options will exercise it to gain profit as

the announcement of shares buyback will boost the share price. In fact, small investors do not gain as much as what the big investors did.

### **1.1.7 Share Repurchases Background in Malaysia**

There was a serious financial crisis in the year 1997, which is known as the Asian Financial Crisis 1997. This has created a new platform in the Malaysia stock market for the firms to buy back shares as the market leaders were trying to gain back the investors' confidence (Ahmad et. al., 2009) by introducing the share buyback activity, aiming to push up the company shares price. Share repurchases took off in the mid-1980s. In 1982, Congress enacted rule 10b-18, which provided companies with a safe harbor, or a legal shield from the threat of being sued, for the first time. This rule made many companies used the buybacks in the first time in modern history. In the USA, many companies use share repurchase more than using dividend method to provide shareholders. This caused the value of share repurchase exceed dividend for the first time in the late 1990s (J. Mauboussin, 2006).

There are several reasons for firms to go for repurchase decision. Some of the reasons are to increase the market price of the share, to improve financial ratios of the company i.e. EPS, ROA, ROE etc., to make sure that there is availability of cash in excess, to avoid dilution, to acquire share for management and employee incentive plan, to generate currency for merger and acquisition.

The stock market in Malaysia was damaged seriously at the Asian financial crisis in 1997. So that, the Malaysian corporate and stock market leaders try to introduce the new program for rejuvenate confidence to investors. This program is share repurchase and it is a new landscape in the Malaysian stock market. The share repurchase is want to shore up the share prices, the Securities Commission, the regulatory body relaxed earlier restrictions on

companies to repurchase their own shares and began formulating laws and procedure to facilitate and regulate companies to buy back their own shares. Share repurchase was legalized under Malaysia Companies Act through enactment of section 67A on 1<sup>st</sup> September 1997. This was allowed all listed companies in the Kuala Lumpur Stock Exchange (KLSE) to buy back their own share through proper application. Further to that those listed companies involve in the buying back their own shares should report all transaction of the buyback into the financial statements as stipulated under the Malaysian Accounting Standard Board (MASB) in April, 1999 through its circular 'share-buyback accounting and disclosure.

In the Bursa Malaysia data, it shown that 154 listed companies were buy back their own share and it is about 15.6% of the total in year 2007. The Bursa Malaysia also suggested corporate Malaysia to join this buyback program because it allows the more efficient use its surplus financial resources to stabilize the supply and demand of its shares, thereby supporting its fundamental value. The buyback program trend in Malaysia just keeps rising, it is mean that the listed companies is accept the buyback program and think it is very good for companies operation. It shown that it got 204 listed companies buy back their own share in year 2008 and it is about 20.9% of the total. The following year 2009, it was 196 listed companies buyback their share and 20.4% of the total (Oh, 2010).

Table 1.1 Executive summaries of share buybacks in Bursa Malaysia between years 1999-2006

Year	Total number of companies
1999	12
2000	13
2001	26
2002	32
2003	62
2004	70
2005	127
2006	145
2007	154
2008	204
2009	196

*Source: Nadarajan et. al. (2009). Citation from Ramakrishnan et. al. (2007).*

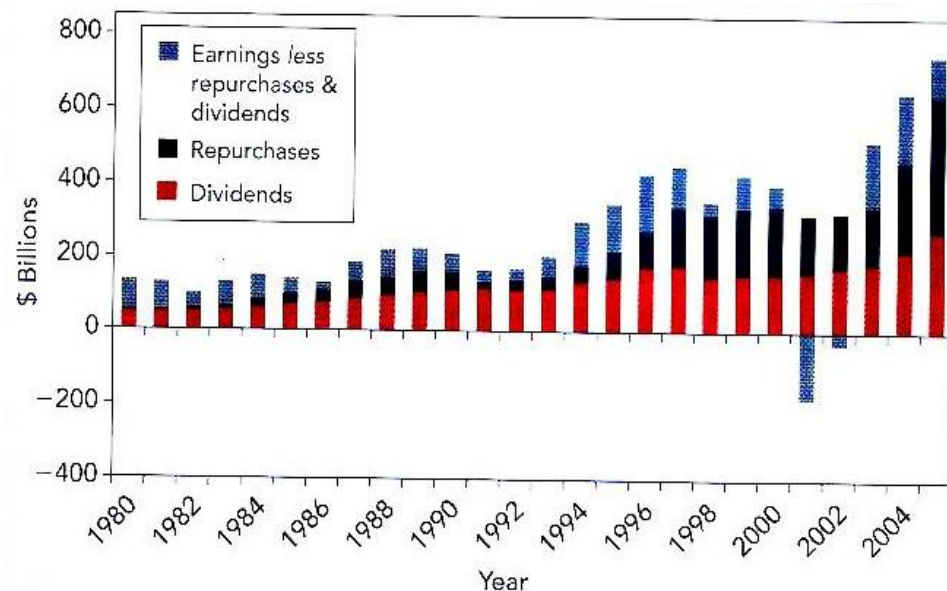
### **1.1.8 Dividend and Share Repurchase Background Internationally**

Huang, You, and Lin (2009) found that Taiwan listed companies prefer to give out dividend in either cash dividend or stock dividend. This is similar to U.S. situation where their dividend payout ratio to Taiwan is close. Lee, Jung, and Thornton Jr. (2005) found that the primary objective for share repurchase in Korea is to stabilize the stock price in the market. Denis and Osobov (2005) had examined the dividend payout trend in the financial market for a period from 1989 to 2002 to determine how is dividend is paid in Canada, United Kingdom, Germany, France, and Japan. In these countries, it shows a declining trend for the firms to pay the dividend to their investors.

There is limited information on why there are some shareholders prefer stock dividend, especially in China, Netherlands, and South Korea. In the U.S. most of the companies are barely giving out the stock dividend. However, there is an average of 34.46% of the Chinese listed firms distributed stock dividend, and there are also 10.46% of the firms that are paying both the stock dividend and cash dividend.

However, what determines whether shareholders should get dividend, how much should be paid, and what are the determinants to give out dividend are still in puzzled. Many researchers have did researches on this by selecting different factors such as liquidity of the firms, tax regime, firm size, etc. and get a mixed result. Nevertheless, it also depends on how developed are the countries' financial market. Different geographical locations have shown to give different result on different factors. Thus, we would like to studies how our selected factors act on dividend payout and share repurchase decision in Malaysia.

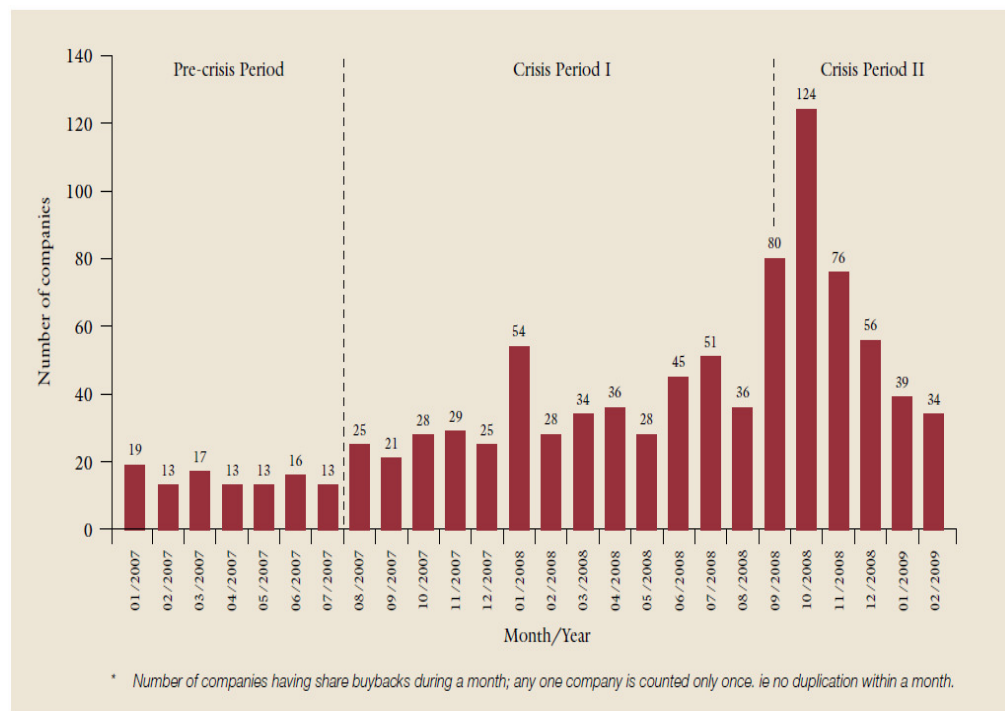
Figure 1.4: Dividend and Stock Repurchase in the United States, 1980 – 2005.



Source: A. Brealey, R., C. Myers, S., & Allen, F. (2008)

Figure 1.4 shows the dividend distribution trend in United States (U.S.) is quite stable for the past 20 years. However, the trend of share repurchase in United States has been rising in the past few years, especially in 2004. The practice of distributing dividend and share repurchase were existed long time ago, but most investors were familiar with the dividend as their behaviors are more toward the Bird-in-the-hand theory, and the firms have to take consideration of the behaviors of the investors as they are also one of the major stakeholders of an organization.

Figure 1.5: Number of share repurchase companies in Hong Kong (Jan 2007 – Feb 2009)



Source: HK Exchange Research and Corporate Development Department (2010)

In Figure 1.5, it describes the share repurchase trend in Hong Kong. From the figure, we observed that the practice of share repurchase in Hong Kong is considerable growing stage for long time and the share repurchase initiative in Hong Kong is obviously become more and more popular, especially after the

2007 global financial crisis. Ahmad et. al. (2009) commented that the 2007 global financial crisis has created a new platform in the Malaysia stock market for the firms to buy back shares because of the market leaders were trying to gain back the investors' confidence. Hong Kong is a developed country in the ASEAN while Malaysia is a developing country. Thus, it is desirable for us to determine whether Malaysia is facing the similar situation.

## 1.2 Problem Statement

In corporate view, there were two methods of company to distribute their profits to shareholders, either in form of dividend or share buyback. Nevertheless, corporate payout policy has changed significantly over the previous year. Fama and French (2001) reported that the proportion of listed US firms paying regular cash dividends experiencing descend since 1978 to 1999, and stock repurchase emerged as an significant phenomena in early 1980s, while Denis and Osobov (2008) consider dividends are concentrated among largest and profitable firms, which play key role in signaling their earnings position. Divergence in their views showing that they are facing problem with an absence of standard issuance plan that can be followed by all listed firms, which may bring them to a favorable or superior position.

DeAngelo et al. (2004) found a large increase in real dividends when Fama and French (2001) discover an opposite consequence, which estimates depend on the proportions of firms that tend to pay dividend out, but not in real dividend basis. It is worth to note that differ proxy of measurements will produce different outcomes. Another problem is, some researches were merely focus on dividends without evaluate share repurchase as an alternative approach of payout mechanism available to firms, consistent with Jain, Shekhar, Torbey (2009) that develop their learning in payout behavior of IPO firms. It can present as barriers to produce a precise result that free from omitted selections.



Owing to some research limitations, Denis et al. (2008) also have an idea about the biases that might be produced in their estimations of the change in dividend propensity. All samples collected in their study period are purely dividend payers that mainly concern to larger, more mature firms, thus will lead to imperfect judgment of predicted dividend payers' size, by reason of ignore those small and less mature firms. Such coverage pattern can exhibit a decline in the propensity to pay dividends, even if no such decline exists.

## **1.3 Research Objectives**

### **1.3.1 General Objective**

The first aim of this research is to provide insights and in-dept understanding of the management of the consumer product industry prefers paying dividend or share repurchase. Secondly, the purpose of this research is to identify which variables would managers of the consumer product industry take into consideration in making the corporate payout policy either paying by dividend or share repurchase among four variables, which are profitability, liquidity, leverage, and free cash flow, lastly, the specific objectives of this research are as follow.

### **1.3.2 Specific Objectives**

The objectives of this proposed study are to:

1. Investigate the effect of firm's profitability in making corporate payout policy-dividend and share repurchase;
2. Investigate the effect of firm's liquidity in making corporate payout policy-dividend and share repurchase;

3. Investigate the effect of firm's leverage in making corporate payout policy-dividend and share repurchase;
4. Investigate the effect of firm's free cash flow in corporate making payout policy-dividend and share repurchase;
5. Investigate which variable has the strongest impact in corporate payout policy-dividend and share repurchase.

## **1.4 Research Questions**

Five research questions for the proposed study are as follows:

1. Does firm's profitability have capability to influence the managers in making corporate payout policy-paying by dividend or share repurchase?
2. Does firm's liquidity have capability to influence the managers in making corporate payout policy-paying by dividend or share repurchase?
3. Does firm's leverage have capability to influence the managers in making corporate payout policy-paying by dividend or share repurchase?
4. Does firm's free cash flow have capability to influence the managers in making corporate payout policy-paying by dividend or share repurchase?
5. Which variable has the strongest impact on paying dividend or share repurchase?

## **1.5 Hypothesis of the Study (for quantitative research)**

In this study, corporations' share repurchases and dividend payout are our two dependent variables. While, profitability, firm size, liquidity, leverage, and free cash flow are our independent variables. Thus, we make a hypothesis either there are significant relationship between these dependent variables and independent variables. Either one of these independent variables or some of them do have positive effect to influent corporation to implement buying back their shares or distributing dividend to shareholders.

## **1.6 Significance of the Study**

From previous studies reviews, firms have no an agreed level to examine the most suitable distribution approach to push them to a superior situation, there is need to develop an evaluation based on the factors that affect firms' decision the most, either to pay dividend out or share buyback. Some researchers stated that there is lack of experiments that evaluate the payout mechanism, which focus on dividend payout and share repurchase simultaneity. The importance of our research is to examine the factors that significantly magnitude to contribute to results or outcomes either pay dividend or buyback the share, by take them both into accounts.

Our research emphasizes on issues related to company profit's distribution manner that mainly execute in Malaysia. It is contribute to investors, listed corporations in Malaysia, who would like to determine the consistency between past studies in foreign countries and the implementation in Malaysia, to learn up whether it will provide distinct impacts. It is magnitude in test the usability of same investigation in different locations.

## **1.7 Chapter Layout**

Chapter 1 is basically the background of dividend and share repurchase around the world from the past. Chapter 2 will be the Literature Review, Chapter 3 is the Methodology, Chapter 4 is the Data Analysis, and lastly with Chapter 5, the Conclusion, Recommendation, and Implication.

## **1.8 Conclusion**

This chapter has explained the background of the dividend and shares repurchase in general and have justified the trend of share repurchase in Malaysia. Besides, it also further explained the advantages and disadvantages of dividend and share repurchase respectively. Now, we would like to proceed to review the previous researchers' works to understand affect of the variables on dividend and share repurchase.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.0 Introduction**

Many variables have been used to be investigated on their influences to the payout decision. These variables included profitability, firm size, liquidity, leverage, taxes, and the availability of the free cash flow of the company. Many researchers have studied on these variables and found that there are mixed results for the relationships between each variables on payout decision respectively.

### **2.1 Review of the Literature**

#### **2.1.1 Profitability**

The relationship between firms' earning/profitability and their propensity to pay dividend produces ambiguous result. Some opposition arises although most of the evidences were supporting the positive correlation between these two factors.

Denis & Osobov (2008) studied six countries in sample, US, UK, Canada, Germany, France, and Japan, while Chay & Suh (2009) develop to a greater extent, seven major countries involving Australia. All these countries have the largest stock markets among developed countries. They found that the likelihood to pay dividend is positively related to more profitable firms and those with a greater earned/contributed equity mix. They believed that mature firms that contain greater earnings relative to contributed equity will lead to higher expected retention costs associated with investors' desires, thus

propensity to pay dividend increases. Similarly, DeAngelo et al. (2006) recognizes the greater impact of the earned/contributed equity mix (and to contributed capital mix) of dividends paying firms, or when retained earnings are a larger proportion of total equity or capital, there is high potential for firms to pay dividends.

In the same way, Fama and French (2002), and Truong and Heaney (2007) found no different answer. It is less likelihood for less profitable firms to initiate dividend payout since it brings on high cost to finance investment with new risky securities. Both of them use either earnings pre-interest, pre-tax to total assets ( $ET_t/A_t$ ), or earnings pre-interest, after-taxes to total assets ( $E_t/A_t$ ) as proxies of profitability. Besides, DeAngelo et al. (2004) have perceived a large increase in real dividends of top-end firms that produce greater real earnings, despite reduce in dividend payers since 1978 to 2000. Baker et al. (2006) conducted a survey about the views of corporate managers of Norway dividend-paying firms, and identified the level and stability of current earnings as the most vital factors that influent the payout decision, and indeed, the level of expected future earnings. Firms will only offer higher dividends when they fully ensure that they have adequate ability to maintain it. Also, Goergen et al. (2005) stated that net earnings are the key determinants of the decision to change dividend.

In addition, they do so irrespectively of the size of loss with the past level and future earnings. So far as there are annual net earning losses, though the firm in a good record of past performance and stable dividend payout policy, it always cause the omissions of dividend in the year of the loss. It delivers a significantly positive correlation between dividend decision and earning levels. However, dividend policy of German firms incline to higher downward flexible characteristics compared to US and UK firms, whose still remain at positive levels of dividends even there is dividend cuts, rather than adopt the dividend omissions.

Nissim and Ziv (2001) found that the profitability changes in each of the two years after the dividend changes are significantly and positively related with dividend increases. However, dividend decreases are not related to future profitability due to the accounting conservatism. The accounting concept reflects that any losses should be recognized in earnings when anticipated, which is consistent with dividend decrease may be reflected in current earnings that are disclosed after dividend decrease announcement. In like manner, Seifert (1997) examines the association between the earnings and dividend changes, stated that any positive (negative) change in annual dividend per share is considered as dividend increase (decrease) as well. Eventually perceived that there are positive earnings changes before the dividend decrease, only the earning changes during the period of dividend changes are in the same direction as dividend changes, which is opposite to Lintner (1956) argument “Dividend change is usually the result of a permanent change in earnings”.

Nonetheless, divergent outcomes induce the raise of arguments. Andres et al. (2009) realized the firm with high proportion of published earnings, has assigned a low proportion of cash flow as dividend payout compared to UK firms, these cases happen in same state, Germany. Whereas, the result can be understand by several explanations. Dividend omissions and zero dividend payout policy occur more frequently in Germany due to their more volatile dividends compared to US and UK. Moreover, German firms tend to retain part of their earnings as legal reserves purpose, thus the published profit may not correctly reflect firm’s performance. Given the conservative nature of published-earnings outline, their long term payout policy is expressed on cash flows rather than earnings, while cash flow was being employed as earning measurements as well. Lastly, German firms run to have more flexible dividend policies since they are more willing to cut dividend when decrease in profitability persistently.

Another way of compensate investors by returning money is share repurchase. Brockman et al. (2008) found that manager will tend to release more bad news prior to initiating their repurchase in order to buy back shares at relatively low prices, both in terms of frequency and magnitude. Managers would like to lower the EPS forecasts amounts before repurchase, guide the investor expectations of firm value downward. In conclusion, here found that repurchase events are negatively and statistically significant for management's forecasted earning per share on pre-repurchase period. Hribar et al. (2006) mention that firms with small negative earnings surprises before repurchase tend to activate accretive repurchases more frequently, in case the accretive stock repurchase are used to manage reported EPS forecasts that estimated the market's expectation before firms' repurchase decisions. They also defined that share buyback variable is measured by the dollar volume of share repurchases occur in those firms. Skinner (2008) explained that the increasing rate of losses and the increase in earnings volatility can be best explained the substitution of dividends to repurchases, due to the flexibility of latter.

Nevertheless, dividend policy inclines to more conservative since it always needed to minimize the possibility of dividend cuts or omissions, and it requires dividend initiating costs for new firm without a dividend history. It supports the evidence that firms with greater losses more likely to elect share repurchase as their way to distribute earnings to shareholders. Jain et al. (2009) suggest that initial public offering (IPO) firms are likely to look forward to capital gains rather than dividends or share repurchases during the post-IPO stage, even if profitable, to assure their capacity to meet or finance the growth projects, since IPO is firm that issues common stocks or shares to the public for the first time, which are often in negative cash flow. However, they found strong evidences indicate that IPO firms are preferred to repurchase over distribute it as dividends.



### **2.1.2 Firm Size**

Firm size has always been used as a factor to justify whether it is influential on the payout policies. Denis and Osobov (2008) investigated the firm size as one of the determinant that affects the dividend payout. They have used the total asset as the measure of the size and found that the dividend payout are affected by the firm size in U.S., Canada, United Kingdom (U.K.), Germany, France, and Japan.

Ho (2003) has investigated the dividend policies in Australia, and found out that their dividend policies being significant positively affected by the firm size. Grullon and Michaely (2008), and Kahle (2002) also done an investigation on the relationship between size and the likelihood of the firm to payout dividend and proved that it is a positive relationship in their studies. The size has its influence on the firm when decide whether to pay dividend. Gang and Xiao (2009) found that firm size not only significant to the dividend payout, it is found to have a positive effect on how much cash dividend is to be paid out. As from the findings of DeAngelo et. al. (2004), the firm size effect is significant for those listed companies as they are large in size and willing to pay out in greater amount. Blau and Fuller (2008) have used the firms' market capitalization as the size measurement to justify the relationship between the firm size and dividend payout, found out a significant and positive relationship in the end while larger firms are believed to pay greater amount of dividend.

DeAngelo et. al. (2006) used total assets and equity value as the size measurement to investigate the relationship of firm size and payout in U.S. and found that firm size is significantly positive for the firms' likelihood to pay dividend. Besides, Fama and French (2001) have used the total assets as the measure of size, also suggested that the probability for the firm to payout dividend depends on the firm size. Nevertheless, Initial Public Offering (IPO)

firms are found to have a positive reaction on both payout form for dividend as well as share repurchase but the variation on these two types of payout initiation mechanisms have not been further investigated (Jain et. al. 2009).

However, adverse outcomes still exist. Chemmanur et. al. (2010) found that this firm size effect is significant for the Hong Kong firms, but, it is not applicable for the United States (U.S.) firms. Chemmanur et al. (2010) suggested that in Hong Kong, larger firms are more to be expected to cut dividend than the smaller firms. On the other hand, the researches done by Allen and Michaely (2003) and Keim (1985) have shown that there is a negative relationship between the dividend payout and the firm size.

Different geographical areas have different findings. The listed companies in Taiwan market and U.S. market prefer to give out dividend (Huang et. al. 2009). However, share repurchase is more preferable in Korea. Lee et al. (2005) found that in Korea, the larger the firm size, the lesser the possibility it repurchases its outstanding share in the market. Besides, firm size is always believed to have its effect on dividend payout in Canada, U.K., France, Germany, and Japan (Denis & Osobov, 2008). Besides, Grullon (2002) found out the smaller the firms, the further the share buyback activities it used to be, due to the larger earning volatility of those small and young firms. They also used total expenditure on the purchase of stocks to measure the extent of share repurchase.

However, the firm size effect was said to be slightly toward weak form in the studies by Smith and Watts (1992). Lee (2010) had used market capitalization as the firm size measurement and found that it is not significant for the decision on dividend payout although there is an argument saying that larger firms are more likely to pay dividend as their payout method. Huang et al. (2009) used book value of the assets as the size measurement but was unable

to prove that firm size could affect the future earnings growth of the firm which further to determine its payout mechanism.

### **2.1.3 Liquidity**

Baker et al. (2006), they survey Norwegian managers about the most important factors influencing their setting on firm's dividend policy. Among 22 factors, liquidity is the 5<sup>th</sup> most highly factor that influenced the dividend policy of Norwegian firms. They argue firms' liquidity affect their ability to pay dividend. Consistent with Eije and Megginson (2007)'s finding, they found out relative liquidity will influence the probabilities to pay dividends as well as share repurchase when they examine whether the fifteen nations that were member of the European Union prefer to cash dividend or share repurchase.

Banerjee et al. (2005) showed that past liquidity is a significant determinant of dividend initiations. They also mentioned firm's stock market liquidity is related to the payout policy of the firms. As a result, firm will distribute dividends when their market liquidity is high.

Different in Blau and Fuller (2008) findings, they have developed a model of corporate dividend policy based on the idea that management values operating flexibility. Then, they found out firms with high liquidity have significant lower dividend payments. Griffin's (2010) also showed that, although he confirms the liquidity of the stock of the firms do influence them to pay dividend, more liquid of a firm's stock, they tend to invest more in positive NPV project and eventually decreasing the dividend amount.

On the other hand, Brockman et al. (2008) indicate that stock market liquidity plays a significant role in determining the firm's payout decision among share

repurchase, dividend or none through undertaking logistic regression analysis. *Ceteris paribus*, higher market liquidity stimulate the corporate use repurchase instead of dividends. Besides, they found out stock market liquidity has two effect, first order effect on the repurchase decision and the residual order effect on the dividend decision. They also provide that stock market liquidity is more likely to affect repurchase decision than on dividend decision. Eventually, they report that repurchase have recently become the payout decision of choice in part because of rising stock market liquidity.

### **2.1.4 Leverage**

From previous researches indicated, leverage is one of the important independent variables to determine the corporate payout policy, either in dividend or share repurchase. By using Tobit analysis and three-stage least square estimation, Zhang (2007) has found out that leverage is one of the significant and positive variables in determining the reason of corporate distribute dividend instead of share repurchase in Hong Kong listed-firms. Blau and Fuller (2006) reported there is a positive relationship between leverage and dividend. Baker et al. (2006) found out financial leverage is considered as one important determinant in influencing dividend policy of Norwegian firms through distribute the survey forms to managers of Norwegian firms listed on the Oslo Stock Exchange. Those managers believed the firms will distribute dividend once the firms finance through any debt or stock issuing and increase its financial risk, earning volatility.

Fama and French (2001) used the leverage and debt regressions and find out that debt is indeed the residual variable in financing decision for dividend payers. Besides, they further confirm leverage does have positively indirect relationship with corporate dividend payout ratio through positively influence the firm size. Jain et al. (2008) found that a comparison between dividend

paying and repurchase firm, a firm have significantly higher leverage are more likely be dividend firms. They also further prove it through undertaking logistic regression analysis.

On the contrast, Li and Lie (2005) have run a multinomial logistic regression to test whether increase or decrease dividend against various variables and the dividend premium. As a result, the firms are more likely distribute their dividend when leverage and certain variables are low and this result consistent with Grullon and Michaely's (2006) finding. Leverage is negatively affecting the dividend payout. Similar to the finding of Truong and Heaney (2007), they use leverage as an independent variables in their analysis against Fama et al. (2001) propose leverage and dividend payout are dependent variables which influenced by growth option and profitability. Eventually, they confirm their analysis that 8279 listed firms from 37 countries are more likely choose to pay dividend when their leverage ratio is low. Moreover, Brown et al. (2004) also found that dividend firms are less likely distributing or increasing dividend when they have high debt ratio.

From Bagwell and Shoven (1988) and Kahle (2002), they showed that the firms are less likely to repurchase when they have high leverage. It can be explained by finding of Dittmar (1999), assuming that an optimal leverage ratio exists, only when firm's current leverage ratio is below its target leverage ratio, they tends to engage more in share buyback programs, as the distribution of excess fund to shareholders will increase firm's leverage ratio. Same as Hribar et al. (2006), the dollar volume of share repurchases being used to measure extent of share buyback. Kahle (2002) found that there is significant difference in leverage between dividend firm and repurchasing firm.

### **2.1.5 Taxes**

From the literature done by previous researchers, it has shown that in recent decades, mostly there is a fundamental shift away from dividends has developed in the countries abroad, rather it shown stock repurchase have chosen as an alternative to dividend payout. One of the determinants variables affect a company propensity whether to implementing share repurchases or dividend payout are the taxes.

There are a lot of previous studies on the relationship between the tax and company payout policy across the broad countries. For instance, Baker et al (2003) have conducted surveys on the manager perspective to learn their views about their firm's share repurchase. Under U.S. tax law, authors found tax is one of the significant variables that increasingly motivate for substitution of share repurchases for dividend, this is to provide a tax-efficient way to distribute funds to shareholders thus indicate a positive relationship between tax and share repurchase. The result is consistent with the prior research done by Grullon and Michaely (2000) that supported return excess capital to shareholders in a tax efficient manner as one of the major theories that explain why company adopt a share repurchase policy, it is evidenced by the declining average dividend payout ratio on the past decade between 1974 to 1998 while the frequency of firms initiating a distribution with a share repurchase increased. It is also consistent with the Lee et al. (2006) studies on taxes and dividend clientele in Taiwan.

It shown that after the legalization of share repurchases in Taiwan (September 2000), firms with higher concentrations of highly taxed shareholders were significantly more likely to commence repurchase programs. There is also a research done by Korkeamaki et al (2010) that study the effects of the major dividend tax reform on the changes in dividend and share repurchase policies that occurred at Finland in 2004. This reform introduced double taxation of

corporate income. The empirical findings of the authors are firms increased dividends during the last year of the old tax system, after the reform, dividend payouts decline across all firms. Authors also found a significant increase in share repurchases after the reform.

On the other hand, Hsieh and Wang (2008) conducted a study to examine whether a corporate payout policy is associated with insider share holding and their tax preferences over the 1991-2001 periods. It was found that personal tax considerations from insiders affect corporate payout decisions. Their findings are insider ownership and the implied tax liabilities are positively related to a firm's propensity to employ share repurchases. Firms with higher levels of or greater increases in insider ownership prefer stock repurchases to cash dividends. This relation is more significant in years when dividends were more tax disadvantaged relative to capital. Whereas De Jong et al. (2003) studies on the dividend and share repurchase policies of Canadian firms. In Canadian, public corporations are not required to pay taxes on cash dividends received from the investment in another taxable Canadian firm thus dividends carry a tax advantage to those corporation. One of the significant finding in their empirical analysis is that choices for dividend as payout are caused by factors such as tax and behavioral preferences while the choice for share buybacks is driven by tax preferences.

The changes of the taxes system by various countries also affected the payout policies of a companies, Pattenden and Twite (2008) consist the period of change in Australian tax regime in their study, which is followed by the introduction of dividend imputation system. Classical tax system adopted in Australia is dividend payments taxed at both the corporate and personal levels. They realized that all dividend payout measures and dividend reinvestment plans increased with the introduction of dividend imputation and gross dividend payouts are more volatile under dividend imputation. The increase in dividend payout and initiations differs across firms. This paper suggests that

the higher the level of available franking tax credits, the higher the firm's gross dividend payout and the more likely the firm is to initiate a dividend.

### **2.1.6 Free Cash Flows**

Abe et al. (2003) use the multinomial logit regressions and observed an expected significantly positive relationship between free cash flow and share repurchase. It shown that a firm has free cash flow; it is more likely to buy back its shares. They also found that free cash flow has a significantly negative relationship with the dividend payout; it is indicate that if the firm has more free cash flow, they will less likely to pay out the fund. Beside, Kai and William (2007) are use signaling theory and agency theory to explain the relationship between free cash flow and share repurchase. This result is consistent with the implications of signaling theory and agency theory and shown that firm with more free cash flow is not likely to pay the dividend.

The repurchase signaling theory explains that the firm will not waste the free cash flow, they get benefit from increase in share price. The larger firm will prefer to share repurchase more than dividend payout. Lastly, Benjamin and Kathleen (2008) also found that dividend is negatively related to free cash flow and it is mean that the firm with lower free cash flow will pay higher dividend.

In the contrast, Monica et al. (2008) use the regression analysis and find that the actual share repurchase is positively related to free cash flow but free cash flow is no longer significant. In addition, Jagannathan et al. (2000) realized that repurchase firm got more non-operating cash flows than dividend increase firm. It suggesting that it is positive relation between cash flows and share repurchasing. Repurchases allow firms to distribute large quantities of cash to shareholders relatively quickly. Bharat et al. (2009) indicates that strong



product market industry prefer the flexibility of share repurchase to inherent rigidity of dividend as their payout policy. This result is also consistent with the life cycle and signaling theory of dividend. They use the CPH model for payout initiation through repurchases to find that the free cash flow got stronger positive relationship with share repurchase.

Chay and Jungwon (2009) suggest that cash-flow uncertainty is also important in explaining a firm's choice of payout method. They also suggest that firms facing high cash-flow may avoid paying dividends and instead use share repurchases. Andres et al. (2009) conduct a research in German, and employ dividends per share as the figure of dividend distributions, reveals that dividend payment depend more on cash flow than on published earning. They claim that in German, published earnings do not really reflect the company ability to pay dividends.

## **2.2 Review of Relevant Theoretical Models**

In the theory part, economist use some theory to explain that why the firm prefer distribute the dividend or share repurchase.

### **2.2.1 Signaling theory**

The concept of signaling was first studied in the context of job and product markets by Akerlof and Arrow was developed into signal equilibrium theory by Spence (1973), which says a good firm can distinguish itself from a bad firm by sending a credible signal about its quality to capital markets. The basis of signaling theory is that a firm's management is better informed about the company's true value than outside shareholders. Because of this informational asymmetry, prevailing stock prices may not reflect true value because investors

only have access to public information. Signaling theories were developed to explain positive abnormal returns following announcements by firms of an increase in dividends. Such excess returns are puzzling in traditional models of perfect information because dividend income has been taxed less favorably than capital gains. To reconcile why firms pay dividends even though they are more adversely taxed, researchers have constructed signaling models in which firms convey their private information about firm profitability by dispersing costly dividends. Repurchasing shares of the firm's stock may signal that existing stock prices are below the stock's intrinsic value. According to one form of signaling theory, companies use common stock repurchases to convey to the market positive information about the firm's future prospects.

### **2.2.2 Agency theory**

The agency theory was developed by Jensen and Meckling in year 1976. The importance of agency problems is can analyze the structure and value of corporations. One dimension of conflict in a corporate setting is the link between insiders (i.e., managers) and outside shareholders. Management has an incentive to divert resources from outside shareholders by investing in unprofitable projects (e.g., empire building), perquisite consumption, and even outright theft (see, e.g., Jensen (1986)). Because the relationship between insiders and outsiders and the attendant governance mechanisms vary widely across our three groups of firms, the potential agency costs vary as well. Agency theory is in many respects a critique of managerialism. Its proponent acknowledges the difficulties that emerge with the dispersal of stockholdings and the rise of management.

### **2.2.3 Tax preference and dividend clientele theory**

Miller and Modigliani (1961) lay out their famous condition under which dividend payout is irrelevant. In their framework, different shareholders do not add value differentially to the underlying firm. They invoke the tax clientele effect, arguing that there are no problems in having institutions assume all dividend-paying shares. Their intent is to invoke it to argue that dividend taxes can de facto be costless avoided. Miller argues that tax-exempt insurance policies can tax-shelter all income which is not consumed. In effect, they argue that the “marginal” shareholder is a tax-exempt entity.

### **2.2.4 Bird in the hand theory**

The essence of the bird-in-the-hand theory of dividend policy (advanced by John Litner in 1962 and Myron Gordon in 1963) is that shareholders are risk-averse and prefer to receive dividend payments rather than future capital gains. Shareholders consider dividend payments to be more certain than future capital gains – thus a “bird in the hand is worth more than two in the bush”. Gordon contended that the payment of current dividends “resolves investor uncertainty”. Investors have a preference for a certain level of income now rather than the prospect of a higher, but less certain, income at some time in the future. The key implication, as argued by Litner and Gordon, is that because of the less risky nature dividends, shareholders and investors will discount the firm’s dividend stream at a lower rate of return, “ $r$ ”, thus increasing the value of the firm’s shares.

### **2.2.5 Residual Theory of dividend policy**

The essence of the residual theory of dividend policy is that the firm will only pay dividends from residual earnings, that is, from earnings left over after all suitable (positive NPV) investment opportunities have been financed. Retained earnings are the most important source for financing for most companies. A residual approach to the dividend policy, as the first claim on retained earnings will be the financing of the investment projects. With the residual dividend policy, the primary focus of the firm's management is indeed on investment, not dividends. Dividend policy becomes irrelevant, it is treated as a passive rather than an active, decision variables. The view of management in this case is that the value of firm and the wealth of its shareholders will be maximized by investing the earnings in the appropriate investment projects, rather than paying them out as dividends to shareholders. Thus managers will actively seek out, and invest the firm's earnings in, all acceptable (in terms of risk and return) investment projects, which are expected to increase the value of the firm. Dividends will only be paid when retained earnings exceed the funds required to finance the suitable investment projects. Conversely when the total investment funds required exceed retained earnings, no dividend will be paid.

### **2.2.6 Motive for a residual policy**

The motives for a residual policy, or high retentions, dividend policy commonly include:

1. A high retention policy reduces the need to raise fresh capital, (debt or equity), thus saving on associated issues and floatation costs.
2. A fresh equity issue may dilute existing ownership control. This may be avoided, if retentions are consistently high.
3. A high retention policy may enable a company to finance a more rapid and higher rate of growth.

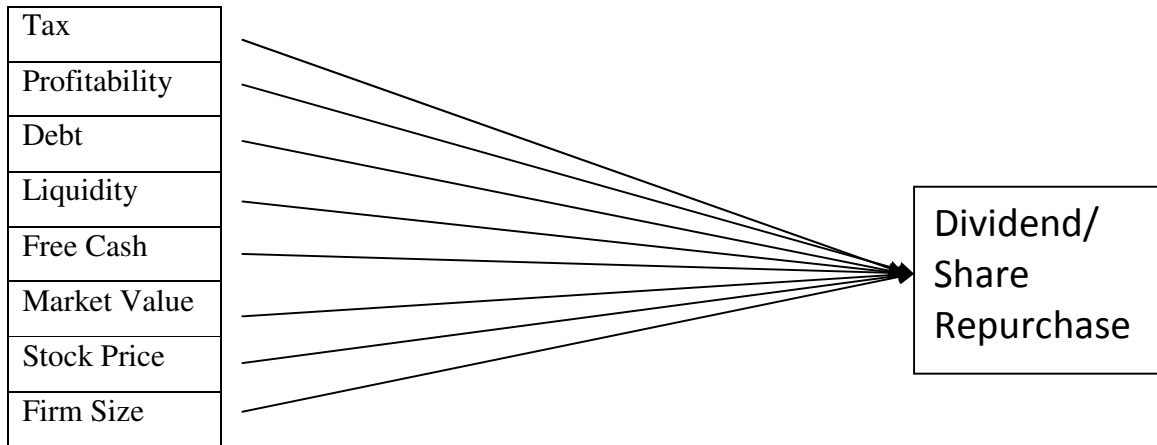
When the effective rate of tax on dividend income is higher than the tax on capital gains, some shareholders, because of their personal tax positions, may prefer a high retention/low payout policy

### **2.2.7 Life Cycle theory**

The Life Cycle theory is an economic concept analyzing individual consumption pattern. It was developed by the economists Irving, Roy Harrod, Albert Ando and Franco Modigliani. Unlike the Keynesian consumption function, which assumes consumption is entirely based on current income, life cycle theory assumes that individuals consume constant percentage of the present value of their life income. The life-cycle model also predicts that individuals save while they work in order to finance consumption after they retire. If this theory is true, the US economy should see a large drop in individual saving over the next two decades as a large segment of the population reaches retirement age. Miller, however, carried the stable consumption pattern by observing that people would try to stabilize consumption over their entire lifetime. He stressed that the way consumers save their  $pY$  is based on forward looking expectations. The future provides a rigorous connection between consumption expenditure and the value of assets held by the consumer. Household consumption over their lifetime should equal to Household  $Y +$  Holding of assets that come from sources other than work.

The variable which affect the firm make payout decision

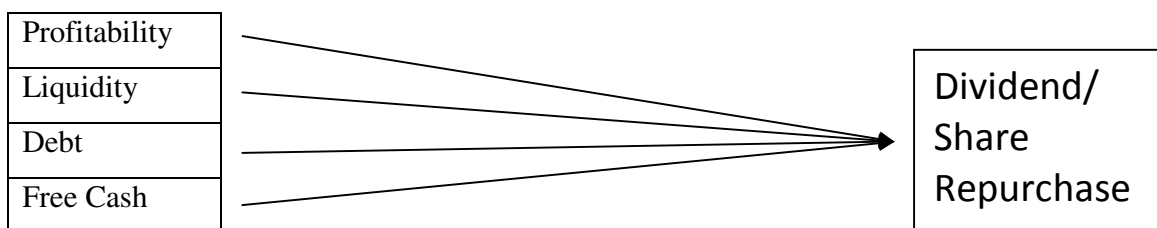
Figure 2.1: Reviewed Theoretical Framework



### 2.3 Proposed Theoretical Framework

After we finish review the previous journals by others researcher regarding the relevant scope, we are use two theories to explain the relationship between dividend and share repurchase based on previous researcher finding. We choose signaling and agency theory to analysis the correlation between dividend and share repurchase because these two theories can explain it clearly and these two theories are used four independent variables to measure the how the firm makes the payout decision from pay dividend or buy back share. The four independence variables are profitability, liquidity, leverage and free cash flow.

Figure 2.1: Proposed Theoretical Framework



## 2.4 Hypothesis Development

A hypothesis is a statement or proposition that can be tested by reference to empirical study. Hypotheses are usually stated in a form that predicts there is a difference between two groups in relation to some variable, or that there is a relationship between two variables. A null hypothesis predicts that there is no difference between two groups in relation to some variables, or that there is no relationship between two variables. The research can accept the null hypothesis if the statistical differences between groups or the strength of relationships are absent, or small and significant. Alternatively, the researcher can reject the null hypothesis if the differences between groups, or the strength of relationship, are large enough to be significant (Kerlinger, 1973).

### 2.4.1 Hypothesis

H<sub>0</sub>: There is significant relationship between profitability and dividend.

H<sub>1</sub>: There is insignificant relationship between profitability and dividend.  
(We expect there is a positive relationship between profitability and dividend)

H<sub>0</sub>: There is significant relationship between liquidity and dividend.

H<sub>1</sub>: There is insignificant relationship between liquidity and dividend.  
(We expect there is a positive relationship between liquidity and dividend)

H<sub>0</sub>: There is significant relationship between debt and dividend

H<sub>1</sub>: There is insignificant relationship between debt and dividend.  
(We expect there is a positive relationship between debt and dividend)

H<sub>0</sub>: There is significant relationship between free cash flow and dividend

H<sub>1</sub>: There is insignificant relationship between free cash flow and dividend.  
(We expect there is a positive relationship between free cash flow and dividend)

H<sub>0</sub>: There is significant relationship between profitability and share repurchase

H<sub>1</sub>: There is insignificant relationship between profitability and share repurchase.  
(We expect there is a positive relationship between profitability and share repurchase)

H<sub>0</sub>: There is significant relationship between liquidity and share repurchase

H<sub>1</sub>: There is insignificant relationship between liquidity and share repurchase.  
(We expect there is a positive relationship between liquidity and share repurchase)

H<sub>0</sub>: There is significant relationship between debt and share repurchase

H<sub>1</sub>: There is insignificant relationship between debt and share repurchase.  
(We expect there is a positive relationship between debt and share repurchase)

H<sub>0</sub>: There is significant relationship between free cash flow and share repurchase

H<sub>1</sub>: There is insignificant relationship between free cash flow and share repurchase.  
(We expect there is a positive relationship between free cash flow and share repurchase)

## **2.5 Conclusion**

In this chapter, we began with a literature review designed to show the importance between the determinants variables identified in our study and corporate payout policy. Second, we proceed with reviewing some relevant theoretical models commonly used by researchers in explaining the payout policy of corporation, which can be useful for providing a framework to guides our research, and lastly following



by the hypothesis development. Further study will be conducted in chapter 3, discussion on the empirical methodology of our research and description of data.

## **CHAPTER 3: METHODOLOGY**

### **3.0 Introduction**

Methodology is a set of methods, rules or ideas that are important in a science or art. In this sense, it can be defined as the theoretical analysis of the methods appropriate to a field of study. Furthermore, it is also defined as the body of methods and principles particular to a branch of knowledge.

The decision of making dividend payment or share buyback is associated with the company's financial performance; profitability, liquidity, leverage, and free cash flow. Thus, this chapter will further describe how the research is carried out in terms of research design, data collection method, sampling, constructs measurement, data processing and methods used in analyzing data.

### **3.1 Research Design**

Our research is to determine what factors will affect the firms' decision whether they prefer to distribute dividend or to implement share repurchase. We have chosen profitability, liquidity, leverage, and free cash flow as our research independent variables and aimed to find out how these variables act on our first dependent variable, dividend, and second dependent variable, share repurchase.

Our research is going to study on what are the effects of the independent variables on our dependent variables in a round and respectively. Thus, we are on the path to construct a quantitative research. Besides that, we have also chosen causal research as

our research design which get along with our purpose on finding out how the independent variables chosen have their influences on the dependent variables.

### **3.2 Data Collection Methods**

The variables used in the research are dividend payout, share repurchase, profitability, liquidity, leverage, and free cash flow. In order to find the relationship between the chosen independent variables and dependent variables, we have selected relevant determinants on each and every variable. We are using dividend per share (DPS) to measure dividend payout, total amount on share repurchase to measure share repurchase (SRP), return on equity (ROE) to measure profitability, current ratio (CR) to measure liquidity, total debt-to-assets (DTA) to measure leverage and operating cash flow to assets (FCF) to measure cash flow. All the data is collected from the 5-years annual reports of the 50 companies respectively. We are using secondary data to evaluate the independent variables that stated in the above.

There are various industries in the Bursa Malaysia and we have selected Consumer Industry to carry out our research as this is a field where it is closer to the public daily social life and we are interested on how these companies compensate their shareholders. There are a total of 61 companies in the Main Board at year 2009. (DynaQuest Sdn Bhd, 2009) Initially, we did our research on a duration of 3 years which is from year 2006 to 2008. At that point, there are a total of 59 companies to be justified as there are 2 companies cannot be used due to insufficient data. After some consideration, and with the passion to find out a more accurate result, we have increased our research period to a duration of 5 years which is from year 2004 to 2008. We have collected the 5-year Annual Reports of these 61 companies and did a brief checking on these companies to determine whether the research can be proceed by checking if any of these companies have implemented share repurchase within the 5 years and the availability of the full version of the company financial statement. After the checking, there are only 50 companies are qualified to be tested and we

carried on our research with these 50 companies. There is a total of 11 companies are rejected due to insufficient of data and annual reports.

### **3.2.1 Secondary Data**

The whole research is carried out based on secondary data. We get the data from Annual Reports of the companies respectively and from Bursa Malaysia web pages. All the data are stated in the Annual Reports and we extracted it for the use to evaluate each factor. Besides, we also have reviewed the academic journals form previous researchers on their researches on the relevant sectors. Nevertheless, we have gone through some articles and newspaper articles on Finance sector to strengthen our research objective to determine the trend of dividend payout and share repurchase decision in Consumer Industry in the Main Board of Bursa Malaysia.

## **3.3 Sampling Design**

### **3.3.1 Target Population**

In this research, we have selected the Consumer Industry to be our targeted population. There are 61 companies in the Main Board of Bursa Malaysia. After the data collection, we continued the research on 50 companies as the other 11 companies have insufficient data to be reviewed.

### **3.4 Data Processing**

Our research has selected profitability, liquidity, leverage, and free cash flow as our independent variables. The data collected to evaluate the variables above are found in the annual reports. We have divided ourselves to key in the data into Microsoft Excel for the preparation of the data analysis. After key in the data, we have checked the data for twice to confirm its reliability and the relevancy to be used. There are a few minor amendments.

#### **3.4.1 Dividend**

Many researchers used different dividend measurement on their projects. For example, Zhang, H. Y. (2008) used dividend payout to measure the dividend, while Li, W. & Lie, E. (2005) used dividend yield to measure.

Consequently, we use dividend per share (DPS) as our formula to measure the dividend which followed by Nissim and Ziv (2001), Seifert (1997), Andres et al. (2009) did on their researches.

$$\text{DPS} = \text{total dividend} / \text{total outstanding shares.}$$

#### **3.4.2 Share Repurchase**

There are many measurements the previous researches using for measure share repurchase. Glinglinger, E. & Hamon, J. (2006) measured the repurchase as a dummy variable that takes the value of one if the firm has repurchased shares on the given trading day, and zero otherwise. However,

Brockman, P. et al. (2008) used purchasing of common and preferred stock then subtract any reduction in the redemption value of preferred stock to measure.

As seen, there are many formulas been using to measure share repurchase, and we take total amount of share repurchase as our measurement indicator for share repurchase which this formula supported by Hribar et al. (2006), Grullon (2002), Dittmar (1999).

$$\text{SRP} = \text{total amount on share repurchase}$$

### **3.4.3 Profitability**

To determine profitability, Fama & French (2002), Truong & Heaney (2007) and Denis & Osobov (2008) used ROA measurements, either earnings pre-interest, pre-tax to total assets ( $ET_t/A_t$ ), or earnings pre-interest, after-taxes to total assets ( $E_t/A_t$ ) as proxies.

As supported by Doron Nissim & Amir Ziv (2001) and Chay & Suh (2009), they include ROE as explanatory variable of profitability. The former measured it as  $ET-1 / BT-1$  and B denotes the book value of common equity, in order to predict earning changes better, and it is expressed as a percentage, while the latter apply retained earning-to-total assets ratio ( $RE/TE$ ). In the same way, Brockman, Khurana, and Martin (2008) employ variable ROE to capture firm performance, and ROE is always represent as a good way in standardized earning changes, and in turns determine firm's earning growth.

However, DeAngelo et al (2006) employed both ROE and ROA to measure profitability, test whether firms with high ROE or ROA are more likely to pay dividend. By this token, we can dig out that these two measurements can be proxies to best describe profitability and we choose ROE as our measurement for profitability. As followed by Doron Nissim & Amir Ziv (2001), Chay & Suh (2009) and DeAngelo et al (2006), we use return on equity (ROE) to measure our profitability.

$$\begin{aligned}\text{Profitability} &= \text{ROE} \\ &= \text{net income} / \text{total equity}\end{aligned}$$

### **3.4.4 Liquidity**

Liquidity is another independent variable that we are using, and its measurement is defined as current ratio (total asset over total liabilities). This formula has been supported by Konia and Bacon (2005). They studied what factors motivate the corporate dividend decision and liquidity is one of their independent variables.

Beside, Milind, James, Michael and Ray (2002) also include this formula into the book which they published to indicate liquidity can be measured by current ratio formula. Moreover, Macdonald and Koch (2008) also supported this formula and filed it into the book they published. Thus, as follow by above researchers, we take current ratio (CR) to measure the liquidity.

$$\begin{aligned}\text{Liquidity} &= \text{Current Ratio} \\ &= \text{Current assets} / \text{current liabilities} \\ &= \text{CA} / \text{CL}\end{aligned}$$

### **3.4.5 Leverage**

We decided to make leverage as an independent variable, and use long term debt / book value of assets as our measurement which was supported by Brckman et. al. (2008). Besides, Zhang (2008) and Blau et. al (2008) also used total debt to total asset as their measurement, which was similar to the previous studies.

However, there are also other methods being used to measure the leverage of a firm. Blau et. al (2008) and Li et. al. (2005) used debt to equity and long term debt as the measurement respectively.

Total debt over total asset is being employed to measure the leverage as followed by Brckman et. al. (2008), Zhang (2008) and Blau et. al (2008).

$$\text{Leverage} = \text{Total debt} / \text{total asset}$$

### **3.4.6 Free cash flow**

We have gone through related journals and found that Chay and Jungwon (2009) used operating cash flow divided total assets. Bharat, Chander and Torbey (2009) measured the cash flow by using the cash flow divided by total assets and it is defined that operation cash flow divided by total assets. We also have searched other researchers such as Jarrad Harford (1999). He uses the operating cash flow divided the total asset to measure the free cash flow.

Furthermore, we have searched that the cash flow can be used to measure by the operating cash flow in website. Concludely, we define the operating cash flow divided the total asset to measure the one of our independent variables - free cash flow. Hence, operating cash flow over total asset is being employed to measure the free cash flow as followed by above researches.



$$\text{Free Cash Flow} = \text{Operating Cash Flow} / \text{total asset}$$

### **3.5 Data Analysis**

Statistical Package for the Social Science (SPSS) and econometric analysis (EViews) are two software used for general statistical analysis and econometric analyses. In our research, these two computer programs are employed to analyze the data.

Descriptive analysis and liner regression will be applied to investigate the relationship between the 4 independent variables and 2 dependent variables. Besides, we also can learn thought these methods to further understand the effect of changing in these independent variables on 2 dependent variables

#### **3.5.1 Descriptive Analysis**

It is used to describe the basic features of the data and provide simple summaries about the sample and the measures. As simply stated, it is referred to means, ranges and number of valid cases of one variable.

Descriptive analysis is especially useful in a research study when there are a lot of measures because it can simply help to handle large amount of data in a sensible way. Each descriptive statistic reduces lots of data into a simpler summary. (William M.K. Trochim, 2006)

### 3.5.2 Inferential Analysis (Multiple Regressions)

It is classified as one of the inferential statistics which referring as reach conclusions that extend beyond the immediate data alone. It is a method for estimating the unknown parameters in a linear regression model. Besides, this method helps on minimize the sum of squared vertical distances between the observed responses in the dataset, and the responses predicted by the linear approximation. The general form of the linear regression equation considers the relationship between a dependent variable and several explanatory variables.

In this research, the linear regression equations are:

$$DIV = \alpha + \beta ROE + \beta CR + \beta DTA + \beta FCF + \varepsilon$$

$$SRP = \alpha + \beta ROE + \beta CR + \beta DTA + \beta FCF + \varepsilon$$

Where;

Div = dividend at year t

SRP = share repurchase at year t

ROE = return on equity

CR = current ratio

DTA = total debt over total asset

FCF = operating cash flow/ total asset

$\beta$  = Beta

$\alpha$  = constant

$\varepsilon$  = Random error term

### **3.5.2.1 Heteroskedasticity**

It is referred as a series of random variables, if the random variables have different variances. What make an attention, when some statistical techniques were used, such as Ordinary Least Square (OLS), typically a number of assumptions are typically made. And one of these assumptions is that error term has a constant variance. This assumption is considered as true if the observations of the error term are assumed to be drawn from identical distribution. Apparently, this assumption is violated by this heteroskedasticity. However, heteroskedasticity doesn't cause OLS coefficient estimates to be biased. Whereas, the variance of the coefficients tends to be underestimated, inflating t-scores and sometimes making insignificant variables appear to be statistically significant. Besides, heteroskedasticity is also major practical issued encounter in ANOVA problems. Furthermore, if apply OLS into heteroskedasticity, it will cause the variances estimated to be biased estimator.

### **3.5.2.2 Auto correlation**

It is a mathematical tool used frequently in time series and signal processing. It reflects the mutual relationship between two or more random variables in different time. Unlike cross-correlation, auto-correlation is the correlation of a signal with itself. It is being used to find repeating patterns in a signal or identifying the fundamental frequency of a signal which doesn't actually contain that frequency component, but implies it with many harmonic frequencies. (Brandon Hodgson, 2008)

### **3.6 Conclusion**

In a summary, consumer product industry as our research's target to measure the company within this industry prefer either distribution dividend or share repurchase when encounter to their shareholders. The data collected from respective company's annual report providing the relevant data to apply into methods chosen to measure the effect or relationship with our two dependent variables.

Finally, chapter 4 will further describe the relationship between these 4 independent variables and two dependent variables by providing the methods chosen.

## **CHAPTER 4: DATA ANALYSIS**

### **4.0. Introductions**

This chapter is wanted to present the result which we use the Eview 6 to analysis and find out. In this section, the test will be executed after all data collection in order to ensure the stability and consistency of the measurement. In the addition, the data will be analyzed by using the Descriptive Statistics and Multiple Regression.

### **4.1. Frequency Analysis**

Frequency table represent the simplest method for analyzing categorical (nominal) data. This data analysis is used to review how different categories of values are distributed in the sample.

#### **4.1.1. Executive summary of share buybacks in Bursa Malaysia between years 2004-2008**

Table 4.1 Executive summary of share buybacks in Consumer Industry between years 2004-2008

Year	Total number of companies
2004	2
2005	4
2006	6

2007	9
2008	12

From our research, we also find that there is a trend of rising share buyback in the Consumer Industry in Malaysia from year 2004 – 2008. However, the number collected is vary from the previous researchers because the total number of companies taken vary due to the combination of Main Board in Year 2009 and the rejection of companies that due to lack of information.

Somehow, after the global financial crisis 2007, the firms are offering the share repurchase to gain the confidence of the investors, giving them an image that the firm is in a good performance to calm the situation. Thus, there is a trend of increasing share repurchase.

#### **4.1.2 Payout method of consumer product industry in Malaysia from 2004 to 2008**

Table 4.2 Payout method of consumer product industry in Malaysia from 2004 to 2008

	Frequency	Percent	Cumulative Percent
Valid Dividend only	37	60.7	60.7
No consistent Dividend	11	18.0	78.7
Dividend and Share repurchase	13	21.3	100.0
Total	61	100.0	

Figure 4.1 Pie Chart shown that payout method of consumer product industry in Malaysia from 2004 to 2008

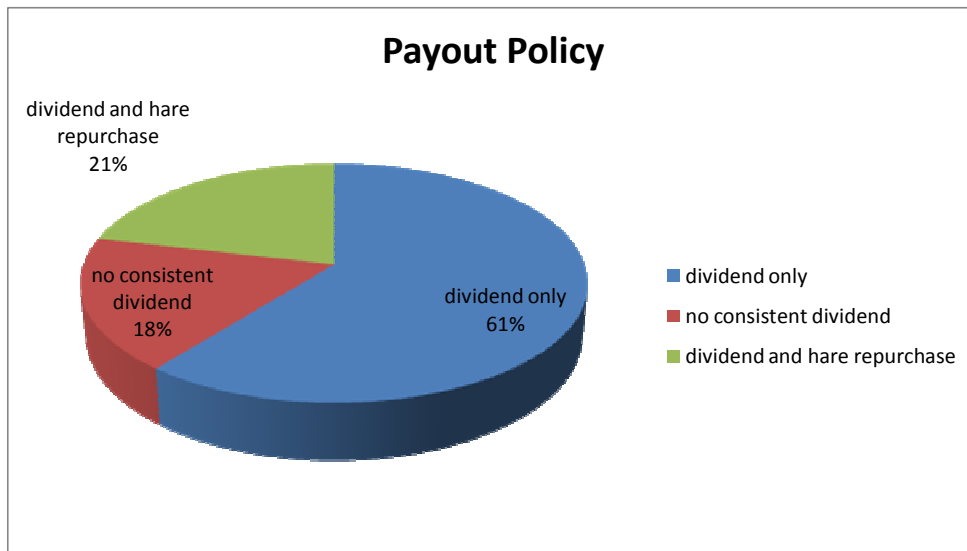


Table 4.2 above shows the frequency and percentage of the payout policy of consumer product industry in Malaysia from 2004 to 2008. Most of the consumer product firms use the dividend to be their payout policy; there are 37 firms which contribute 60.7% from total 61 consumer product firms. In addition, there are 11 firms are not provide dividend to their shareholders which contribute 18% in total 61 consumer product firm. The firms are use both dividend and share repurchase two method to be their payout policy have 13 firms which are 21.3% in consumer product industry. It may due to the reason that the share repurchases are not be prevail in our country, most of the firm prefer use the dividend to be their payout policy.

## 4.2. Descriptive statistics

### 4.2.1. Descriptive statistics for Dividend

Table 4.3 Descriptive statistics for Dividend

	DPS	CR	DTA	FCF	ROE
Mean	0.193808	2.490996	0.373808	0.091508	0.157308
Maximum	2.548000	11.64360	0.684000	0.432800	1.518700
Minimum	0.010000	0.752600	0.034400	-0.026800	0.022600
Std. Dev.	0.394947	1.941667	0.159701	0.073426	0.213708
Observations	50	50	50	50	50

Table 4.3 presents some basic statistics on dividend determinants in consumer product industry in Malaysia. The period of analysis is from year 2004 to year 2008. The highest mean is liquidity (CR) which is 2.490996 and the lowest mean figure is free cash flow (FCF) which is equal to 0.091508. The highest standard deviation is liquidity (CR) which is equal to 1.941667 and the lowest standard deviation also is free cash flow (FCF) which is 0.073426. The highest for minimum is liquidity (0.752600) and the lowest minimum is free cash flow (-0.026800). The highest for maximum is liquidity (11.64360) and the lowest for maximum is free cash flow (0.432800).

In conclusion, the liquidity (CR) as an independent variable has the highest figure of standard deviation, mean, maximum and minimum among all variables. On the other hand, free cash flow as an independent variable has the lowest figure of standard deviation, mean, maximum and minimum among all variables



## 4.2.2. Descriptive statistics for Share repurchase

Table 4.4 Descriptive statistics for Share repurchase

	SR	CR	DTA	FCF	ROE
Mean	2166702.	2.507177	0.347577	0.079462	0.114438
Maximum	12661983	5.899100	0.619100	0.133400	0.208400
Minimum	46968.20	0.910800	0.034400	0.034400	0.022600
Std. Dev.	3491662.	1.439709	0.164460	0.034949	0.053649
Observations	13	13	13	13	13

Table 4.4 presents some basic statistics on share repurchases determinant in consumer product industry in Malaysia. The period of analysis is from year 2004 to year 2008. The highest mean is liquidity (CR) which is 2.507177 and the lowest mean figure is free cash flow (FCF) which is equal to 0.079462. The highest standard deviation is liquidity (CR) which is equal to 1.439709 and the lowest standard deviation also is free cash flow (FCF) which is 0.034949. The highest for minimum is liquidity (0.910800) and the lowest minimum is profitability (0.022600). The highest for maximum is liquidity (5.899100) and the lowest for maximum is free cash flow (0.133400).

In conclusion, the liquidity (CR) as an independent variable has the highest figure of standard deviation, mean, maximum and minimum among all variables. On the other hand, free cash flow as an independent variable has the lowest figure of standard deviation, mean, and maximum among all variables. Beside, the profitability as an independent variable has the lowest figure of minimum.

## 4.3 Scale measurement

### 4.3.1. Ordinary Least Squares (OLS) - Diagnostic Checking

Table 4.5 Diagnostic Checking for Dividend

Dependent Variable: DPS

Tests	Static	Decision Rule	Decision
Autocorrelation (Lagrange Multiplier test)	$P(X^2) = 0.5606$ $R^2 = 0.026556$	If $P(X^2) > 0.01$ , Do not reject $H_0$ .	Do not reject $H_0$ . No Autocorrelation.
Heteroskedasticity (White Test)	$P(F\text{-stat}) = 0.8673$ $R^2 = 0.186531$	If $P(F\text{-stat}) >$ $0.01$ , Do not reject $H_0$ .	Do not reject $H_0$ . No Heteroskedasticity problem.

Autocorrelation

$H_0$ : no autocorrelation

$H_1$ : autocorrelation

LM test is used to check whether there is an autocorrelation in the model. It has to be checked by checking the probability of Chi-Square in order to determine whether the model consists of autocorrelation problem.

We have listed the null and alternative hypothesis and set the level at 1% level. If the  $P(\text{Chi-Square}) < 0.01$ , there is a autocorrelation. From the test run by using EView 6, it shows that the  $P(\text{Chi-Square}) = 0.5148$ , which is greater than 0.01. We do not reject  $H_0$ , and thus, we concluded that there is no autocorrelation problem in the model where the dependent variable is

Dividend per Share (DPS). From the test, we also get the R-squared of the model equals to 0.026556.

Heteroskedasticity

H<sub>0</sub>: no heteroskedasticity

H<sub>1</sub>: heteroskedasticity

The White Test is one of the statistical tests under the heteroskedasticity test. It is used to test whether the residual variance of a variable is constant in the regression model. There is an alternative to the White test, which is known as the Breusch-Pagan test.

We have listed the null and alternative hypothesis and set the level at 1% level. If the P (F-stat) < 0.01, there is a heteroskedasticity. From the test run by using EView 6, it shows that the P (F-stat) = 0.8673, which is greater than 0.01. We do not reject H<sub>0</sub>, and we concluded that there is no heteroskedasticity problem in the model where the dependent variable is Dividend per Share (DPS). From the test, we also get the R-squared of the model equals to 0.186531.

Table 4.6 Diagnostic Checking for Share Repurchases

Dependent Variable: SR

Tests	Static	Decision Rule	Decision
Autocorrelation (Lagrange Multiplier test)	$P(X^2) = 0.1816$ $R^2 = 0.262437$	If $P(X^2) > 0.01$ , Do not reject $H_0$ .	Do not reject $H_0$ . No Autocorrelation.
Heteroskedasticity (White Test)	$P(F\text{-stat}) = 0.6808$ $R^2 = 0.312189$	If $P(F\text{-stat}) >$ $0.01$ , Do not reject $H_0$ .	Do not reject $H_0$ . No Heteroskedasticity problem.

Autocorrelation

 $H_0$ : no autocorrelation $H_1$ : autocorrelation

By using the same test, now, it is used to test the model where the dependent variable is the shares repurchase (SR). Similarly, LM test is used to check whether there is an autocorrelation in the model and it has to be checked by checking the probability of Chi-Square in order to determine whether the model consists of autocorrelation problem.

We have listed the null and alternative hypothesis and set the level at 1% level. If the  $P(\text{Chi-Square}) < 0.01$ , there is a autocorrelation. From the test run by using EView 6, it shows that the  $P(\text{Chi-Square}) = 0.1816$ , which is greater than 0.01. We do not reject  $H_0$ , and thus, we concluded that there is no autocorrelation problem in the model where the dependent variable is shares repurchase (SR). From the test, we also get the R-squared of the model equals to 0.262437.

### Heteroskedasticity

$H_0$ : no heteroskedasticity

$H_1$ : heteroskedasticity

By running the test to check whether there is a heteroskedasticity problem in the model where the dependent variable is shares repurchase (SR), this time we used the alternative test to the White test as the sample size of 13 is too small to run the White test. The test we used is known as the Breusch-Pagan test.

We have listed the null and alternative hypothesis and set the level at 1% level. If the P (F-stat) < 0.01, there is a heteroskedasticity. From the test run by using EView 6, it shows that the P (F-stat) = 6808, which is greater than 0.01. We do not reject  $H_0$ , and we concluded that there is no heteroskedasticity problem in the model where the dependent variable is shares repurchase (SR). From the test, we also get the R-squared of the model equals to 0.312189.

### 4.3.2. Multiple Regression Analysis

Table 4.7 Multiple Regression Analysis for Dividend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CR	-0.008804	0.014277	-0.616619	0.5406
DTA	-0.101880	0.176796	-0.576259	0.5673
FCF	1.081789	0.508860	2.125906	0.0390
ROE	1.429854	0.177191	8.069563	0.0000
C	-0.070098	0.095259	-0.735869	0.4656
R-squared	0.876637			

Table illustrates the information that is used to construct a least-squares regression equation.

Linear equation:  $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e$

Y = DPS (Dividend)

X1 = ROE (Profitability)

X2 = CR (Liquidity)

X3 = DTA (Leverage)

X4 = FCF (Cash Flow)

By using the Eview 6, we estimate the Multiple Regression model to examine the simultaneous impact of the four key factors on dividend after we enter the data and found out the result. Table 4.7 shown that analyze the relationship between dividend per share and other independent variable. We analyze some important things in this table. Firstly, when the regression model has been constructed, we must be confirming the goodness of fit of our regression model and the statistical significant of the estimated parameters. So that, we

analyze the R square firstly and the denoted R is known as correlation coefficient which is often used to measuring the degree of correlation between variable Y and X, Y is be sign of dependent variable while X will be independent variable. The R square value varies from 0 to 1.

In regression, the R square coefficient of determination is statistical measure of how well the regression line approximates the real data point. When R square close to 1, it indicates that it got strong positive relationship between Y and X, if the R square of 0 indicate that it is no relationship between Y and X. In table 4.7, the result shown that the R square is 0.876637 which is close to 1. So that, it mean that there are strong positive relationship between dividend and other independent variable including profitability, free cash flow, leverage and liquidity. Beside, the F-statistic also equal to 79.9445 and the significant level is 0.000000. This meant that the probability of these result occurred by chance was less than 5% and 10% level.

Based on the output in above table 4.7, the following equation is formed.

$$Y (\text{dividend per share}) = 1.081789X1(\text{Profitability}) - 0.008804X4(\text{Liquidity}) - 0.101880X3(\text{Leverage}) + 1.081789X2(\text{Cash Flow}) - 0.070098 + e$$

According to the result, we can find that the most important factor that affects the dividend is profitability. The table 4.7 shown that coefficient of the profitability (ROE) is 1.429854. It indicated that profitability has a positive impact on dividend. It means that when the profitability increase by 1%, it will cause the firm increase their dividend by RM 1.429854, holding other variables in model constant. So that, it indicated that most firm adjust their dividend based on their profitability level. If the firm is doing well and earns more profit in this year, they will increase the dividend for shareholders.

Beside, second variable got large impact affect the dividend is free cash flow (FCF). The result shows that the coefficient of free cash flow is 1.081789.

This figure indicated that the free cash flow and dividend have a positive relationship. This meant that if the free cash flow increases by 1%, it will affect the firm increase the shareholders dividend by RM 1.081789 in same time, holding the other variables in model constant. Another explanation is the firm got more free cash flow in hand, they will pay more dividends to shareholders.

The coefficient of liquidity (CR) provided by table 4.7 is -0.008804. It shown that if 1% increase in firm liquidity, the dividend payment will decrease by RM 0.008804 with the assumption other independent variables are remain constant. The slope coefficient of leverage (DTA) is -0.101880 that means when the leverage level increase by 1% then the dividend payment will decrease by RM 0.101880, keeping the other independent variables constant. Next, the table 4.7 of T-statistic and P-value will be further interpreting. In multiple regression models, the equation has more than one independent variables need to be examined by us. The T-statistic and P-value will be the key to determine whether there is enough evidence of linear relationship between the individual independent variable and the dependent variable. We formed the null and alternative hypothesis to identify the result of test statistic which is derived from the Eview 6 software.

$$H_0: \beta_1 = 0 \text{ (there is no linear relationship)}$$

$$H_1: \beta_1 \neq 0 \text{ (a linear relationship exists)}$$

If the null hypothesis is true, that is means that there is no linear relationship exists between dependent variable and independent variable. While, if the alternative hypothesis is true, it means that the dependent variable and independent variable have a linear relationship.



A: Test of  $\beta_1$  (Profitability)

Test to identify whether there is enough evidence to conclude that there is a linear relationship between the dividend and profitability. We use a 10% significant level.

H<sub>0</sub>: There is significant relationship between profitability and dividend.

H<sub>1</sub>: There is insignificant relationship between profitability and dividend

The t-value in profitability provided that highest figure which is 8.069563 and it is the highest figure among all independent variables. The largest t-value indicated that better the profitability's explanatory power. The p-value for profitability is significant level at 5% which is 0.0000. So that, we can reject null hypothesis, which mean that the linear relationship does exist between dividend and profitability. Since, ours result shows that profitability has large impact toward dividend and this is also consistent with the finding of Goergen et. al. (2005), Doron Nissim & Amir Ziv (2001), and other previous researchers. Therefore, The reason is that more profit can result in higher dividends whereby more profit imply a greater availability of internal funds for dividend distributions ( Dr. Kash, 2010).

B: Test of  $\beta_2$  (Liquidity)

H<sub>0</sub>: There is significant relationship between liquidity and dividend.

H<sub>1</sub>: There is insignificant relationship between liquidity and dividend.

The liquidity recorded the t-value of -0.616619 and the p-value of liquidity is 0.5406 which is greater than significant level at 10%; therefore, the liquidity also is insignificant. After we found the result, we cannot reject the null hypothesis which means that there is no linear relationship between the

liquidity and dividend. Some researcher found that the liquidity is insignificant affect the dividend the main reason is liquidity is affect the stock split rather than dividend (K. Bechmann and J. Raaballe, 2004).

C: Test of  $\beta_3$  (Leverage)

$H_0$ : There is significant relationship between debt and dividend

$H_1$ : There is insignificant relationship between debt and dividend.

The t-value in leverage provided that figure which is equal to -0.576259. The p-value for leverage is significant level at 10% which is 0.5673. This results shown that the p-value for leverage is high than the significant level, so it means that the leverage is insignificant for dividend. Therefore, we cannot reject the null hypothesis which means that there is no linear relationship between the liquidity and dividend. Example like Pakistan, the public debt market is not well and major loan are sanctioned on socio-political basis and such loan are only for some project and not contributed in capital employed by company. Therefore, debt not considered as having direct bearing on the corporate dividend policy (Ayub, 2005).

D: Test of  $\beta_4$  (Free Cash Flow)

$H_0$ : There is significant relationship between free cash and dividend

$H_1$ : There is insignificant relationship between free cash and dividend.

The result of the  $\beta_4$  would then derive from the same rule of decision, which is we will reject the null hypothesis. The free cash flow recorded the t-value of 2.125906 and the p-value of free cash flow is 0.0390 which is lower than significant level at 5%; therefore, the free cash flow also is significant and our result shown that there is a linear relationship between dividend and free cash

flow level. If the firm got a poor cash flow position means less generous dividend due to shortage of cash (Amarjit et. al, 2010).

Hence, the profitability and free cash flow are the variables that significantly affect the dividend where the significant level at 5%.

**Table 4.8 Multiple Regression Analysis for Share Repurchase**

Variable	Coefficien			
	t	Std. Error	t-Statistic	Prob.
ROE	-46236641	20794938	-2.223456	0.0569
FCF	81142094	27197754	2.983412	0.0175
DTA	11189684	5950757.	1.880380	0.0968
CR	1315112.	757273.3	1.736641	0.1207
C	-6176218.	3454459.	-1.787897	0.1116
R-squared	0.587936			

Table illustrates the information that is used to construct a least-squares regression equation.

$$\text{Linear equation: } Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n + e$$

Y = Total amount of share repurchases

X1 = ROE (Profitability)

X2 = CR (Liquidity)

X3 = DTA (Leverage)

X4 = FCF (Cash Flow)

Table 4.8 show the result that we use the multiple regressions to analyze the relationship between total amounts of share repurchases and other independent variable. From the table 4.8, it shows the result that the R square is 0.587936. So that, it mean that there are positive relationship between share

repurchase and other independent variable including profitability, free cash flow, leverage and liquidity. This also statistically tells us that 58.79 percent of the variation of the dividend is explained by the variation of the profitability, free cash flow, leverage and liquidity. The remaining of 41.21 percent remains unexplained by this model.

Based on the output in above the table, the following equation is formed.

$$Y \text{ (Total amount of share repurchases)} = -6176218 - 46236641X1(\text{Profitability}) + 1315112X4(\text{Liquidity}) + 11189684X3(\text{Leverage}) + 81142094X2(\text{Cash Flow}) + e$$

From the table 4.8 shown above, the most important factor that affects the share repurchase is free cash flow. It is because table above shown that coefficient of free cash flow was 81,142,094. It indicated that the free cash flow and share repurchases have strong positive relationship. It meant that when free cash flow in firm increase 1%, it will let the firm buy back their share RM 81,142,094, holding other variable is constant. So that, if the firm got freer cash flow in hand, they will buy back more shares from shareholders.

Second variable is profitability which got more influence to the share repurchase. It is because the coefficient of profitability is -46,236,641. It indicated that the profitability and share repurchases have a negative relationship. When the firm doing well their business and earn more profit, they will not buy back their share. It meant that if firm reduce their profitability by 1%, they will increase the share repurchase by RM 46,236,641. In addition, the leverage recorded the coefficient value is 11,189,684. It indicated that leverage and share repurchases have a positive relationship. If firm's leverage increase in 1%, they will buy back their share by RM 11,189,684. Lastly, the coefficient of liquidity is 1315112. It meant that the liquidity and share repurchase have a positive relationship. It also indicated that if liquidity increase by 1%, the firm will buy back their share by RM 1,315,112.

Next, we will explain the T-statistic and P-value based on the table 4.8. We set up the null and alternative hypothesis to identify the result of test statistic which is derived from the Eview 6 software.

A: Test of  $\beta_1$  (Profitability)

Test to identify whether there is enough evidence to conclude that there is a linear relationship between the share repurchase and profitability. We use a 10% significant level.

$H_0$ : There is significant relationship between profitability and share repurchase

$H_1$ : There is insignificant relationship between profitability and share repurchase.

As show in Table 4.8, the relationship between the profitability and share repurchase is being analyzed. T-value in profitability provided that figure which is -2.223456. In addition, the p-value for profitability is significant level at 10% which is 0.0569. We reject the null hypothesis and linear relationship does exist between the profitability and share repurchase. Consequently, the profitability is significantly affect the share repurchases. Manager will tend to release more bad news prior to initiating their repurchase in order to buy back shares at relatively low prices, both in terms of frequency and magnitude. Managers would like to lower the EPS forecasts amounts before repurchase, guide the investor expectations of firm value downward (Paul Brockman et al, 2008). Ours result also consistent with the finding of Hribar et. al. (2006) , Skinner (2008) and other researchers.

B: Test of  $\beta_2$  (Liquidity)

$H_0$ : There is significant relationship between liquidity and share repurchase

$H_1$ : There is insignificant relationship between liquidity and share repurchase.

The t-value of liquidity is equal to 1.736641 and p-value of liquidity is equal to 0.1207 and higher than the significant level at 10% so it means that the liquidity is insignificant. Liquidity is most insignificant affect the share repurchases and making it difficult to draw a clear inference with respect to liquidity implied by share repurchase. In USA, the open market share repurchase is non-eventful with respect to liquidity effect (Jaemin Kim, 2010).

This means that we cannot reject the null hypothesis and the linear relationship does not exist between the liquidity and share repurchase.

C: Test of  $\beta_3$  (Leverage)

$H_0$ : There is significant relationship between debt and share repurchase

$H_1$ : There is insignificant relationship between debt and share repurchase

The t-value in leverage provided that figure which is equal to 1.880380. The p-value for leverage is significant level at 10% which is 0.0968. This result shows that the p-value for leverage is lower than the significant level, so it means that the leverage is significant for dividend. Therefore, we can reject the null hypothesis which means that there is a linear relationship between the liquidity and dividend. The reason is that company use leverage buyback to

raise the stock's price and to alter their capital structure to avoid over-capitalization (Matt, 2010).

D: Test of  $\beta_4$  (Free Cash Flow)

$H_0$ : There is significant relationship between free cash and share repurchase

$H_1$ : There is insignificant relationship between free cash and share repurchase

The free cash flow recorded the t-value of 2.983412 and also is highest among those independent variables. The p-value of free cash flow is 0.0175 which is lower than significant level at 5%; therefore, the free cash flow also is significant and our result shown that there is a linear relationship between dividend and free cash flow level. Therefore, we can reject the null hypothesis and there is a linear relationship between free cash flow and share repurchase. This shows that free cash flow has large impact toward share repurchase. This result is also consistent with the previous researchers' result. Most of the results which found by previous researchers are same. Examples like the Monica, Edwin and Kathleen(2008) are also use the regression analysis to find the result that the free cash flow and share repurchase have a positive relationship. Beside from paying out free cash flow, repurchases may also be used to take advantage of undervaluation of their stock. If manager believes their stock is currently trading below its intrinsic value. They may consider repurchases and wait for the market to correct the undervaluation whereby prices increase to the intrinsic value of the equity, and reissue them at a profit. (William J. McNally, 1999)

Hence, the liquidity is the only variable that insignificantly affect the share repurchase where significant level is at 10%.

In the last chapter, chapter 5, we will discuss on our result and make a conclusion on our research.



## **CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS**

### **5.0 Introduction**

From the previous chapter, we present the patterns of the results and analyses of the results which are relevant to the research questions and hypotheses. In chapter five, we will provide a discussion on the summary of statistical analyses, major finding and the implication of our studies. This chapter also offers limitations of the study, along with suggestions for future research. At last, we present the conclusion, which summarises the results and the contribution of the research.

### **5.1 Summary of Statistical Analyses**

#### **5.1.1 Descriptive Statistics Results**

In Table 4.3, we provide the descriptive statistics for all the regression variables of dividend determinants in consumer product industries in Malaysia. The table shows the average indicator of variables computed from the financial statements. We describe what was observed in the sample using some numerical descriptors which include mean, the highest value, the lowest value and standard deviation. From the analysis, we found that the liquidity as an independent variable has the highest figure of standard deviation, mean, maximum and minimum among all variables while free cash flow as an independent variable has the lowest figure of standard deviation, mean, maximum and minimum among all variables. We also present some basic statistics on share repurchases determinant in consumer product industry in

Malaysia in table 4.4, the share repurchases as a dependent variable has the highest figure of standard deviation, mean, maximum and minimum among all variables. On the other hand, free cash flow as an independent variable has the lowest figure of standard deviation, mean, and maximum among all variables. Beside, the profitability as an independent variable has the lowest figure of minimum.

### 5.1.2 Inferential Analyses Description

In this section, we summarize the results of a number of robustness tests that have been conducted in chapter four which to examine the individual variables and our whole regression model. Lagrange multiplier test is used to check whether there is an autocorrelation in the model, while white test used to test for heteroskedasticity. By the test that we have been run, there is no autocorrelation and heteroskedasticity problem in the model at a significant level of 0.01. The results of test are as shown in following:

Table 5.1: Diagnostic Checking for Dividend

Dependent Variable: DPS

Tests	Static	Decision Rule	Decision
Autocorrelation (Lagrange Multiplier test)	$P(X^2) = 0.5606$ $R^2 = 0.026556$	If $P(X^2) > 0.01$ , Do not reject $H_0$ .	Do not reject $H_0$ . No Autocorrelation.
Heteroskedasticity (White Test)	$P(F\text{-stat}) = 0.8673$ $R^2 = 0.186531$	If $P(F\text{-stat}) > 0.01$ , Do not reject $H_0$ .	Do not reject $H_0$ . No Heteroskedasticity problem.

**Table 5.2: Diagnostic Checking for Share Repurchases**

Dependent Variable: SR

Tests	Static	Decision Rule	Decision
Autocorrelation (Lagrange Multiplier test)	$P(X^2) = 0.1816$ $R^2 = 0.262437$	If $P(X^2) > 0.01$ , Do not reject $H_0$ .	Do not reject $H_0$ . No Autocorrelation.
Heteroskedasticity (White Test)	$P(F\text{-stat}) = 0.6808$ $R^2 = 0.312189$	If $P(F\text{-stat}) > 0.01$ , Do not reject $H_0$ .	Do not reject $H_0$ . No Heteroskedasticity problem.

## 5.2 Discussions of Major Findings

### 5.2.1 Dividends and Share Repurchases Theories

From our research, we found that the firms in the Consumer Industry are still having a close relationship with the signaling theory. Almost all the firms are distributing dividend no matter they are making profit or loss. It is because the continuous dividend distributing practice conveys a positive message to the investors, and a sudden discontinue of dividend distribution will cause the investors to lose their confidence on the particular firms. Besides, due to the Bird-in-the-Hand theory, most of the firms are not giving up the so-called tradition of dividend distribution although there is an increasing trend of share repurchases because majority of the investors prefer to hold the realized gain.

However, we also find that not all the companies in the Consumer Industry are following the Residual Theory of Dividend Policy. Along with our research, we have collected 5 years of annual reports of 50 companies respectively. In

the financial reports of these companies, we found that some of which will still distribute dividend even though they are making losses.

In overall, we concluded that every company has their independent management and will follow different theory as which is preferable to their companies.

### **5.2.2 Effect of Profitability, Cash Flow, Leverage, and Liquidity on Dividends**

In determine the preference of payout policy and which variables would managers of the Malaysia consumer product industry take into consideration in making the corporate payout policy either paying by dividend or share repurchase. We examine the influence of profitability, cash flow, leverage, and liquidity on the dividend. Our findings show the coefficients for variables representing the profitability and free cash flow are positively and statistically significantly related to dividend. The finding of positive relationship between profitability and dividend are consistent with prior studies such as Doron Nissim and Amir Ziv (2001) and Goergen et. al. (2005), it indicates that companies adjust their dividend based on their profitability level. However our finding in Malaysia consumer industries is inconsistent with those of the previous researchers such as Abe et. Al. (2003), Benjamin and Kathleen (2008), and Monica et. al. (2008) where they found a negative relationship between the free cash flow and dividend.

Furthermore, there is no statistically evidence that leverage and liquidity have any influence on Malaysia companies' dividend payout. Although we found leverage and liquidity have a negative impact on dividend however there is no significant relationship which indicates that leverage and liquidity cannot effectively influence the dividend. Inconsistent with Fama and French (2001), Blau and Fuller (2006), and Zhang (2007) claim that leverage is one of the significant and positive variables affect the dividend. While Baker et. al.

(2006), Eije and Megginson (2007) and etc. found liquidity play an important role influence a company to paid dividend.

### **5.2.3 Effect of Profitability, Cash Flow, Leverage, and Liquidity on Share Repurchase**

Next, we examine the impact of profitability, cash flow, leverage, and liquidity on company share repurchase. We observed a positive and statistically significant coefficient for the free cash flow in explaining share repurchase. This is consistent with existing evidence from Jagannathan et al. (2000), and Abe et al (2003). The coefficient of the profitability, represent the second largest variable, shows a significant negative relationship with share repurchase. The result is consistent with the existing studies such as Hribar et. al. (2006), Skinner (2008), and other researchers. We also find that share repurchase are significantly positive related to leverage. Lastly Brockman et al. (2008) indicated a significant positive relationship between liquidity and share repurchase. It was contrast to our findings that the liquidity is the variables that insignificantly affect the share repurchase although there is a positive relationship between liquidity and share repurchase.

As a conclusion for the major findings, our study found the independent variable that has strongest impact on Malaysia consumer industries companies to paying dividend are the profitability following by free cash flow which indicates managers of consumer industries take into consideration these two variables in distribute the dividends. While profitability, cash flow, and leverage play a significant role for manager to make decisions whether to implement share repurchase.

## **5.3 Implications of the Study**

### **5.3.1 Managerial Implications**

On policy makers' perspective, this report provides a greater insight for them to develop a distribution approach, either pay dividend or buyback the shares, which adapt to firms' current situation the most. Especially new listing companies, they are in the position without a given payout mechanism, and lack of previous empirical experience as well. This study represents as a guideline for those new listing firms to do an evaluation among the few factors that we found are most significant to payout policy such as liquidity, free cash flow, earnings and leverage.

By taking two distribution approaches both into account, it will be good news for those practitioners attempt to taking similar studies, since there is shortage of investigation that put in two variables simultaneously. This method able to presents corporate payout behavior in a more integrity manner.

## **5.4 Limitations of the Study**

In studying the Malaysian companies' choice of payout policy, whether they prefer dividend payment and share repurchase, there are a few limitations that must be acknowledged when interpreting results reported in our previous chapter.

Our study has several potential limitations. The first limitation concerns the sample of our research, as statistical tests normally require a larger sample size to justify that the effect did not just happened by chance alone. We limit our sample to fifty companies. Compared to some other existing share repurchase and dividend policy studies, our sample is relatively small which can only help us to determine the trend of a particular industry, such as consumer industry in our research. Moreover, the total number of company that is offering share buyback is only thirteen. Furthermore, the

numbers of listed companies are further eliminated in the filtering process as a result of incomplete financial information and missing values are excluded from the analysis. It will be merely inaccurate for us to make conclusion on the whole market in Malaysia.

The investigation period of five years from 2004 to 2008 which we undertake to analyze the data is considered relatively short and might violate the accuracy of the results. Whereas it is better to use the latest data in order to understand the recent trend. However, the reason we took the data from 2004 to 2008 is because many companies still haven't published their own 2009 annual report. Furthermore, there are also quite many companies that newly listed in the main board of Bursa Malaysia recently and it is another reason why we can't lengthen the period to analyze the relationship between the 5 independent variables and 2 dependent variables.

Another limitations have to do with the possibility of creative accounting, as our data about share repurchase and dividend payout was collected by analyzing the financial statement of selected companies, it was hard to justify what we received are entitled to information transparency, and out from corporate control or manipulation. Sometimes the firm may wish to show favorable profits to gain public confidence, they taking some actions that hide the true and fair view intently.

Lastly, the life cycle theory of dividends suggests that as companies become mature, its ability to generate cash overtakes its ability to find profitable investment opportunities. Eventually, it becomes optimal for the companies to distribute its free cash flow to shareholders in the form of dividends. However due to the lack of data about the listing age and size of the Malaysian consumer industries companies between the time period of 2004 to 2008, we unable to study the life cycle hypothesis in the Malaysian perspective.

Although there is limitation acknowledged in our research but they do not detract from our significance of findings. Limitations of this study may open opportunities for advanced research in the future.

## **5.5 Recommendations for Future Research**

As for limitations of this study, it is recommended to increase the sample size needed to cover the adequate width of studies, for example, taking in more industries as consideration so that the result collected will be more reliable to explain the trend of dividend payment and share repurchase in Malaysia. It is also recommended that the period to analyze the relationship between the independent variables and dependent variables to be lengthen in order to prevent the likelihood of inaccuracy data. As for the possibility of creative accounting, the access to any resources need to be further investigated its facticity, and obtain it from origins that are after fully recognized, make sure that all data selected are reliable and accurate.

Our research focuses on particular industries which is the consumer industries. We observe the trend of dividend payment and share repurchase according to boards and industries. However, it is not studied further whether there is any relationship between industries and their trend of dividend payment and share repurchase as it is commonly perceived that there is an industries norm for choice of dividend payment and share repurchase in Malaysia. The relationship between industries and their trend of dividend payment and share repurchase can be an interesting topic for future research.

## **5.6 Conclusion**

In corporate view, there were two methods of company to distribute their profits to shareholders, either in form of dividend or share buyback. Nevertheless, corporate payout



policy has changed significantly over the previous year, the increasing trend of share repurchase also becomes a questionable new movement to the investors. In this study, we examine the trend of Malaysia companies particularly consumer product industries payout policy, whether the manager of consumer product industries prefer paying dividend or share repurchase. We also propose several theories to explain why the firm prefer distribute the dividend and why they prefer share repurchase. Secondly, the aims of this study is to identify which variables would managers of the consumer product industry take into consideration in their payout policy decision, these variables are firm size, profitability, liquidity, leverage, and free cash flow. Our sample data consist of fifty consumer product industries companies over five years period between 2004 and 2008.

Our empirical results can be summarized as follows. First, we concluded that every company has their independent management and will follow different theory as which is preferable to their companies in making payout policy decision. Second, we found the independent variable that has strongest impact on Malaysia consumer industries companies to paying dividend are the profitability following by free cash flow which indicates managers of consumer industries take into consideration these two variables in distribute the dividends and there is positive relationship between both variables and dividend payout. While the liquidity and leverage insignificant affect the manager propensity to distribute dividend. Third, our result also suggests that cash flow, profitability, and leverage play a significant role for manager to make decisions to implement share repurchase. Among the four variables, we found cash flow has a strongest impact on share repurchase, there is a positive relationship between the cash flow and share repurchase. Profitability represent the second important variables, indicates a negative relationship with share repurchase. We also find that share repurchase are significantly positive related to leverage.

Finally, this research emphasizes on issues related to company profit distribution manner that mainly execute in Malaysia. It is contribute to investors, listed corporations in Malaysia, who would like to determine the consistency between past studies in foreign

countries and the implementation in Malaysia, to learn up whether it will provide distinct impacts. It is magnitude in test the usability of same investigation in different locations.

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## APPENDIX

### Appendix 1: List of Companies in the Consumer Industry

1	Acoustech Bhd	26	Lion Diversified Holdings Bhd
2	Ajinomoto (M) Bhd	27	London Biscuits Bhd
3	Apex Healthcare Bhd	28	Malayan Flour Mills Bhd
4	Apollo Food Holdings Bhd	29	Mamee Double-Decker (M) Bhd
5	Asia File Corporation Bhd	30	MWE Holdings Bhd
6	British American Tobacco (M) Bhd	31	Nestle (M) Bhd
7	C. I. Holdings Bhd	32	New Hoong-Fatt Holdings Bhd
8	Carlsberg Brewery Malaysia Bhd	33	NTPM Holdings Bhd
9	Cycle & Carriage Bintang Berhad	34	Oriental Food Industries Holdings Bhd
10	Degem Bhd	35	Oriental Holdings Bhd
11	Dutch Lady Milk Industries (M) Bhd	36	Padini Holdings Bhd
12	DXN Holdings Bhd	37	PCCS Group Bhd
13	Ekowood International Bhd	38	Pelikan International Corporation Bhd
14	Emivest bhd	39	Poh Huat Resources Holdings Bhd
15	Eng Kah Corporation Bhd	40	Poh Kong Holdings Bhd
16	Formosa Prosonic Industries Bhd	41	PPB Group Bhd
17	Fraser & Neave Holdings Bhd	42	Proton Holdings Bhd
18	Guinness Anchor Bhd	43	QL Resources Bhd
19	Hong Leong Industries Bhd	44	Tan Chong Motor Holdings Bhd
20	Hup Seng Industries Bhd	45	UMW Holdings Bhd
21	Hytex Integrated Bhd	46	UPA Corporation Bhd
22	JT International Bhd	47	Xian Leng Holdings Bhd
23	KBB Resources Bhd	48	Y. S. P. Southeast Asia Holding Bhd
24	Latitude Tree Holdings Bhd	49	Yee Lee Corporation Bhd
25	Leong Hup Holdings Bhd	50	Yeo Hiap Seng (M) Bhd