THE RELATIONSHIP BETWEEN SHARE REPURCHASE FREQUENCY AND FIRMS FINANCIAL CHARACTERISTICS: A STUDY IN MALAYSIA

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College of Business

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ABSTRACT

The purpose of this study is to examine the relationship between different frequency of share repurchase program and firm financial characteristic in Malaysia. The number of Malaysia firms buying back their own shares on the open market has been increasing since 1997 subsequent to the Asian Financial crisis. This study fills the gap by examining the relevant determinants of the firm financial characteristics that may lead to the different frequency of share buyback of a company. Infrequency share buyback firms engage in between (1-3 programs) while frequent buyback firms are categorized as having engaged in between (4-5 programs). The findings of this study showed that market to book value and earnings per share are the variables that affect share repurchase frequently significantly. This study contributed to the understanding of the scant literature of frequency on share buyback in Malaysia. This study also contributes to the explanation of the signalling hypothesis regarding the buyback frequency program explained by the findings.

ABSTRAK

Tujuan kajian ini dijalankan adalah untuk mengkaji hubungan antara perbezaan frekuensi pembelian balik saham dengan ciri-ciri kewangan syarikat di Malaysia. Bilangan syarikat di Malaysia yang membeli balik saham mereka di pasaran terbuka telah meningkat sejak tahun 1997 selepas krisis kewangan Asia. Kajian ini mengisi penentu ciri-ciri kewangan syarikat yang boleh menjadi penyebab kepada perbezaan frekuensi pembelian balik saham. Kajian ini mempunya dua kategori iaitu syarikat yang kerap membuat pembelian saham (1-3 program) dan syarikat yang tidak kerap membuat pembelian balik saham (4-5 program). Hasil kajian ini menunjukkan bahawa pasaran kepada nilai buku dan pendapatan sesaham adalah pembolehubah yang memberi kesan kepada perbezaan frekuensi pembelian semula saham. Kajian ini menyumbang kepada pemahaman literatur tentang kekerapan pembelian balik saham di Malaysia. Kajian ini juga menyumbang kepada penjelasan hipotesis isyarat mengenai program tentang kekerapan pembelian balik saham. .

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In the name of Allah the most benevolent and most merciful. All praise to Allah, God of the universe and Peace be upon his messengers

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BM = Bursa Malaysia

CCM = Companies Commission of Malaysia (CCM)

DY = Dividend yield

EBITDA = Earnings before interest, tax and amortization

EPS = Earnings per share

MASB = Malaysia Accounting Standard Board

MTBV = Market to book value

ROA = Return on asset

SC = Securities commission

SR = Share repurchase

CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter starts with the introduction of stock repurchase by firms in the context of corporate strategies and trend of buying back the share. It proceeds with the purpose of the study by explaining the problem statement, formulating research questions, research objectives, significance and contribution of the study.

1.1 Background of the Study

Payout policy is a crucial thing that may involve a large amount of money and is much related to and interact with other corporate financial policies such as investment and capital structure. Based on corporate perspective, payout policy is important because it determines the amount of funds paid to shareholders and also the amount of fund that is retained for reinvestment. The role of deciding this policy rests with the manager. He or she needs to decide whether to have a payout policy or not, which type of payout to implement and how much should be distributed.

Findings from previous studies indicate that financial policies related to event studies, such as investment policy and payout policy, have information content that may greatly affect firm value. Events such as the announcement of merger and acquisition (Jensen &Ruback, 1983), the decision to carry out bonus issues, rights issue and equity offerings (Asquith and Mullins, 1986), the choice to carry out

research and development expenditures (Abrahams & Sidhu, 1998; Lakanishok&Sougiannis, 2001), the decision to initiate share repurchase activities (Dann, 1981; Grullon&Michaely, 2002; Stephen &Weishbach, 1998), and the choice to announce dividend payments (Asquith & Mullins, 1983; Michaely, Thaler& Womack, 1995) bring about positive significant implication to stock price.

The payout decision may involve large sums of cash due to the firms dealing with cash distribution to shareholders. Because of this, it is important to understand why corporations implement such policies and how this decision affects their firms' value. Furthermore, developing a good payout policy that is capable of maximizing shareholder wealth and enhancing firms is one of the priorities and ultimate goal of a firm.

There are two methods of cash distribution policy currently in practice globally. These are cash dividend and share repurchase. Share repurchase is a procedure by which a firm buys back its own shares from individuals, group, or targeted shareholder or from the public. Share buybacks are also a new payout mechanism. Miller and Modigliani (1961), state that dividend policy is irrelevant in a firm valuation under perfect and complete market. They demonstrate that what really matters is the firm's investment policy. Furthermore, the firm may alter the mix of retained earnings and payout without affecting firms' value, as long as they maintain their investment policy.

Based on perfect market, the dividend irrelevance theorem serves faultlessly. The theorem must satisfy these four elements (1) no tax, (b) no transaction costs, (c) no agency cost and (d) symmetric information (Myers, 2001; Ross, Westerfield, & Jaffe, 2005). This implies that if a market had all these elements, a payout policy would not affect the firm' value and manager did not have to worry about payout policy. But, if one of these elements was not included together, corporate financial decision such as the payout policy would affect firm value and return.

1.2 Trend in Buyback Activities

It is an important phenomenon that companies repurchase their own shares in corporations distributing policy today (Brockman & Chung, 2001; Dittmar, 2000; Evans, Evans & Gentry, 2003; Grullon&Michaely, 2002, 2004; Hatakeda&Isagawa, 2004; Kahle, 2002; Stephens &Weisbach, 1998; Steward, 1976).

Grullon&Michaely (2002) find that the upward trend of volume and dollar value of stock buyback activities had risen steadily. They find that investors spending for their share buyback activities had increased from 4.8% in 1980 to 41.80% in 2000. Besides, total cash spent on dividend payment, as a percentage of earnings, decreased from 26.10% in 1980 to 6.8% in 2000. This shows that firms prefer to buy their shares compared to payingdividends in distributing their excess cash.

Share buybacks are rather new in the Asian stock markets like Malaysia, Singapore, Thailand, Taiwan, and Korea. Share buybackprogram were first legalized in the late 1990's in these countries. Although share repurchase is a new activity, the number of

firms embarking on buyback activities and the amount spent for share repurchase had increased tremendously from the inception year.

In Korea, Park and Jung (2005) examine 994 listed companies engaged in buyback shares from 1994 to 2000. In Taiwan, buybacks were allowed only in 2000 but Hu and Chuan (2006) state that there were already 261 listed companies that announced buyback activities from 2000 to 2002. Signalling of undervaluation has been the reason for the increased of share repurchase trend in many markets (Baker, Powell, &Veit, 2003; Dittmar, 2000; Ikenberry, Lakanishok&Vermaelen, 1995).

Share repurchases are an incredibly important tool for U.S. corporations. Buybacks have several large advantages over dividends, and have grown very popular as a result. Since the late 1990's, the total amount of cash used to buy back shares has exceeded cash paid out as dividends, with one brief exception during the financial crisis. U.S. companies are sitting on cash that is the equivalent of 24% of their combined market capitalizations as of April, 2014, so buybacks figure to continue in force in years to come.

Figure 1.1: Volume of cash paid in the share buyback program by firms to shareholders.

1.3 Problem Statement

Firms may either let their excess cash stay in their own treasury, seek new investments or distribute the excess cash it to stock owners. This can be done through (1) directly paying dividends or (2) indirectly repurchasing their own shares. This situation states that a company that has excess cash can manage their payout ratio using these two methods. These different strategies of handling the distribution of excess cash have historically shown different degrees of efficiency and discrepancy in the performance of total return to stockholders. Leimdorfer (2010) states that companies employ different styles of distributing excess cash to stock owners in order to satisfy them.

Based on the last 20 years, it has been shown that there are only a few companies that pay dividend to shareholders. Many of the companies choose to buy back their shares. This situation is more common in the United States (Grullon&Ikenberry, 2000; Grullon&Michaely, 2002). Ikenberry (1995) finds that there are major factors

that influence why a company adopts buybacks. This is because of the signalling effect that is linked to investors repurchasing their own shares.

The theoretical principal-agent framework proposed by Eisenhardt (1989) states that one party (the agent) is more informed than the other (the principal). The actions of the agent can give signals to the principal about something that he (the principal) does not know. Thus, by applying this framework, a company's action can be predicted due to the fact that whenever a company (agent) chooses to repurchase its own shares, it also signals to the investor (principal) that the stock price is undervalued.

Common reasons why a company undertakes the action of repurchasing back their own shares are: (1) the repurchasing is within top management's valuation of the stock, (2) higher expected future earnings compared to the current stock price, (3) acquisition defence strategies and capital structure rearrangement (Ikenberry, Lakonishok, Vermaelen, 1995). The motive of share repurchasing is to change the capital structure and to reach a better debt-equity ratio, thus leading to a higher valuation of the company.

According to Modigliani and Miller (1961), the main purpose of a company increasing their share repurchase is to reach a desired capital structure. This has been observed across Europe and this kind of trend has grown in importance (Haw, Ho, & Zhang, 2011).

Share repurchase program has shown to support the existence of long term abnormal return following repurchase announcement (Lakonishok and Vermaelen, 1990; Ikenberry et al., 2000; Chan, Ikenberry, & Lee, I. 2007; Yook, 2010). However, Kothari,Lewellen, Warner (2006), disagree that there are abnormal returns. They assert that if were abnormal returns, there might be mispricing or lack of sufficiently sophisticated measurement tools. By initiating a share repurchase program, there are also firms that initiate a share repurchase in different frequencies, leading to a positive abnormal return.

Adrian and Jonas (2014) find that there are different returns in market performance when firms initiate repurchase program infrequently, occasionally or frequently. They also find that repurchasing stock which is done infrequently shows no abnormal return while occasionally and frequently repurchase indicates a positive abnormal return.

The studies regarding the repurchase in emerging economies are very few and have focused solely on the announcement effect, on the weekend effect and the anomaly return, and not on the frequency of buyback shares. In the case of Malaysia, companies have been actively participating in repurchase activity. From the inception year in 1997 until December 2005, 305 firms or about 25 percent of all listed companies has participated in repurchase activities.

Recently, in Malaysia there werestudies had been carried out regarding share buyback activities (seeRohaida and Kamarun (2013), Hidayu and Wahid

(2013),Mansor, Zaidi and Siew (2011), Hanita and Adiana (2006), Zhang (2005), Nazri (2004), Nasruddin (2004), and MohdJays' and Chin (2001)). However, most of these Malaysian studies did not focus on the stock repurchase frequency program.

In US, UK and other developed countries, firms are able to buy back their shares only two or three times a year. This case is different in Malaysia, a country with a unique scenario of share buyback. Companies in Malaysia have been aggressively embarked with a share repurchase once they are engaged in this program. Reflecting to this criteria, some of Malaysia firms have a very high frequency of share buybacks whilst some are not.

Due to the marked differences in these frequencies of share repurchases in Malaysia, this present study intend to explore this phenomenon due to the lack of information regarding share buybackin Malaysia. This study captures some pertinent issues in relation to different firm financial characteristics. The knowledge provided by the findings of this study could enrich to the literature on share buyback.

In this present study, repurchase programs are categorized based on a different frequency that is, 1-3 times repurchase of stock is considered as an infrequent program, and 4 or more time repurchase of stock is considered as frequent program. This category follows the definition Adri and Jonas (2014) with some modification. Unlike Adri and Jonas (2014) who used three levels of frequencies 1-2 times share buyback classified as infrequent programs, 3 times buy back shares as the occasional programmer and 4 or more is frequent program. This present study adopts twotypes

of frequencies. Since the study period covers only 5 years, these twotypes of frequency used to ease the classification. This present study examines how the different financial characteristics of Malaysia listed in Bursa Malaysia firms affect the frequencies of share repurchase.

1.4 Research Questions

a) Is there a positive relationship between different share buyback frequencies and market-to-book value of Malaysian firms?
b) Is there a positive relationship between different share buyback frequencies and return on asset of Malaysian firms?
c) Is there a positive relationship between different share buyback frequencies and dividend yield of Malaysian firms?
d) Is there a positive relationship between different share buyback frequencies and earnings before interest, tax, depreciation and amortization of Malaysian firms?
e) Is there a positive relationship between different share buybacks frequencies and earnings per share of Malaysian firms?

1.5 Research Objectives

The main purpose of the current study is to examine the differences in frequenciesof share repurchase programand how there are related to firm financial characteristic.

The specific objective of this study is:

(a) To determine the relationship between different share buyback frequencies and market to book value of Malaysian firms

(b) To examine the relationship between different share buyback frequencies and return on asset of Malaysian firms.

(c) To examine the relationship between different share buyback frequencies and dividend yield of Malaysian firms.

(d) To confirm the relationship between different share buyback frequencies and earnings before interest, tax, depreciation and amortization of Malaysian firms.

(e) To explore the relationship between different share buybacks frequencies and earnings per share of Malaysian firms.

1.6 Significance of the Study

Practically, market players are always searching for new information regarding the companies that are listed on the stock exchange. It is important for them to be the first to buy or the first to sell their shares before there is a reaction towards the share price. Studies have shown that upon the announcement of a buyback program, the repurchase firms experience a positive abnormal return surrounding the announcement dates (Chen, Chao-Liang, & Cheng, 2004; Stephens &Weisbach, 1998; Zhang, 2002).

In the US, firms often conductbuybackprogram once in every two or three years (Jaganathan& Stephens, 2003). However, in Malaysia, firms are very aggressive since they always buy back their shares repetitively every year. This trend shows that

once firms embark on buying the program, they will become a frequent buyer of their own shares. Because of this, the public can predict the occurrence of the buying back activities(Rohaida, 2013).

Since this currentstudy which examines the frequency of share buyback, it could help investors and analysts to understand the consequence of buyback activities which can be used in their analysis of the Malaysian stock market. This study can also help investors to predict the surrounding announcement and therefore improve the efficiency of the stock market.

Theoretically, many of the existing research on share buyback focusing on the buyback motivation and the abnormal return that gain from the activities (Frilander, 2013; Hidayu and Wahid, 2013; Rohaida and Kamarun, 2013; Zuriawati, Hadi and Joriah, 2013; Isa, Ghani and Siew-Peng, 2011; Axeson and Brismann, 2011;gas 2009; Nazri, 2004). From these studies, it examines the relationship between firm financial characteristics and frequency share buyback by selecting and adding variables that rarely being used especially studies in emerging countries (market-to-book value, return on asset, dividend yield, earnings before interest, tax, depreciation and amortization and earning per share).

The studies regarding the share buyback frequency also limited (Adri and Jonas, 2014; Hun and Minji, 2014, Isa et al., 2011; Jagannathan and Stephens, 2001). This could help to enhance the literature on the share buyback frequency since in Malaysia, the study of this topic is still limited. Moreover, this present study also

could explore the relationship between the variables since in Malaysia, the buyback regulation is different compared to the regulation in developing countries.

1.7 Organization of the Thesis

This chapter providesthe background of the thesis of share repurchase as a growing trend in Malaysia and also as a new payout policy. Chapter 2 covers the literature review, whichoverviews buyback activities and the regulation regarding buybacks in Malaysia as well as in selected markets around the world.Chapter 3 explains the methodology of the study as well as the development of the hypotheses. The results of the study are discussed in Chapter 4. Finally, Chapter 5 summarizes the findings andconcludethe research by providing recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter starts with a discussion on laws and rules that are relevant to the buyback program and the accounting standards practicedin Malaysia, followed by a discussion on buyback activities around the globe.

2.1 Laws and Rules of Share Buybacks in Malaysia

Share buyback was allowed in 1997 by the Malaysian government because of the wakeup call of the financial crisis in Asia. Malaysia Accounting Standard Board Technical Released (MASB-TR1) was introduced to allow companies to repurchase their shares and then treat those shares as treasury shares.

Unlike in United States, the only method that is allowed in Malaysia for firmsto buy back their shares is through the open market. Malaysian public firms are required to lodge director's intent to buy back theirshares with the Companies Commission of Malaysia and Bursa Malaysia and then send a copy to Securities Commission regarding the buyback announcement. Appropriate amendments have been developed in the appropriate rules and guideline to legalize the buybacks (Legal Research Board, 2003).

The statutory bodies involved in the implementation of buying back shares are Companies Commission of Malaysia (CCM), Bursa Malaysia (BM), Securities Commission of Malaysia (SC), and Malaysia Accounting Standard Board (MASB). CCM is the government agent to enforce the law and administer the policy. This rulegoverns in the Companies Act 1965. In 1997, Companies Amendment Act 1997 was introduced to allow modification in section 67A of Companies Act 1965. As a result, with this new amendment, a public company is allowed to repurchase their shares based on these three conditions: (1) the company is solvent at the announcement date, (2) the purchase is an open market buyback and (3) the purchase is made in good faith and in the best interest of the company.

The Regulation 18A of Part IIIA of Companies Regulation Act 1996 states that the manager of the company must reveal his or her intention to buy back the shares in a meeting. Within 6 months after the declaration is made, the declaration is valid. Besides that, the Regulation 18B of the same act requires that directors report their intention to buy back their shares in the exchange market (Bursa Malaysia) the registrar (Companies Commission of Malaysia) and the Securities Commission within seven days after the declaration.

Bursa Malaysia plays a vital role in the share repurchase program. Besides acting as the forefront regulator of Malaysian companies, it also established two sets of regulations which are: Bursa Rules and Bursa Listing Requirements. These regulations are one of the more important policies to enhance and promote high standard of business contacts and disclosure between Malaysian companies and brokers.

The other statutory body is SC. It is responsible to supervise Bursa Malaysia and to report annually to the Parliament and Ministry of Finance on matters regarding market activities, business performance and dealers' conduct. As a conclusion, BM and SC are the statutory bodies that build Malaysia as a market of quality and integrity while protecting investors' interests.

There are sets of rules and guideline that need to be complied when firms make stock repurchase activities in Malaysia. This is stated in Chapter 12 of Bursa Listing Requirements.Some of the requirements are as follows:

1. A firm need to send a proposal of the buyback intention to Bursa Malaysia and send a circular to shareholders of the buyback implementation before conducting an annual general meeting (AGM) or extraordinary general meeting (EGM). The meeting is conducted to get at least 75% of shareholders' approved before buybacks are allowed. This mandate is valid for at least one year until the next AGM,

2. The firm needs to be solvent, and must send a letter of solvency and must submit to Bursa Malaysia for endorsement,

3. The share buyback plan must not cause public shareholding to fall below 25%,

4. The paid up capital must not fall more than RM 60,000,000 for firms that are listed on the Main Board. For firms that are listed on the Second Board, the paid up capital must not fall more than RM 40,000,000,

5. A buy back firm must make an immediate announcement to the exchange of any purchase of own shares, resale or cancelation of buying shares no later than 6.30 p.m. On the date of the transaction.

However, Chapter 12 of Bursa Listing Requirements does not place any restriction on the types of funds which can be utilized in the share repurchasing program, as long as the funds can be backed by the equivalent amount of distributed retained profit and/or share premium. Before this, firms in Malaysia were divided into two boards which were Main Board and Second Board. However, in August 2009, the new listing frameworkwas made which merged these two boards to be the Main Board and the MESDAQ, now known as the ACE market. The guideline is the same for the share buyback program for the firms that are listed on the Main Market and ACE Market.

There are two Practice Note (PN) issued by SC which are applicable to buybacks firms. PN can be divided into PN 2.7 and PN 2.9.10. (a) PN 2.7 related to the purchase of a company of its voting shares and mandatory offers. (b) PN 2.9.10 is about the exemption from part 11 of the Malaysian Code on Takeovers and Merger 1998 (MCTOM). It established a proper procedure relating to a takeover offer, merger, or the compulsory acquisition for submission to the SC. It is implied for the Malaysia firms that want to buybacks their share.

This Note allows the holder of voting shares, director and persons acting in concert to seek exemption from making a general mandatory offer.Otherwise, holders,

directors and persons acting in concert must make a mandatory general offers, as stated in PN 2.7 of the same code. As the result of buybacks, the holders, directors, and persons acting in concert: (a) obtain more than 33% of but less than 50% of shares outstanding, or (b) increase their holding by an additional 2% or more of the voting right of the company in the range of 6 months.

Bursa Malaysia issued a guideline called Practice Note 18 in January 2005 which is the Perusal of Draft Circular and Other Documents. Practice Note 18 (PN 18) sets out the relevant requirement to document to be submitted to Bursa Malaysia. Under section 2.0 of PN 18, perusal of Bursa Malaysia is not required before the issuance of circulating on purchase of own shares (include the ordinary resolution) as it is considered an "exempt circular".

The statutory requirement that is responsible for the development and issuance of financial reporting standard and accounting in Malaysia is the Malaysia Accounting Standard Board (MASB) (Larson, Wild, Chiapetta, Ropidah, Haslinda, Aryati& Liana, 2007). MASB issued a revised standard in July 1999 known as MASB-Technical Released TR1 (revised): Share Buybacks- Accounting and Disclosure, which permits the use of the share premium account for the consideration of companies share buyback program.

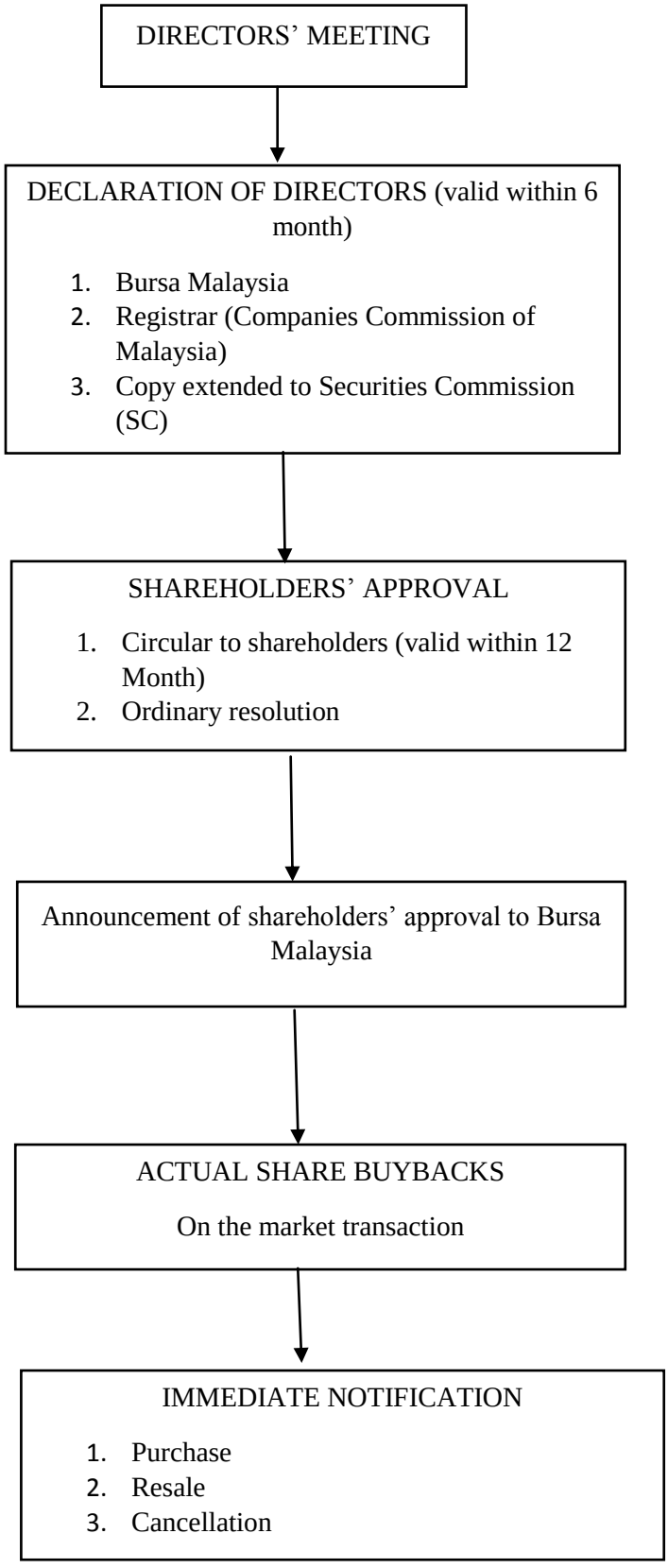
Subsection (3A) of Section 67A of the Companies Act, allows public listed companies upon actual bought back of the shares, to (a) cancel the share, (b) maintains the shares so bought in treasury shares (c) combined the (a) and (b)

condition. The directors of the firm are allowed to distribute the treasury shares to shareholders in the form of share dividend or resell the treasury shares in the market of the stock exchange as provided in Subsection 3B of the Act.

There are two alternative accounting treatments that are available when a company buybacks its own shares. They are (a) the treasury stock method and (b) the share retirement method. Companies can choose any one of the methods or combine both methods in a single buyback transaction.

The company has an option to hold all shares so bought as treasury shares, or retire all share so bought, or retire some shares and hold some of the boat as treasury shares. The process of affecting share repurchase in Malaysia is made according to; (1) Regulation 18, PART 111A of Companies Regulation 1966 (2) Section 67 A Companies Act 1965 and (3) Chapter 12 of Bursa Listing Requirement.

Figure 2.1 The process of effecting share buybacks in Malaysia.



2.2 Theoretical Review on Share Repurchase

There are seven related theories that are related to the share buyback program. These theories are relevant to identify the motives of share repurchase. There are: (1) Signalling hypothesis, (2) Agency Cost of free cash flow hypothesis, (3) Capital structure or optimal leverage hypothesis, (4) Tax saves hypothesis, (5) Dividend substitution hypothesis, (6) Liquidity changes hypothesis and (7) Management incentive hypothesis. Each of the hypotheses is discussed below:

2.2.1 Signalling Hypothesis

Signalling hypothesis are used by Miller and Rock (1985) and Myers and Majluf (1984) in the context to measure financial policy changes. This theory has two general assumptions; (1) managers are better informed than shareholders and the public concerning the future prospects of their firms, (2) managers have an information advantage in which they canincrease cash distribution to investors in an attempt to signal that their company are undervalued. This hypothesis predicted that the managers will be motivated to inform the market if they perceived the market as mispricing. This is due to the presence of information asymmetry between the insiders who are the managers and outsiders.

Signalling hypothesis indicate that managers would give buyback signal to the public that their firms are currently undervalued or want to increase the earning in the future. Besides that, the managers also want to reduce the firm's systematic risks. The undervaluation of a firm suggests that the market lacks of information and it is

wrong about the true value of a firm. This hypothesis estimate that having privy information on the firms would be impelled to correct the mispricing. One way of doing this is by announcing the buybacks intention. This shows that the manager hasa strong belief that their firms is a good choice for making investment and the reasons for poor price performance would be due this market conditions. Baker, Powell and Velt (2003), find from the evidence on a survey of 194 top financial executives who are engaged with share buybacks is consistent with the hypothesis.

The second reasons that signalling hypothesis suggests managers are positive that their firms are going to experience better performance in the future. Managers would signal better future performance by buying back their shares from the market. Stewart (1976) states that by using the price index as indicator of performance, the buyback firms perform better compared to the non-buyback firms subsequent to buy back years. This study suggests that, the larger the size of the buyback, the better the performance of the firm. Usually, fixed price tender offers involve a large percentage of buyback shares relative to open market buyback. This would cause a large percentage increase in the price index. Bartov (1991) explains that buyback firms experienced positive earning and also positive revision of analyst forecasts to the buyback initiation years. This shows that buyback activities contain relevant information regarding the future earnings performance.

Based on Jagannathan et al., (2000),a firm that announces share repurchase activity will experience less variability in operating performance compared to firms that do not initiate buyback announcement. This suggests that buyback firm is stable

fundamentally and therefore the firm would be able to maintain and sustain profitability after the implication of share repurchase programs.

The third reason why company embarked with share repurchase is that managers may initiate buyback to signal risk changes. This is due to the concept that; the higher the systematic risks, the higher the returns and vice versa. The manager's decision may affecttheir firm's price because the corporate decision may affect the firm's risks.

There would be a positive price reaction regarding the announcement of a buyback. This could lead to the changes in investors' valuation a firms' value (Bartov, 1991). He argues that firms that buy back their own shares essentially can reduce the volatility of future cash flow. This is associated with the reduction in firms' risk and therefore will cause the investors to revise their expectations positively. This indicates that buyback firm is capable of maintaining high earnings and low financial risks.

Bartov (1991) also finds that buybackfirm experience a positive significant unexpected earnings and positive forecast revision in a 2-year period regarding the buyback initiation. Moreover, he also finds that the announcement return during the announcement period are positively correlated with earning changes. But, the announcement return is negatively correlated with the risk changes.

Previous studies show that corporate events affect the trading activities and these lead to the changes in systematic risks (Healy and Palepu (1990) and Lease, Masulis

and Page (1991)). There is a positive significant increase in risk estimating following equity offering and Bartov (1991), Dann (1981), and Masulis (1980) document a significant risk reduction following share repurchase activities.

Based on the previous studies, Baker et al (2003), Bartov (1991), Comment and Jarrell (1991), Dann (1981), Ho et al. (1997) and Vermaelen (1981), they conclude that signalling of undervaluation is the main reasons for companies to buy back their shares.

2.2.2 Agency Cost of Free Cash Flow Hypothesis

Regarding to Jensen (1986), managers that managed a firm that have much cash in hand are subjected to severe agency problems. The manageris likely to over-invest in negative net present value (NPV) project when they have more cash and simply retained cash or consume more discretionary perquisites for private benefit.

The firms are actually reducing the agency cost when they distribute dividends to the shareholders. This argument also applies in the buyback activities. Free cash flow hypothesis state that stockholders considerable excess funds should benefit from share buyback and holding a constant of investment opportunities. Compared to the cash dividend, disbursement of cash through share buybacks offer managers flexibility to manage the timing of the disbursement of excess cash.

Previous studies in U.S have found that there will be a stern price of penalty when firms are failing to disburse cash regarding the previously announced dividends (Jensen & Johnson, 1995; Gunasekarage& Power, 2002). However, there is no

documented evidence yet about the penalty in the case of firms failing to actually buy back their shares as previously announced (Grullon&Michaely, 2002; Healy &Palepu, 1988). The manageris free to decide regarding the magnitude of share repurchase regarding the free cash flow available to them. Since the implementation of open market buyback required a minimal cost. The managerhas the freedom to manage the cash flow in embarking with the share repurchase program due to the flexibility in buybacks policy.

In signalling hypothesis, it is concerned with correcting of the undervaluation or the mispricing of the market. If the market positively responds and reflect a firm's intrinsic value, there would be no need for the manager to buy back their share. However, in agency cost of free cash flow hypothesis, the benefit regarding the buyback announcement would only be materialized upon actual buyback of shares in the marketplace. This is because, the excess cash is saved from being improperly used. Based on the previous studies, (Howe et al. (1992) and Chan, Ikenberry, and Lee (2004) find no support for excess free cash flow hypothesis for firms that proposed initial tender offer buyback announcements.

Stephens and Weisbach (1998) also find that the managers are likely to engage in open market buybacks when they have free cash flow. A study found that, a market responded positively to buyback news because it help to reduce agency cost with an excess of surplus cash (Lie, 2000). Oswald and Young (2008) also find a strong relationship between buyback and surplus cash, especially for firms that have low of growth opportunities.

Chan et al. (2004) find that signalling hypothesis are strongly related to mispricing information, disgorging excess cash flows and increasing leverage. The buyback firm has positive abnormal returns experienced during the announcement period, which refer to the mispricing information. However, there is no evidence regarding the disgorging excess cash flow and leverage that lead to the abnormal return.

However, there is an argument from Howe, He and Kao (1992) which theyinvestigates whether the cash flow series has any explanatory value on infrequent announcement such as in tender offer shares buyback and also on the designated dividends. The author's state that the market react differently due to the announcement. This is because, the cash distribution is different during different period. It suggests that, the market could not recognize the real intent of distributing cash flow and this result did not consistent with the cash flow hypothesis.

Based on the previous studies, there is no inconclusive evidence to support that manager embarking with buyback activities to disgorge excess cash flow in order to mitigate agency problems as suggested by Jensen (1986).

2.2.3 Optimal Capital Structure Hypothesis

Optimal capital structure and optimal leverage ratios play a vital role in many models of corporate financing (Masulis, 1980). The importance of capital structure in corporate financing has been mixed based on the finding in the previous studies. Based on Mussels' and DeAngelo (1980) firms value is maximized when there is an optimal capital structure. It states that firm will restructure the proportion of its debt

and equity in order to maximize the value of the firm. However, capital structure change and will change in term of stock price. The firm that embark with tender offer share repurchase will increase the after-tax value of the firms and also increase the value of the firm. (Masulis, 1980).

Based on (Masulis, 1980; Dittmar, 2000), the manager may use share buybacks to alter their firm's capital structure. The leverage ratio is likely to be lower than average when the firm has excess of cash. If there is an optimal level of capital structure, it is expected that under the levered firm will struggle to maintain is target leverage level. In order to improve the leverage position, there are two options; (1) issuing debts or (2) buying back the firm shares.

The first option is by issuing debt will increase the firm leverage level but also can increase the bankruptcy risks. Hence, firms with ample cash would prefer buyback transaction because it allows firms to improve their leverage ratio without bankruptcy threat. The second option is to buy back firm shares will adjust the capital structure by increasing the firms leverage level. Changes in capital structure may affect the stock prices as predicted by Masulis (1980). In his study, he found that firm that raises more than 50 percent in debt to finance buyback experienced 21% percent announcement period return. The return is different with the firm that were not raised their debt to finance and only get an average return of positive 17%.

Then the authors break down the samples into two groups with the percentage of shares repurchase as the cut-off point. The result shows that bought above average

percentage received a return of 23.5 percent. The other group's returns is 12 percent. This suggests that, the changes in share price didn't only happen because of the changes in capital structure, but it is the choice of financing buybacks with debts and magnitude of shares. This may enhance the degree of changes of the stock price.

Regarding to Cai and Gosh (2003), they have investigated whether a firm debt and equity mix follows the optimal capital structure or pecking order. It suggests that the optimal capital structure is not to be translated as a single point, rather a range of values from zero to industry mean. The findings show that firms adjust its debt level towards an optimal range rather than adjusting the single optimal which is the industry's main. In this study, they conclude that, firm with a higher leverage ratio than the optimal range tend to converge faster towards an optimal range as compared to share repurchase firm that are usually under-levered and do not devote as much from the optimum range. The implication from this finding is; to adjust the under levered firm leverage ratio, it does not have much pressure as compared to the highly levered firms because their value would not be affected much.

Based on the perking order theory, firm prefers the internal financing to affect its capital structure changes and also as a resort to debt financing over equity financing when it comes to raising the firm external funds. The result also consistent with the finding from Leary and Roberts (2006). They found that firm have a target range for their leverage ratio. The managers are concerned with debt financing, thus there are less likely to use external funds when the company has sufficient internal funds.

Regarding to Hovakimin (2004), his study test the target-adjustment hypothesis which follows the dynamic capital structure model that proposed by Fischer, Heinkel, and Zechner (1989). This model suggests that firm will strive to be within the determine range of endogenously. He test the target-leverage hypothesis by using equity issues, debt issues, equity repurchase and debt retirement. Firms prefer equity (issuing or repurchasing) than the debts to adjust their leverage towards its target.

Hovakimin (2004) finds that in order to increase targeted leverage ratio, firm issue debt. However, this study failed to find firms buy back shares to increase the target leverage ratio. Firms that issued debt have remained significantly higher their leverage ratios compared to the contemporaneous industry medians in the 3 years of post-debt issuance. But, for firms that buy back their shares, the deviation from the median is small and inconsistent throughout the year. It shows that, the small proportion of leverage can be offset when the firm embark with share buyback program.

Firms with high levels of ownership concentration will follow the pecking order theory in deciding heir debt levels Minguel and Pindado (2001). The authors argue that firms of concentrated ownership would have less cash flow problem and also they have less concern to mitigate the problems. Thus, the firm will be categorized as under-levered firm. Assuming that there is an optimal debt level, the under levered firm is compelled to achieve the target and therefore the firm will choose share buyback as an easy way out.

As a conclusion, the overall empirical evidence with respect to optimal structure hypothesis appear to be mixed. Based on Ditmarr (2000) and Masulis (1980), the changes in capital structure will lead to share price changes, implying that managers would adjust the structure component to affect the price performance.

2.2.4 Tax Savings Hypothesis

Grullon and Michaely (2002) have found that share buyback activities have experienced, a fast growing trend beginning from 1980. The growing rate is at an average of 26.1 percent from 1980 to 2000 while the dividend grew at just an average of 6.8 percent. Is the share buyback program could be the reason of tax saving? The income from dividend is treated differently from capital gains (Bagwell &Shoven, 1989; Ditmarr, 2000; Grullon&Michael 2002; Masulis, 1980; Oswald&Yound, 2004; Rau &Vermaele, 2002).

In the US study, the dividendis subjected in two levels to two levels of taxation. The first level is at the federal corporate income tax, and second level of the personal income tax. Cash distribution by means that buyback are taxable only when the buyback price exceeds the shareholders price. (Dittmar, 2000; Grullon&Michaely, 2002). The amount will be taxed at the capital gains tax rate. Based on Bagwell &Shoven (1989), there is a tax advantage to shareholders since capital gains are usually taxed capital gains tax rate. The capital gain can be deferred to a laterdate, allowing investors to postpone payment of capital gain taxes. Therefore, in the shareholder perception, buyback announcement are considered as good news as they

lead to a delayed payment and lower taxes. Because of this, shareholder preferred shares buyback compared to cash dividend.

Grullon and Michaely (2002) conducted a study whether a tax saving hypothesis could be a reason why share buyback was tremendously used in the US. The finding US firm was reluctant to do a share buyback although US firm was not prohibited from buyback their own shares. This is because they want to avoid the potential risk of violating the anti-manipulation provisions of the Securities Exchange Act of 1934. These were concerned by the Securities Exchange Commission (SEC) which is buyback activities might affect the natural order of financial markets.

The SEC gave the approval to save the harbour provisions for firm to buy back their shares in 1982 without going against the anti-manipulation provisions of the Securities Exchange Act of 1934. This shows how share buyback activities surge in US after 1982. If the firms gave priories to the shareholder benefits, we could expect that buyback activity to be less popular after the Inland Revenue Service Introduced Tax Reform Act of 1986 (TRA 1986).

Grullon and Michaely, (2002) divide their sample into two categories which are firms that announce buyback before TRA 1986 and the firm that announce buyback decision after approval of tax reform 1986. They found that the market reaction for firm announcing buybacks increased from 3.49 percent prior to the TRA 1986 decision. For those that announce buyback intention after the approval of tax reform 1986, increased from just 2.42 percent. The result suggests that there is a decrease in

market reaction to announcements of buyback after tax reform, so the buyback announcement did not significantly affected by tax changes in 1986.

In UK studies, Rau and Vermaelen (2002) studied UK buyback announcement between 1985 and 1998. They suggest that the buyback is tax driven. The finding shows that the volume of UK dealer is small compared to those in the USA. They said that the small numbers of shares bought back by UK's firm have caused a less positive abnormal returnof the data of the announcement. The abnormal return average mean during the announcement for buyback in the UK is less than half of average mean reported in the US. The authors find that buyback activity was peaked during 1994 to 1996 which parallel with the time of the tax credit being allowed to pension fund. The return of one year post announcement is significantly lower during the period reinforces that share buyback are not motivated by undervaluation but takes advantage.

However, Oswold and Yound (2004) provide a different explanation when they conducted a study that divide their sample into four regimesexplore how to treatment affected the share buyback decision. Regime 1 is for pre-September 1994 when the credit is not allowed for buyback of pension funds, Regime 2 is between September 1994 to October 1996 when the buybacks agencies were given tax advantage, regime 3 is when the dividend are given tax credits from October 1996 to July 1997, Regime 4 is the period where the tax credit are no longer available for the pension fund that carried out buybacks. This happened since July 1997 and the author found that buyback intentions and executions increase tremendously when no tax advantage were given to pension funds that undertake buybacks. Because of this, it lends no

support to the notion that pension funds embarked on buybacks to take advantage of tax credits.

The literature regarding the tax changes on buyback decision is inconclusive. The expectation that tax givesan advantage at shareholder's level provide incentive for firms to buy back their own shares (Grullon&Michaely, 2002) and Lie Lie (1999). But, it contradicts to Oswald and Young (2004) and Bagwell and Shoven (1989). They find that there is no evidence that this tax advantage explain the surges in buyback activities in the UK and US.

In Malaysia cases, the importance of tax saving hypothesis could not be investigated in the absent of differential tax treatment between capital gain and dividend to the tax payers. Thus, there were no tax changes regarding buyback activities. (Koh and Tan, 1998). In Malaysia, there is no capital gains tax and was acknowledged by a website that created by the Securitas Industry Development Corporation.

2.2.5 Dividend Substitute Hypothesis

Dividend and share repurchase considered as a perfect substitute regarding Miller and Modigliani (1961). In the US, the firms preferred to pay on dividend over share repurchase despite the disadvantage on the tax that firms need to pay on a dividend payment. Recently, the trend has reversed. Regarding to Grullon and Michaely (2002), while the dividend payment grew at an average rate of 7.5 percent's per year from 1980-1999. The share repurchase volume also grown at an average of 28.3

percent's in the same period. The question is, could share buyback be the substitute for dividend in today's economic environment?

Theoretically, the share price would decrease proportionately with the amount of dividend paid after the firm paid the dividend to the shareholders. (Ross, Westerfield, &Jaffie, 2005). However, the intention to buy back its own shares would push the price upward, and firm able to get an average return of 3 or 4 percent's during the announcement period (Dittmar, 2000; Ikenberry et al., 1995; Stephens &Weisbach, 1998). This gives a positive indication for a firm to choose to buy back their own shares compared to pay cash dividend.

Share buyback is different with dividend payment because share buyback is not a liability. Firm are not necessary to buy back their own shares in order to obtain benefits. Moreover, the shareholders did not equally participate in buybackprogram. Because of this inequality, it is considered as a great tool for the management if flexibility is needed in the distribution policy. The appropriate amount of share buyback that the manager need to required can be determined whenever the need arises (Kahle, 2002; Grullon&Michaely, 2002; Dittmar, 2000).

There is a lack of evidence to support the notion that the firm bought back shares to replace dividend payment Dittmar (2000). The authors used dividend payment as a proxy for substitution hypothesis. Dividend payoutrefers to the ratio of cash dividend paid to net income in the year prior to the actual buyback. The result suggests that dividend payout is consistently positive and significant in most of the sample years.

It states that firms buy back their shares do not use funds that otherwise would be used to pay the dividend. There is a study that examined the flexibility and the substitution hypothesis between share repurchase and dividend payment. The finding state that share repurchases are mostly related to the temporary earning but not the dividend, butboth of share buyback and dividend payment are not related to the permanent earnings. Because of this, it can be concluded that share buyback and dividend is not a perfect substitute. (Lee and Rui, 2007). This result is consistent with the study that conducted by Dixon, Palmer, Stradling and Woodhead (2008). They found a weak support that firm buy back shares to replace dividend payment. In other words, the dividend is not substitute to the share buyback.

There is another important consideration in determining the method payout policy which is to see the impact on the levels of firm cash flow, current and future level. Share buyback is not obligatory and the managers also have the information which is not available to outsiders. It is expected that they will used share repurchase to adjust their payout without being penalized.

Fama and French (2001) explored that in US the proportion of firm paying cash dividend among non-financial and non-utility that were traded in US have decreased from 66.5 percent in 1978 to 20.8 percent in 1999. They state that the firmhas lower tendency to pay as more firms are less likely to have the characteristic of past dividend paying firms.

There are three characteristics that the dividend paying dividend firm has decreased from 1978 to 1998 which are (1) profitability, (2) investment and (3) size of firms. The decline is due to the increasing tilt of publicly listed firms towards the future of non-paying dividend which is: lower earnings, small size and few investment opportunities. The finding shows that firm that paid dividend use buyback their own shares rather than dividend payment. The firm is at about 25 percent of their cash payment to their stockholders. Besides that, they also find that more firms perceived lesser benefit in paying dividends. A survey was conducted by Block (2006) which explained that the main reason for buyback firm shares is because it is to substitute for cash dividend. Previous studies also have found that the buybackis increasingly becoming the dominant payout method in the US. (Eije and Megginson (2008) and Skinner (2008). Skinner (2008) uses regression base on Litner model to determine the relationship between earnings and buybacks. The relationship between earnings and dividends is weak and this proved the idea that share repurchase is the preferred method compared to the dividend.

However, there is still inconclusive evidence whether share buybacks is substitute for the cash dividend or not. In Malaysia, share buybacks is possible to be the substitute to the cash dividend because of two reasons which are (1) announcement of the share buyback intention by the firm and (2) there is no differential in tax between capital gains and dividend at the corporate level in Malaysia's environment.

2.2.6 Liquidity Changes Hypothesis

Previous studies had been conducted in the market microstructure support that liquidity of securities is another factor that affect the firms expected return. The other factor that affect is size, book-to-market ratio, beta a momentum (Amihud&Mendelson, 1986); Brennan &Subrahmanyam, 1998; Gervais, Kaniel, &Mingelgrin, 2001; Jun, Marathe and Shawky., 2003; Chan & Faff, 2003). Liquidity is where an asset can be converted to cash (Datar, Naik, & Radcliffe, 1998). It can be observed in the stock trading from the bid-ask spread that is quoted by dealers, turnover ratio, trading volume, and turnover-volatility (Gervaais et al., 2001; Jun et al., 2003). Regarding to Chan and Faff (2003), they state that liquidity is the proxy of the share turnover and it is important in the price formation. The relationship between liquidity is negatively related to the stock return. It is important persists even after controlling for book-to-market, size, beta and momentum.

There is an increase in daily trading volume will lead to increase in stock price (Gervais et al. (2001). The finding suggests that trading activities have a new information about the future evolution of the share prices. Jun et al. (2003) studied about the relationship between liquidity and stock return in an emerging market environment. They find that there is an increased of the market liquidity as measured by turnover ratio, turnover-volatility and trading volume. It is a hard work to preserve the liquidity of the stock market in order to enhance trade, attract outside investors and also provide integrity of the market (IOSCO, 2004).

Regarding the distribution policy, Barclays and Smith (1988), found that the firm prefers cash dividend to buyback because of the buyback reduce liquidity. The liquidity has decreased, which refer to the bid-spread during the open market

announcement increased. This shows that there is and increased in cost of capital that could lead to a lower price of the stock. There is three hypotheses that could explain the relationship of buyback announcements and liquidity, which are competing-market-maker, inventory-holding-cost hypothesis and information-asymmetry hypothesis. (Singh, Zaman and Krishnamurti (1994).

Firm are competing in the market for their stocks and this lead to increase the competition for the stock. This will make the bid ask spread lower, thus make the stock more liquid as suggested by competing-market-maker hypothesis. The inventory-holding-cost hypothesis would lead to increase in firm's liquidity. The authors argue that after announcing a share repurchase intention, the trading volume for the stock will increase which also lead increase the liquidity. As suggested in information asymmetry hypothesis, they would be an increase in the number of informed traders, especially the buyback firms. The traders will only trade the stock at a favorableprice and would make the stock less liquid since the bid ask spread increase.

Based on Brockman and Chung (2001), they studied whether the managers have timing ability in implementing the share buyback program and whether the firm that buy back their shares may affect their stock liquidity level. They found that the managers are capable to buy back shares at a lower cost than a naïve accumulation strategy. To examine the factor that affectsthe manager's timing ability, Brockman and Chung regressed managerial timing market movement, interest rate, cash flows interaction of cash flows and low interest rate. Besides that, the author's also regressed specific variables such as firm size and frequency of repurchase executed. The result shows that managers have timing ability to buy back their shares at a

lower cost in the open market. Besides that, they also able to determine the frequency of buyback activities in such a manner that will give benefit to their firm. As a conclusion, Brockman and Chung (2001) state that the managers have great opportunities to identify the stock mispricing during the wide price swings and high interest rate. A frequent buyback firm may have a lower timing ability since the previous public disclosure of the intention of buyback activities have reduced the information asymmetries. The authors posit that the volume and volatilities are significantly higher during the buyback period as compared to the period before and after the buyback program. This means that the share repurchase affected firm's liquidity. Based on this finding, there is a temporary significant improvement on liquidity improvement in the liquidity levelof share buyback activities.

There is an investigation of the differences in liquidity changes around the open market buyback announcement for firms with different degree of information asymmetry Kim (2005). The finding state that the liquidity does not differ across firms regarding the differentiation on the information asymmetry. As a conclusion, previous studies provides various evidence on how liquidity changes affect pen market buybacks.

2.2.7 Management Incentives Hypothesis

The manager’s goal might be different with the goals of shareholders Jensen and Mackling (1976). If the managers were the sole owner of the firm, he will choose the activity for the firm such as the total value of the firm is less than it would be. Managers are often driven by short term focus which are their priorities often

focused on the performance, managers tend to accomplish their own goal in the short horizon and the expansion of the firm value. Because of this, it is necessary to develop an adequate compensation scheme to align the managers' interest. There are three hypotheses that relate to the management incentives hypothesis which are; (1) meet earnings target hypothesis, (2) undo dilutive effect hypothesis and (3) maintain an ownership control hypothesis.

2.2.7.1 Meet or Beat Earnings Target Hypothesis

When managers are using their discretionary power in the financial reporting process, it is often described by the earning management. This is done by the managers in order to obtain desired profit to meet or beat earnings targets. Based on the previous studies, there are various method for the firm used to manage their report earnings (Agarwal, Chomsisengphet, Liu, & Rhee, 2007; Burgstahler&Dichev, 1997; Chung, Firth, & Kim, 2005; Dechow& Skinner, 2000; Healy &Wahlen, 1999; Jelic, Saadouni, &Briston, 2001; Kothari, Leone & Wesley, 2005; Vafeas,Vlitos, Katranis, &Ockree, 2003). The firms will manage their earnings when the anticipated the earning will be negative or decline due to the analyst expectation Haely and Wahlen (1999).

The investors or the analysts tend to focus on the earning rather than cash flows in measuring the performance and the well-being of a firm Jacob & Jorgensen, (2007). Graham, Harvey and Rajgopal (2005) state that most of the manager is strongly agreed the last quarter reported in Earning Per Share in an important benchmark to measure earnings. Moreover, the manager also tends to smooth the earnings even

they need to sacrifice long term benefits. This is because they believe that volatile earning would be very costly. It also could spur the severe market reaction if the manager missing the target earning at least in the short period. In this case, managers are very concerned with meeting or beating with the EPS. (Bartov, Gioly, &Hayn, 2002; Brockman, Khurana, & Martin, 2008; Burgstahler& Michael, 2002; Matsumoto, 2002).

Hribar, Jenkins and Johnson (2006) had carried out a study whether buyback decision are influenced by the meeting or beating analysts'. They find that disproportionatereturns for the firm that did not buy back their shares and also will experience a small EPS.

2.2.7.2 Undo Dilute Effect Hypothesis

Previous studies have found that in the US, one of the manager benefit is where the management stock option are widely used by firms (Dittmar, 2000; Fenn& Liang, 2001; Kahle, 2002). Kahle (2002) statement that the surge in the number of firms that embarking with share repurchase activities can be explained by the surge of growing use of stock option in management compensation. Management stock option could benefit and help to align between the management and the shareholder incentive. The manager are motivated to work harder and good performance of the firm means hefty rewards to them. This is because, the management stock option help to inspirer the manager and since they are able to own a fraction of the company.

However, the EPS figure can be dilute because of the number of share outstanding will increase when the option is exercised. However, the manager will find a way to undo or curb this dilution effect of newly exercised option since they are concerned with the EPS figure. One of the way in solving this problem is to buy back their own shares. (Bens, Nagar, Skinner, & Wong, 2003).

Kahle (2002) find a high correlation between the stock option and firm's decision to buy back shares and the amount that were spent for the buyback activities. Regarding to the finding, firm are more likely to buy back their shares when; (1) there are more options exercised in the year of actual buybacks relative to the previous year and (2) there are more total option that were outstanding in the year after the buyback. Further analysis explained that the time to implement buybacks also controlled by the managers. She also state that manager tend to buy less when the price high, but when the price is low the managers tend to buy more. This implies that firm used share repurchase to obtained small and needed changes in capital structure and also to smooth the EPS level. This finding also consistent with Hurtt, Kreuze, and Langsam (2006) which find that there is a significant relationship between the stock option exercise and the buyback activities.

Two securities that may greatly impact firms EPS when exercised are option and warrants. There is two was of management that can provide shares for the option and warrants which manager could issue new shares or repurchase share to reissue them later. The choice is preferable as it can help to smooth EPS. Manager are more inclined to initiate buyback and can mitigate the dilution effect of these securities if the firm have outstanding warrants and option.

Dittmar (2000) inclined that manager are motivated to buy back shares as it allow them to disburse cash and also can preserve the stock price. This is true when the firm when the manager hold a proportion of shares in the firm. The authors also argues that the manager could consciously plan a repurchase plan to coincide with the exercise of the option.

In Malaysia, it is offer for the firms not only offer stock option but also offer warrants for their shareholders. So, it can be conclude that the manager would resort to repurchase their share if they are pressured to maintain the firm previous year EPS.

2.2.7.3 Maintain Ownership Control Hypothesis

The important of managerial ownership in corporate financial decision have been highlighted in the previous literature (Anderson &Reeb, 2003; Carney &Gedajlovic, 2002; Chirinko, Garretsen, Ees&Sterken, 2004; Hu & Kumar, 2004; Gonzales & Gonzales, 2004; La Porta, DeSilanes, &Shleifer, 1999; Lemon &Lins, 2003; Morck, Shleifer, &Vishny, 1988; Shleifer&Vishny, 1997). But there is still inconclusive evidence as to whether managerial ownership improve the firm performance.

In Asian countries, coupling of ownership and control in terms of individuals and family members are dominants in many Asian firms (Carney &Gedajlovic, 2004; Chirinko et al., 2004; Lemmon &Lins, 2003). As the wealth and resources of the

firm are in the hand of the manager, this issue provide opportunity to align pay out policy to the interest of owners. The manager may exploit buyback programme in order to modify the ownership structure of their firm especially in the countries that allowed limitation on the volume shares that need to be buy back. This show that the buyback activities reflect the motivation of corporate control as the manager can exploit buyback programme. If the shareholders of a company owned less than certain fraction of the company's shares, then the threat of takeover is great.

In this case, in order to protect their own interest, the controlling family have an incentive to buy back their shares. Besides that, the major shareholder that already owned more than 50 percent from the total firm shares, they are not exposed to take over the power and therefore, ceteris paribus. The owners have less incentive to buy back their shares. The firm that need to maintain or change its ownership structure, lead to the occurrence of repeated share buyback by the firm since the regulators also set the maximum volume allowed to be repurchase at a time.

There is strong evidence that there is no significant relationship between the level of the stock ownership and the pay-out policy which have high proportion of management ownership Fenn and Liang (2001). They find support that pay out policy, dividends and share buyback are strongly related to the firm characteristics. This evidence supported the agency cost hypothesis. A mature firm with high net operating cash flow, low leverage and low investment opportunities are likely to give back the cash to the stockholder (share buyback or cash dividend) as predicted by

agency theory. The relationship between stock option and repurchase is significantly positive relationship which helped explain the rise in stock repurchase programme.

The style of ownership in firm Malaysia is where most of them are tightly owned by directors and family members (Abdul Samad, 2002; ShamsulNahar&Norita, 2004). It is expected that the manager would be more likely to maintain if the firm are performing well. Besides that, the manager also is expected to increase their fraction of shares in the companies. However, if the company implemented share buyback frequently, it would diminish firm's liquidity and would affect the firm value and the share price of the firm. Because of this, it is expected that manager of family owned and tightly owned firm are juggling the shareholder interest in affecting buyback programme.

The "free float" which refer to the portion of shares but not by its major shareholders can be reduce by buying back their firm shares. This would also reduce the liquidity and it is important for the investment purpose. A less liquid stock has to offer a higher return or a lower price in order to attract the investor to make trading in it. The firm are expected to buy back a limited number of shares in order to ensure that it would not affected the liquidity of the shares.

In Malaysia Buyback activities are governed with stringent rules and regulation. A company also must satisfy a minimum shareholding spread of 25 percent before requesting a buyback activities that need to be approved by Bursa Malaysia. Firms with adequate director's ownership are expected to embark with share buyback

programme because these directors have the ability and better chance to influence shareholders on the buyback decision. Thus, it is conclude that ownership structure plays an important role in Malaysia buyback decision.

2.3 Share Buybacks in the United States of America (US)

Firms have never been restricted to embark on buyback programs. It is not until 1982 that the dollar volume for buybacks activities has increased dramatically, but it was about the dollar volume spent for dividends (Grullon&Michaely, 2002; McNally, 1999; Stephen and Weisbach., 1998). Grullon and Michaely (2002) offered an explanation for the surge, which was found to be the introduction of SEC rule 10b-18 by the US Congress in 1982. The rule provides a safe-harbour provision to firms in carrying out buybacks activities. In 1982, firms were reluctant to engage in buybacks for fear of litigation over price manipulation.

Currently there are four methods to execute tender offer. These are open market, tender offers, privately negotiated purchases and derivative-based strategies (IOSCO, 2004). Under the tender offer, there are fixed price tender offers and Dutch-auction tender offers. Companies make their offering of their intention to buy back shares at a specified time period in the tender offer. Only single purchase price is offered with the price usually higher than the prevailing market price. However, in the Dutch-auction tender offers, the offering companies will allow a range of purchaser's price. The shareholder then bid on the range of price that is reasonable and acceptable to them. In addition, the tender offer premium is fixed but the Dutch-auction tender offers give the shareholders opportunity to set the premium to be paid.

Previous studies find that fixed-price tender offers and Dutch-auction tender offers are significantly larger than open-market buybacks (Comment & Jarrell, 1991; Dann, 1980; Gonzalez & Gonzalez, 2004; Grullom&Michaely, 2004; Lie, 2000; Masulis, 1980). In the US, firms bought back their shares on the market at an average of 6% of their shares outstanding within three years of the announcement date whereas in the tender offer buybacks, the average of the firms that buy back their shares is more than 15% of their shares outstanding (Stephens &Weisbach, 1998).

Open market buybacks is also the most commonly used form of buybacks by companies in US, accounted for 90% of the programme initiated in 1980s and 1990s (Grullon&Michaely, 2004). An appointed stockbrokers are executed in the open market buybacks by the exchange. The open market transaction (made up of market price of the share and regular commission rates) would be minimal with the appointment with the stock brokers.

2.4 Share Buybacks in the United Kingdom (UK)

Since the endorsement of the Company Act of 1981, UK firms are legalized to buy back shares, but it is administered by stringent rules. They can buy their shares through recognised stock market and also through specific contract to purchase their own shares. The methods of buying back the company's shares are extremely rare in UK compared to open market buybacks (Dixon, Stradiling&Woodhead, 2008; Oswald & Young, 2004). The firms need to seek the approval at their shareholder meeting in order to initiate open market buybacks. The authorization is valid for 18

month and the number of shares to be bought should not more than 15% of the number of the share outstanding. The price of shares to be bought should not be more than 5% above the average price for five business days prior to actual buyback day. An immediate report need to be submitted to the Financial Supervisory Authority (FSA) as soon as the repurchase are made. This acts as the United Kingdom Listing Authority. The firms in UK are not allowed to buy back their shares during the closed period due to the announcement of firms performance associated with the insiders trading (Rees, 1996).

2.5 Share Buybacks in Australia

There are five methods of share repurchase in Australia which are (1) open market or on the market buybacks, (2) selective buybacks are for specified shareholder with the intend to remove some specific shareholders from the share register, (3) equal access buybacks are off market purchases and open equally for all shareholders (4) employee share scheme buybacks are a compensation scheme to award employee with share purchase plans, and lastly (5) odd-lots buybacks are off market share repurchases for shareholding that have decreased to a marketable parcel that could not be economically disposed on market (Brown, 2007; Mitchell &Dharmawan, 2007; Mitchell, Dharmawan& Clarke, 2001; Mitchell & Robinson, 1999). Auditors report on the solvency need to be prepared and the firms are required to furnish directors' solvency declaration. The number of share repurchase has to be an equal access, on-market and the selective buybacks will be not more than 10% number of the share repurchase.

2.6 Share Buybacks in Asian Countries

In countries like Hong Kong, Japan, Korea, Malaysia and Taiwan have been involved quiet recently in the share buyback activities. Most of these markets allow firms to buy back their share in the early 1990's. Buyback activities do not always give positive impact to the shareholders. There is some impact which can leave the firms with higher debt making interest cost. Due to this, buyback will wipe out the cost of the benefit of the earnings. International Organization of Securities Commission (IOSCO) highlight that the practise of buying back shares by companies could pose a regulatory issue relating to fair treatment of companies' shareholders. Therefore, it is vital that stringent measures are placed to ensure market integrity and to maintain orderly market (IOSCO, 2004).

Unlike in US, a firms enjoy the most lenient regulation when it comes to affecting buybacks activities (IOSCO, 2004). But, in Hong Kong, Japan, Korea, Malaysia and Taiwan there is a need to obtain the shareholder approval before engaging the buybacks activities. In Taiwan, it is required that any firm that announce buybacks must actually buybacks its intended shares within two month period or produce a letter explaining the cause of failure to comply with the Securities and Futures Commission of Taiwan.

Besides that, another countries that has such rules haves to limit the number of shares to be repurchased. In Malaysia and Hong Kong, there are ceiling range that firm can repurchased which is 10% of shares outstanding (Chapter 12 of Bursa Listing

Requirement, and Zhang, 2002). Furthermore, Hong Kong firms are only allowed to buy shares no more than 25% of previous month trading volume.

2.7 Share Buybacks in Malaysia

Share repurchases were not popular in Malaysia in the first year that they were introduced. But, recently, the trend is changing. A number of firms that announced the buyback program has increased considerably. There were just 12 firms that announce their buyback share activities, but in 2005, the number of firms that made the buyback announcement was 206, an increase of more than 12 times.

Studies on buyback activities in Malaysia are limited. According to Nasruddin and Anggapan (2004), all other studies in Malaysia investigated the price effect of buy back activities. Actual buyback firms experience significant positive cumulative abnormal returns of 1.15% in 3 days (day 0 to day 2) following the actual buyback dates (Mansor, Zaidi and SiewPeng, 2009).

MohdJais and Chin (2001), and Lim and Obiyatullah (2002) findsimilar results for firms engaged in buyback during earlier period, from 1997 to 2001. This result is also similar to with Zhang's (2005) result that shows actual buyback firms have positive returns following buyback events. However, Hanita and Adiana (2006) find that there is no evidence to support that actual buybacks firms would experience positive market reactions. The difference in the result of these studies could be due to the differences of their sample criteria and the period of the study.

Nasaruddin and Anggapan (2004) examined the motivation of the share repurchase decision. By investigating 40 firms in Malaysia, they find that firms engaged in

buybacks to stabilize the share price, pay stock dividends, improve earningsper share (EPS) and make potential gain from an increase in firms share price.

Mansor, Zaidi &Siew(2011), find that there is a general price decline in the pre-purchase period, which suggests that the firms make their repurchase after a period of price decline. The study also explained that the share repurchased program can be used as an effective tool for price stabilization.

Concentrated ownership is negatively significant in influencing a company share repurchase decision. The larger the size of the company, the more they intend to do share repurchase. High debt and older firms prefer to have a low share repurchase program. (Zuriawati, Hadi&Joriah, 2013). According to Akma& Wahid(2013), return on equity, earnings per share, return on assets and market to book value of equity are the underlying factor for improvement in the operating performance of the buyback companies' share price.

There is an increasing trend of share repurchasing in Malaysia, but still limited studies on the buyback activities have been published. Firms in Malaysia are bound by strict rules and regulations before embarking on the repurchase, thus it is argued that the motives for share repurchase would be different compared to the developed market.

The result found by Rohaida&Kamarun (2013), are consistent with signalling hypothesis which is Malaysian firms embarking on buybacks share is to get a better operating performance and to increase the cash flow.

As well as Malaysia also, Hong Kong firms are obliged to submit daily transaction of buyback activities to the Stock Exchange of Hong Kong (SEHK) regarding the rules of Rule 10.06 (4) (a) of SEHK listing rules (Zhang, 2005). As an overall conclusion, the number in Asia market buybacks activities is on the rise.

2.8 Previous Studies on the Share Repurchase Frequency

The open-market share repurchase programme have become a trendy and popular event in this recent years. In 1985, there is just 129 open-market share repurchase that valued about $16 billion. It is announced by industrial firms. After 11 years, the number of buybacks programme has increased tremendously for about 90% which is 1,319 programs were announced approximately the value is about $158 billion. Recently, it has become a common event for firms to initiate multiple open market repurchase programs over a short period of time.

Between 1986 and 1996, only 27% of the firms announced an open market repurchased programme and these firms initiated share buybacks programme in the prior five years. However, the number of firms increased to 54% and over half of these firms had two or more open market repurchased programme.

The degree of number of firms paying their dividend to the stockholder has significant decreased Fama and French (2001). Regarding Grullonand Michaely (2000) in 1998, the total value of open market repurchased has exceed the value of dividends for the first time. This show that share buybacks programme have become a vital means of distributing cash flows to the stockholders.There are types of

corporate distribution which is dividend and tender offer repurchase, and the motives for the open market repurchase is to initiate a multiple repurchase programme over a short 5 year period Jagannathan and Stephen (2001).

There are many reasons why firm want to purchase its own share and some of them is (1) to allow the shareholders the tax benefit of repurchased over dividend (Black (1976), Barclay and Smith (1988) and Stephens (1997)). Besides that, the other motives is (2) to pay out temporary cash flows Jagannathan, Stephens and Weisbach (1999), (3) to fund option programs (1998) and Weisbenner (1998), and (4) to take as takeover defence Denis (1990).

Jagannathan and Stephen (2001) revealed the finding that they found in their study. They state that the less frequent repurchase tend to be a larger programs and they seek to repurchase a larger amount of their share outstanding compared to the more frequent repurchase. On the other hand, firms that repurchase most frequently are generally larger,larger managerial ownership, and lower volatility of operating income. Besides, the frequent firms also have higher institutional ownership, higher market to book ratios, more stock options and lower debt ratios. The firm that embarked with most frequency programme have the same characteristic, which is to increase their dividend payments, as state by Jaganattan, Stephen, and Weisbach (2000). Grullon and Michaely (2000) suggest that it maybe as a substituting repurchase for dividend increase.

The motives of firm repurchased their own stock by making infrequent repurchasing is parallel with the traditional view of repurchase; which is the firms announced to buybacks their share is because the managers are most likely to perceive their shares as undervalued. Infrequent repurchase tend to be preceded by a poor market performance and initiated by firms with a potentially high degree of asymmetric information. Smaller firms with a higher variability of operating income, higher levels of capital expenditure, lower market-to-book ratios and lower levels of institutional ownership tend to make an infrequent repurchases. When the repurchase were announced, the market reaction are greeted much more favourably for the infrequent repurchases compare to the most frequent repurchases programme.

Other researcher also found several reasons why companies initiated open market share repurchase programme. Proposed motives for repurchases in the previous study include; undervaluation or signalling (Dann, 1981; Vermaelen, 1981; Comment and Jarrell, 1991; Ikenberry et al., 1995), dividend substitution (Jagannathan et al., 2000; Fama and French, 2001; Grullon and Michaely, 2002; Bartov, GvolyHyan, 2002), capital structure adjustment (Hovakimian et al., 2001; Grullon and Michaely, 2004), takeover deterrence (Bagwell and Shoven, 1989), excess cash distribution (Jensen, 1986) and option funding (Jolls, 1998; Dittmar, 2000).

There is an abnormal return regarding to the purchases announcement. These result support the undervaluation or signalling hypothesis. As example, the managers announce repurchase programme when the stock price is undervalued. But, it is impossible that a frequent firm making repurchase perceived their stock as being undervalued on a regular basis. As suggested by Jaggannathan et al. (2000) and

Grullon and Michaely (2002) a frequent repurchase can be substitute repurchased for dividend increases. Fama and French (2001) state that US firm prefer to disburse cash to their shareholders through share repurchase rather than paying the cash dividends. This occurs since in 1990s and it show that the proportion of dividend-paying firms dropped significantly. With the increased use of share repurchased as a way to distributes profits to stockholders, the term of "dividend policy" has changed to "pay-out policy" (Brealy et al., 2011). Based on the research on stock repurchase by Dann (1981), Vermaelen (1981) and Comment and Jarrell (1991), the firms obtained a positive excess return around the announcement of a stock repurchase.

In the study of Sweeden, it examine open market share repurchase programme. In the expect of share repurchase in Europe are different from share repurchase in US, EU Member States require the approval of share repurchase by shareholders at a general meeting, whereas in the US the Board of Director approves repurchase programme. It found that different in marker performance that initiate repurchase programme in different frequency. (Adri and Jonas, 2014).

There is a study on the impact of business condition on the frequency of share repurchase using data in Australia. Farrugia et al., (2011) found that there is a significant relation between economic condition and the decision to repurchase shares for firms that repurchase their own shares infrequently. But, Jagannathan and Stephen (2003) found a contradict finding which is frequent purchasers repurchases experience greater short run return around repurchase announcements than infrequent or occasional repurchases.

Besides of examining the announcement effect of repurchase programs with different frequency, Yook (2012) investigate the long-term performance for frequent and infrequent repurchases. The finding show that only infrequent repurchases who actually repurchase shares experience significant long run abnormal returns.

Jagannathan and Stephen (2001) found in their study that all repurchased announcement are considered to be favourable in the market. The result shows that the infrequent repurchase shows a stronger positive reaction its shows a negative abnormal return suggesting that undervaluation, or a depressed stock price which this kind of firm need and have to embark with share buybacks. However, they do not find any evidence of improving operating performance by following the infrequent share buybacks announcement. This is likely to be using the repurchase as a signal.

Due to this issues, in Malaysia, there is lack of investigation regarding the different frequency that were embarked in Malaysian. This study would like to explore what are the determinant of firm financial characteristic that lead to different share repurchase frequency in Malaysia firm.

2.9Chapter Summary

Asa conclusion, the literature review explain the share repurchased practise as a worldwide activities and being embarked actively by companies due to many motives in order to gained profit or positive effect to their companies. This is because, share repurchase is a very efficient tool in the disbursement of the company's cash to the stockholder. This chapter also provide overview of the theories regardless to the share buyback programme.

CHAPTER 3

METHODOLOGY

3.0 Introduction

Data and methodology are vital in ensuring the accuracy and reliability of the findings in a study. In this chapter, the research framework and hypotheses are developed to show the relationships between the frequencies of share repurchase program and firm financial characteristics. This chapter also explains the research design that isused to measure the variables and how the data are collected. Besides, it also provided conclusion on the discussion about the method used in analysing the share repurchase frequency of Malaysian firms.

3.1 Research Framework

In this study, the research framework displays the existence of five variables, which include the book-to-market value, return on asset, dividend yield, earnings before interest, tax, depreciation and amortization and earnings per share that could influence to thedifferent share buybackfrequency programming. Under this research framework, it has been illustrated in figure 3.1.

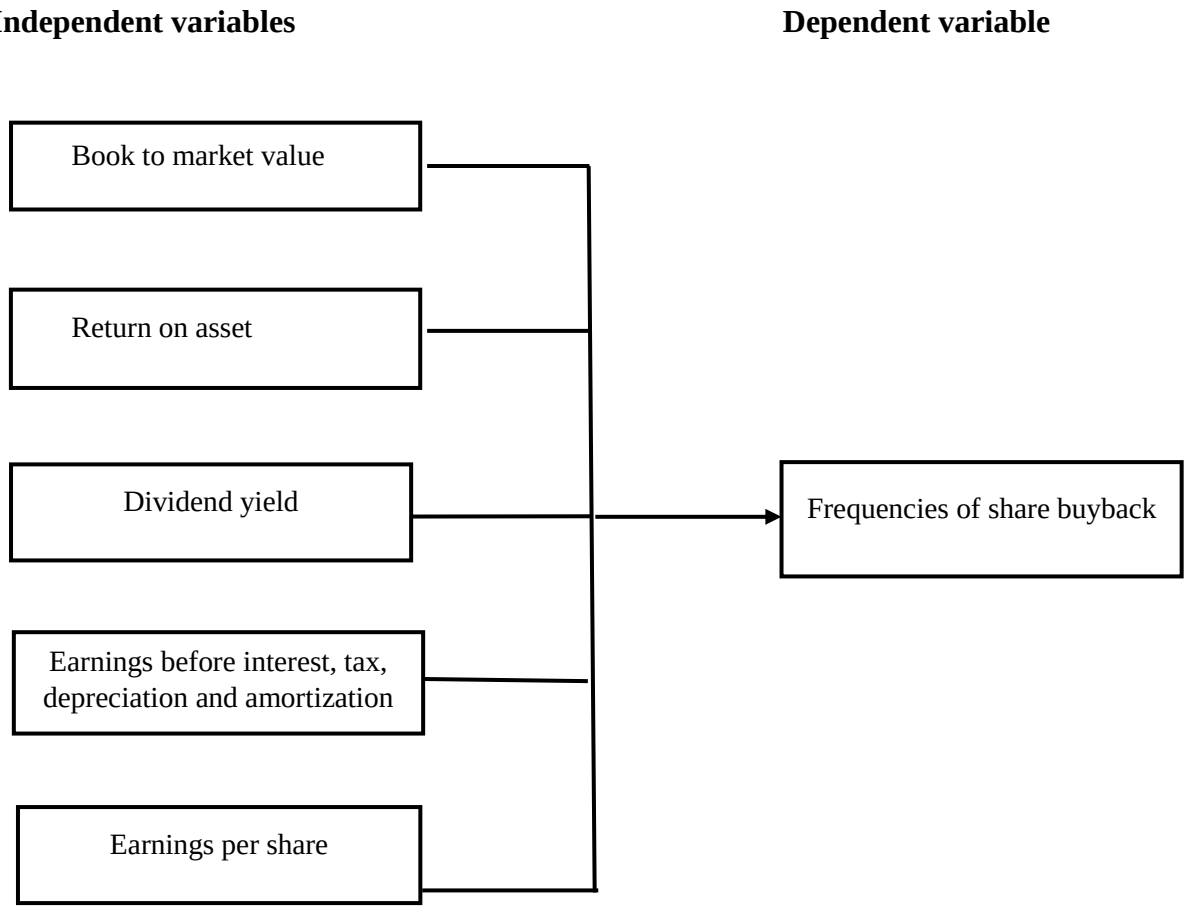


Figure 3.1: Research Framework

3.2 Hypotheses

A hypothesis can be defined as a locally conjectured relationship between two or more variables expressed in the form of testable statement. A relationship is conjectured on the basis of the network of associations established in the theoretical framework formulated for the research study. By doing testing on the hypothesis and confirming the conjectured relationships, the solution is expected to be found to correct the problem occur.

3.2.1 Hypotheses development

3.2.1.1 Market-to-book value

According to Jagannathan and Stephen (2003), firms that repurchases frequently are larger in size, but thosethat do not performed well in their operating income have lower market-to-book value. Thus, it is hypothesize that:

H_1: There is a significant relationship between the firm'ssizes(measured by market-to-book value) and firms share repurchase frequency.

3.2.1.2 Return on asset

Firmsthat performs well with a high return on asset engage in infrequent share buyback (Jagannathan and Stephen, 2003). Therefore it is hypothesized that there is significant relationship between share buyback frequency and return on asset. Therefore, it is hypotheses that:

H_2: There is a significant relationship between return on asset and firms share repurchasefrequency.

3.2.1.3 Dividend yield

Fama and French (2001) and Grullon and Michaely (2002) find that firms that engaged with frequent share buyback activities are pay less dividend to shareholder, in accordance with managers' perspective. Additionally, share buybacks is a good substitute for paying cash dividend because it is more beneficial to firm value.Thus it is hypothesized that:

H_3: There is a significant relationship between dividend yield and firms share repurchasefrequency.

3.2.1.4 Earnings before interest, tax,depreciation and amortization to total asset(EBITDA)

Grullon and Michaely (2004), conducting a study on the company risk, suggest that, mature firms that experienced growth opportunities will face a decliningcost of capital. If buybacks gave a good impact on company's profitability, then operating income should improve due to buybacks programme. Barber and Lyon (1997) and Lie (2002) use earnings before interest, tax, depreciation and amortization as a variables to measure the operating performance. Thus the next hypothesis is:

H_4: There a is significant relationship between earnings before interest, tax, depreciation and amortization and firms share repurchase frequency.

3.2.1.5 Earning Per Share

Managers are concerned with earnings of their firms. Earnings per share (EPS) is one of the benchmarks that frequently used by researchers. It is clear that managers strive to meet the expectation of their EPS (Bartov et al., 2002). If the manager could not achieve their expectation, they would want to buy back their shares. This tendency leads to the following hypothesis:

H_5:There isa significant relationship between earnings per share and firms share repurchase frequency.

Table 3.1 present the result of the previous studies from hypotheses that are developed above.

Table 3.1: Summary of findings from previous studies.

Independent variables	**Dependent variables**	**Result of previous studies**
Market to book value	Different share repurchase	The lower market-book-to-market value, firm will engage with frequent share repurchase(Jagannathan, Stephen and Weisbach;2000, Seung and Minji, 2012; Adri and Jonas, 2014).
Return on asset	Different share repurchase	The higher the return on asset, the firm will engage in infrequent share repurchase program (Hidayu and Wahid, 2012; Adri and Jonas, 2014).
Dividend yield	Different share repurchase	The lower the dividend yield, the company will embark frequent buy back (Grullon and Michaely, 2000; Jagannathan, Stephen and Weisbach;2000; Adri and Jonas, 2014).
Earnings before interest, tax, depreciation and amortization	Different share repurchase	The higher the earnings before interest, tax, depreciation and amortization, the frequent share repurchase program. (Barber and Lyon 1997; Lie, 2002).
Earnings per share	Different share repurchase	The lower the earning per share of a firm, the frequent the share repurchase program (Jagannathan, Stephen, 2001;Weishbach, Bartov, Gvoly and Hayn, 2002).

3.3 Data Collection

3.3.1 Population

The sample of this study consists all Malaysia firms (937 firms) that listed on Bursa Malaysia. The time period covered in this study is 5 years from 2009 to 2013). This study follows the time period of (Jagannathan and Stephens, 2001) study'swhich also examined the different frequency of buyback. This study expects to observe the significant relationship between the characteristic that repurchase shares frequently and infrequently.

This study period starts in 2009 which is after the global financial crisis that affect the stock market. This is because, the global financial crisis during 2007 to 2008 has brought to the negative reaction on the stock market performance regarding to the announcement of firms' share buyback activities (Lemma and Amar, 2009).

3.3.2 Sample Selection

A total of 200 firms that embarked on share buybackprograms are used in this sample. These companies are divided into two parts: 100 firms that engaged with a frequent buyback program and the other 100 firms that engaged in infrequent buyback. The frequencies are counted based on yearly basis. This study follows the previous studies which also used the same number of firms as their samples (Adri and Jonas, 2014, Zhang 2002; Lamba and Ramsay. 2000).

A firms are classified as a frequentbuyback purchaser if it engaged in 3 to 5 times repurchases program in the five year period. It was classified as infrequent buyback purchasers if it engaged just 1-2 times for the whole five years.

Firm financial characteristics, performance(book to market value, return on asset, dividend yield, earnings before interest, tax, and earning per) were also collected in yearly basis.

These firms were from five different sectors: construction, consumer product, property development, plantation and industrial product. The share buyback companies are selected based on the large volume of share buyback program which referring to the top 100 firms that have a large volume of share repurchase (frequent firms) and lowest 100 firms that have a small volume of buying back their own shares (infrequent firms). Table 3.2 presented the buybacks programme frequencies of the sample firms during 2009 to 2013.

3.3.3 Procedures

The data collection for this research comprises two categories: dependent and independent variables. The dependent variable is frequency of shares buy back measures by Tobit Regression model. The independent variables consist of market-to-book value, return on asset, dividend yield, earnings before interest, tax, depreciation and amortization and earnings per share. All these variables are collected from data stream, including the names of the firms involved with share repurchase programme in Malaysian firms.

Table 3.2: Summary of share buybacks frequencies in Malaysian firms

(2009-2013)

Buybacks frequency	**Industry**	**Number of companies**
Frequent (more than 3 times)	Constructions	20
	Consumer Product	20
	Property Development	20
	Plantation	20
	Industrial Product	20
Total companies		100
Buybacks frequency	**Industry**	**Number of company**
Infrequent (less than 3 times)	Constructions	20
	Consumer Product	20
	Property Development	20
	Plantation	20
	Industrial Product	20
Total companies		100

Sources: Data stream

3.4 Measurement of variables

There are five independent variables that are included to determine the relationship with the different frequency of share buyback. The variables are as follows:

3.4.1 Dependent variables: Frequency of share repurchase

To measure the relationship of different frequency and the independent variables, this data used the James Tobin technique. This is an estimation technique of relationship for limited variables (Tobin, 1958). The Tobit regression model is applied to analyze the relationship between a dependent variable (frequency of share repurchase) and the independent variables (firm financial characteristics). Tobin (1958), Greene (1981) and Chay and Powell (2001) justify that using standard ordinary least square regression for this type of dependent data usually gives biased coefficient estimate.

Tobitmodel supposesthat there is a latent state (unobservable) variable y, (share buyback frequency)which linearity depends on x,the independent variables(market-to-book value, return on asset, dividend yield, earnings before interest tax after amortization, and earning per share).Gujarati (2003) explains that an independent variable is defined to be equal to the dependent variable whenever the latent variable is above zero, and zero otherwise.

If $\gamma_1 = > 0$, Frequent firm = 1
If $\gamma_1 = \leq 0$, Infrequent firm = 0

Where γ_1 = different share repurchase

$\gamma_1 = \beta\chi_1 + \mu_1 \sim N(0, \sigma)$

3.4.2 Market-to-book value (MTBV)

MTBV is a ratio used to find the value of a company by comparing the book value of a firm to its market value. Book value is calculated by looking at the firm's historical cost, or accounting value. Market value is determined in the stock market through its market capitalization.

$$\text{Market to book value} = \frac{\text{Firms' market value}}{\text{Book value equity}}$$

3.4.3 Return on asset (ROA)

ROA measures the efficiency of management that is how efficient a company is at using its assets to generate earnings. It is calculated by dividing a company's annual earnings by its total assets. ROA is displayed as a percentage. Sometimes this ratio referred to as return on investment (ROI).

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}}$$

3.4.4 Dividend yield

Dividend yield (DY) is thefinancial ratio that shows how much a company pays out in dividends each year relative to its share price. In the absence of any capital gains, the dividend yield is the return on investment for a stock. Dividend yield is calculated as follows:

$$\text{DY} = \frac{\text{Annual Dividend per Share}}{\text{Price per Share}}$$

3.4.5 Earnings before interest, tax, depreciation and amortization(EBITDA)

EBITDA is calculated as the change in the current EBITDA from that of the previous year. EBITDA is the ratio earnings before interest tax, depreciation and amortization to total asset.

$$\text{EBITDA} = \frac{\text{Earnings before interest tax, depreciation and amortization}}{\text{Total asset}}$$

3.4.6 Earnings per share (EPS)

The calculation of current year's EPS is calculated as if no buyback has taken place. The numerator for current EPS is the net income of the year. The denominator is the weighted average number of ordinary shares outstanding shares prior to buyback transaction. Previous year's EPS is based on reported EPS in a firm's annual report.

$$\text{EPS} = \frac{\text{Net income}}{\text{No of shares outstanding}}$$

3.5 Data analysis

In this section, independent samples t–test, descriptive statistics, correlation analysis and regression analysis are used to answer the research question.

3.5.1 Independent Samples t-test

To increase the reliability of result, this study also conducted a robustness check on the effect of financial characteristics on different frequency of share buybacks in Malaysia. The independent samples t-test is used to compare the means of a certain variables in two sets of data when the data sets are independent of each other. This study conducted independent sample t-test to determine the equality of mean returns on thefrequency of share repurchase(Bakri, Zulkefly, and Tang, 2012).

To test the hypothesis, this study examined the significance of t-test for equality of mean returns. If the t-test for equality of mean returns is significant,it indicates that the firm characteristic is significantly different to the mean of the different frequency of share repurchase. If the test for equality of mean is not significant, it indicates that firm characteristic are not significantly different on the mean of the different frequency of share repurchase.

3.5.2 Descriptive Analysis

This section provides a summary statistic which includes the maximum and minimum values, mean and also the standard deviation of the variables. It also measures the variability of variables including the standard deviation. Descriptive statistics provide simple summaries about the sample studied.

3.5.3Pearson Correlation Analysis

Correlation matrix of the variables is used to examine how one variables is correlated with one another. The result of this examination explains the nature, direction, and significance of the correlation of the variables used in this study. High value of correlation coefficient (i.e greater than 0.8) among independent variables indicates that multicollinearity issue might arise. To test the presence of multicollinearury among the independent variables, this study employed the tolerance and variance inflation factor (VIF) methods. Variables with VIF value greater than 10.0 indicate the existence of multicollinearity problem.

3.5.4 Regression Analysis

Regression analysis is a form of analysis to estimate the relationship between a dependent variable and a group of independent variables. To examine the share buybacks frequency of the Malaysian companies, this study used regression based approach since it is the standard methodology applied in studying the different frequency of share buyback.

Based on Marret and Worthington (2009), regression analysis with dummy variables should be used to determine the relationship of the different frequency of share repurchase programme and the firm financial characteristic. The regression analysis model adapted from Marret and Worthington's (2009) study expected that buyback frequency of a firm is related to firm's financial characteristics (Chan et al., Grullon and Michaely, 2004 and Zhang, 2005). This method provides the researcher to find how far these variables can be explained on the different frequencies of the share buybacks.

$$F= \beta_0 + \beta_1 BTMv + \beta_2 ROA + \beta_3 DIVYLD + \beta_4 EBITDA + \beta_5 EPS + \varepsilon$$

Where,

F = Frequency of share repurchase program

BTMR = Firm market to book value.

ROA = Firm return on asset.

DIVYLD = Firm dividend yield.

EBITDA = Firm ratio of earnings before interest, taxes, depreciation and amortization to total asset

EPS = Firm earning per share.

ε = a random error term.

This present study used SPSS Statistical Software to run the regression analysis. The justification of the different frequencies of buyback is based on its relationship with firm financial characteristics. If β_0 is significant, itimplies that the frequencies of firm are significantly different from zero. If β_1, β_2, β_3, β_4, β_5,β_6 and β_7 are positive and significant, the coefficient indicates that the buyback frequencies are positively affected by the variables. If it is negative, the coefficient indicates that the return are not affected by the variables.

3.6 Chapter Summary

This chapter outlines the methodology adopted in this study. As discussed earlier, this procedure involved calculating the independent sample t-test, descriptive analysis, person correlation and the regression model. This method used to determine the relationship between the different frequency and the firm financial characteristic.

CHAPTER 4

DATA ANALYSIS AND RESULT

4.0 Introduction

This section reports the results of data analysis. Firstly, the organization profile of the analysis techniques is presented, followed by correlation analysis and regression analysis. This chapter provides the results of the hypothesis testing and also the interpretation of the findings

4.1 Descriptive Analysis

Descriptive statistics are used to describe many pieces of data in a simpler numerical form. They summarize all the data into quantitative descriptions and each variable is entitled to have its own quantitative description such as mean, median, and standard deviation. Table 4.1 shows the descriptive statistics of frequency share repurchase program and financial characteristics of repurchasing firms.

Table 4.1: Result on the Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MTBV	1000	-1.8400	121.0900	2.142370	6.8950494
ROA	1000	-48.7100	79.1600	5.944520	10.7288413
DY	1000	-8.3100	1010.0000	20.485800	395.4809822
EBITDA	1000	-206.6220	3050.6000	237.814788	790.1476122
EPS	1000	.0000	13.1100	21.7670	.6962813

Table 4.1: Result on the Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MTBV	1000	-1.8400	121.0900	2.142370	6.8950494
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EBITDA	1000	-206.6220	3050.6000	237.814788	790.1476122
EPS	1000	.0000	13.1100	21.7670	.6962813
Valid N (listwise)	999				

SR = refer to the different of frequency of firms share repurchase,
MTBV = it is a ratio that refer to the market-to-book-value which is used to find the value of a company by comparing the book value of a firm to its market value.
DY= refer to the dividend yield which is the financial ratio that shows how much a company pays out in dividends each year relative to its share price.
EBITDA = refer to net income with interest, tax, depreciation and amortization added back to it.
EPS = refer to the portion on of a company's profit allocated to each outstanding share of common stocks.

The mean for market to book value (MTBV) represent an average of percentage for 2.14. It means that for every RM1 of book value for a firm that involved in the shares repurchase, it is valued by either investors or market at RM 2.14.

ROA gives an idea of how efficient management by using it asset to generate earnings. The mean of return on asset (ROA) is 5.94. It indicates that for every RM 1 of asset utilized in the operation of the firm, it generates a net income of RM 5.94.

Dividend yield is the amount that a company pays to its shareholders annually for their investments. Dividend yield (DY) it shows that the mean is 20.4. It means that the company paid 24.48 cents of dividend to their shareholders for every RM1 that they invested in the company. Investors widely use this ratio in trend analysis and consider their past dividend yield ratios to decide whether to invest in the company or not. There also a large discrepancies of the company sampled. Result show the minimum is -8.31 and maximum of 1010 with a standard deviation of 395.48.

EBIDA is essentially the income that a company has free for interest payment. It is an indicator of a company's financial performance. It can be used to analyse and compare profitability between companies and industries since it eliminate the effect of accounting and financing decision. The result shows a big valuation between the minimum and maximum of EBITDA between the 200 firms. The lowest value is RM-206.63 and the highest is RM 3050 with a standard deviation 790.14. This variable has the highest standard deviation of all the variables.

Earnings per share is an indicator of a company's profitability, defining the portion of a company's profit located to each outstanding common stock. The result shows that, 21.76% of the profit is allocated for every RM 1 outstanding share of common stock. The descriptive statistic for EPS revealed that some companies in the sample is not able to achieve their EPS expectation since the minimum EPS shown to be 0.00.

DY and EBITDA shows a large value ofstandard deviation. It means that the companies have large deviation of earnings in the dividend yield and earnings before interest, tax, depreciation and amortization of the company sample.

4.2 Pearson Correlation Test

To examine the relationship between two variables is highly correlated or not, Pearson correlation analysis need to be conducted. The table 4.2 shows the result of the correlation coefficient for each variable.

Table 4.2: Result on the Pearson Correlations Test

		SR	MTBV	ROA	DY	EBIT	EPS
SR	Pearson Correlation	1	-.089**	-.063*	-.044	.022	.061
	Sig. (2-tailed)		.005	.046	.169	.488	.053
	N	1000	1000	1000	1000	999	1000
MTBV	Pearson Correlation	-.089**	1	.116**	-.005	-.005	.020
	Sig. (2-tailed)	.005		.000	.874	.874	.532
	N	1000	1000	1000	1000	999	1000
ROA	Pearson Correlation	-.063*	.116**	1	.086**	.002	.022
	Sig. (2-tailed)	.046	.000		.007	.950	.481
	N	1000	1000	1000	1000	999	1000
DY	Pearson Correlation	-.044	-.005	.086**	1	-.013	-.011
	Sig. (2-tailed)	.169	.874	.007		.688	.728
	N	1000	1000	1000	1000	999	1000
EBIT	Pearson Correlation	.022	-.005	.002	-.013	1	.232**
	Sig. (2-tailed)	.488	.874	.950	.688		.000
	N	999	999	999	999	999	999
EPS	Pearson Correlation	.061	.020	.022	-.011	.232**	1
	Sig. (2-tailed)	.053	.532	.481	.728	.000	
	N	1000	1000	1000	1000	999	1000

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

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

Based on the table, market to book value, return on asset, and dividend yield are found negative and weakly correlated with share repurchase. On the other hand earnings before interest, tax and amortization and earnings per share are positively correlated to share repurchase but again the correlation is weak.

There is also positive correlation exist between variables. The variables thatexist among the independent variables are; (1) The first is between market to book value and return on asset, (2) return on asset and dividend yield, (3) earnings per share and earnings before interest tax and amortization also have a positive correlation.

Besides that, there is negative and weak relationship between the independent variables. The first correlation is (1) between earnings before interest, tax and amortization and market-to-book value, (2) market-to-book value and dividend yield, and (3) third is between market to book value and earnings per share, (4) between earning per share and dividend yield.

4.3 Multicollinearityand autocorrelation test

Usually, the issue of multicollinearity only arises when there is a strong correlation between independent variables. Even though in Table 4.2 of Pearson's correlation analysis shows only a few variables that correlated, but just to be on the safe side, multicollinearity is tested using variance inflation factor (VIF) method. This is the common method used to detect multicollinearity problem of the variables. If the VIF values are more than 10.0, it is considered to be highly correlated which is it will cause the multicollinearity problem.

Table 4.3: Result on the Multicollinearity test

Model	Multicollinearity		Autocorrelation statistic
Constant	Tolerance	VIF	D-Watson
MTBV	0.986	1.014	0.340
ROA	0.979	1.022	
DY	0.992	1.008	
EBITDA	0.946	1.057	
EPS	0.945	1.058	

The result presented in table 4.3 shows that all the VIF values are far from 10, indicating that, the model is this study is free from multicollinearity issue. Values of VIF exceeding 10 are often regarded indicating multicollinearity.The result of autocorrelation test gave D-W statistic value of 0.340. This indicates that the model is at the optimum value and that there is no autocorrelation between the variables since the value is in the range 0 to 4.

4.4 Regression Analysis

Table 4.4: Result on the Regression Analysis

Variables	**T-test**	**P value**	**Result**
CONSTANT	0.607	0.342	Insignificant
MTBV	-2.663	0. 021	Significant
ROA	3.521	0.130	Insignificant
DY	1.638	0.532	Insignificant
EBITDA	9.513	0.866	Insignificant
EPS	3.886	0.087	Significant
Adj. R^2 = 0.25		F-Statistic = 0.005	

Significant at 0.05 level

Significant at 0.10 level

Based on the result,this study finds that market-to-book value showsnegativesignificant with the different frequency of share buyback and earnings per share indicate a positive relationship with share buyback frequencies. However, return on asset, dividend yield, earnings before interest, tax and amortization are insignificant with the different share repurchase frequency of firms. Market-to-book value is significant at 0.05 level and earnings per share is significant at 0.10 level. This indicates that H_1 and $H_5$are accepted.

The adjusted R-squared value indicate 25% which show that frequency in share repurchase did not highly explained by the independent variables. The remaining of 75% cannot be explained by the independent variables and this is due to the others factor.

The F-statistic is significant at 0.005 which indicates that 95 of every 100 times difference would not occur by chance alone.

4.5Chapter Summary

Regarding to the results, it indicate that there is a causal relationship between the shares repurchase frequency and the firm financial characteristic. The empirical results shows that market-to-book value is negatively significant with the share buyback frequency and earnings per share is positively significant with share buyback frequency. However, return on asset, dividend yield, earnings before interest, tax, depreciation and amortization are insignificant with the different shares repurchase frequency programme.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter will provide summarised from the data analysis of this study. The implications of this study are discuss in details. Limitations and suggestions for the future research are also included. Conclusion will be the last part of this chapter.

5.1 Summary of the Study

Due to the economic downturn, share repurchase programhas been increased tremendously and had been applied of the worldwide companies. Many countries have simplified their regulation and some of them have lifted their ban on share repurchase.

In the United State of America (USA), share buyback activities have been implemented since 1960's but only get the attention in the 1980's following the introduction of a safe harbor provision. Regarding to Steward (1976), he reported that the value of announcing buybacks was USD 1.3 billion in 1963 and increased to USD 27.3 billion in 1987 (Grullon, 2000). Buybacks is the dominant form of pay out method compared to cash dividend in USA ((Fama and French, 2001), (DeAngelo et al. (2004) and Skinner (2008)).

Other countries in the European Union (EU) have experienced an increased in buy back activities. The value of buyback account is half than the value of the cash dividend of the year 1999-2005. The cash dividend has decreased in recent years and the share repurchase has increased steadily. In Australia and Asian countries, buyback also has become more popular due to the Asian financial crisis. Studies in buyback in developed countries are abundant but in emerging countries like Malaysia, is really limited.

This study is different from other studies mostly conducted in the Western market because it is based on the frequency share repurchase and also determinant of the financial characteristic of a firm. Besides that, regarding to Rohaida (2010), Malaysian buyback decision has been influenced by the regulatory environment and different corporate ownership pattern. This study attempted to fulfil the gaps by providing some empirical evidence as whether the frequent buyback company have different financial characteristic or not.

5.2Recapitulation of the Study

The purpose of this study was to examine the relationship between firm financial characteristics and different frequency of share buyback. This research studies five independent variables which are market-to-book value, return on asset, dividend yield, earnings before interest tax and amortization and earnings per share. Five hypotheses were developed to explore the relationship between these variables and share buyback frequency. This study also involved five objectives, which were:

(a) To determine the relationship between different share buyback frequency and market-to-book value of Malaysian firms.

(b) To examine the relationship between different share buyback frequency and return on asset of Malaysian firms.

(c) To examine the relationship between different share buyback frequency and dividend yield of Malaysian firms.

(d) To confirm the relationship between different share buyback frequency and earnings before interest, tax and amortization of Malaysian firms.

(e) To explore the relationship between different share buyback frequency and earnings per share of Malaysian firms.

In this research, the findings from the five broad hypotheses are presented in Table 5.1 below.

Table 5.1: Findings from five broad hypotheses

Hypotheses	**Description**	**Outcome**
H_1	There is a significant relationship between the firm's sizes (measured by market-to-book value) and firms share repurchase frequency.	Accepted
H_2	There is a significant relationship between return on asset and firms share repurchase frequency.	Rejected
H_3	There is a significant relationship between dividend yield and firms share repurchase frequency.	Rejected
H_4	There is a significant relationship between earnings before interest, tax, depreciation and amortization and firms share repurchase frequency.	Rejected
H_5	There is a significant relationship between earnings per share and firms share repurchase frequency	Accepted

5.3Discussion

The following detaileddiscussion of the findings are based according to the research objectives of the study.

1. To determine the relationship between different share buyback frequency and market-to-book value of Malaysian firms.

The finding explainsthe variables that were tested in this study. Market to book value is negatively significant with the frequency of share buyback.

This result indicates that Malaysian companies are having the same condition with other countries and have consistent finding in the share repurchase frequency studies. Previous studies find that firms will repurchase more frequently when they have lower market-to-book value and have less variation in operating income (Jagannathan and Stephen and Weisbach, 2000; Ridder and Rasbrant, 2014). Seung and Song (2012) state that that manager are motivated to repurchase stock frequently when their firm are undervalued. This finding supports the theory of signalling hypothesis where firms repurchase shares partly to signal undervaluation to the investors. Thus, H_1 is accepted.

2. To examine the relationship between different share buyback frequency and return on asset of Malaysian firms.

The second variable that was tested is return on asset. The result shows that it did not have a significant relationship with share buyback frequency. This result is consistent with Adri and Jonas (2014) that indicate that infrequent repurchase programs shows no abnormal return of the firm's that engaged with buyback.

However, Hidayu and Wahid (2012) found that return on asset is one of the underlying construct for the improvement in the operating performance of buyback companies. This revealed that return on asset is significant for the share buyback motivation but did not significant in term of measuring the relationship with share buyback frequencies. So, H_2 is rejected.

3. To examine the relationship between different share buyback frequency and dividend yield of Malaysian firms.

The findings find that dividend yield also did not significant with the share buyback frequencies. This show that firms in Malaysia did not perceived share buyback as a substitute of dividend payment. Based on the previous studies, it gives a general view that state firms that increase their dividend payment will engage with frequent share buyback and maybe substituting share buyback for dividend payment Grullon and Michaely (2000) and Jagannathan, Stephens and Weisbach (2000). This firms are likely to be large, well-established with a high payout ratios, low leverage ratios, high stable income level and also high level of institutional ownership. It indicate that dividend yield have positive significant relationship with share buyback frequency. The finding of this study is contract with the previous literature, thus $H_3$is rejected.

4. To confirm the relationship between different share buyback frequency and earnings before interest, tax, depreciation and amortization of Malaysian firms.

This study find that earnings before interest, tax, depreciation and amortization did not have significant relationship with share repurchase frequency. This findings did

not consistent with Barber and Lyon (1997) and Lie (2002) which found that earnings before interest, tax, depreciation and amortization have a positive relationship with the share repurchase frequencies. There is a lack of literature that discuss this variables regarding share buyback frequency. Most of the studies did not use earnings before interest, tax, depreciation and amortization as the independent variables. Hypothesis H_4 also rejected.

5. To explore the relationship between different share buyback frequency and earnings per share of Malaysian firms.

This result explores that, there is positive significant relationship between share buyback frequencies in Malaysian firms. This result contradicts with the findings of the previous studies. Previous literature state that the lower the earnings of a firm, the frequent they firm will buybackits shares. The manager who did not achieve their target of earnings per share would likely to buy back more shares frequently (Bartov, Givoly and Hayn, 2000; Jagannathan and Stephens, 2001; Han and Song, 2014). Besides that, the managers buyback their own shares more frequently is to offset the effect of securities such as employee stock option, which can decreased diluted EPS. This is to response to employee stock option plans, and executive acknowledge that their decision to issue buyback are influenced by potential earnings per share effects (Daniel, Wong and Skinner, 2001). This findings did not support the previous studies but it have a positive relationship with share buyback frequency. Thus, H_5 is accepted.

As a conclusion, this study have provides significant support for signalling hypothesis theories which partly to signal undervaluation and better operating performance. Most of the firm financial characteristics (return on asset, dividend yield and earnings before interest, tax, depreciation and amortization)did not have a significant relationship with the share buyback frequencies. This maybe because of the free regulation of buyback shares provided by the Malaysian government. Unlike in developed countries, the Malaysian companies can buy back their own shares anytime they want to.

5.4 Implications of the Study

5.4.1 Theoretical Implication

The study is the first documented study that examined the criteria of firms that embarked with different frequency of share buyback in Malaysian firms. In Malaysia, most of the previous research has focused on examining the motivationbuybackshares, the difference of firm's motives between the buy back firms and non-buyback firms and also the abnormal return from the buyback program (Nazri, 2004; Hidayu and Wahid; 2013; Rohaida and Kamarun, 2013; Isa et al., 2011; Rohaida, 2010). This different of contribution is important because it give clear view on the different frequency and the different criteria of why firm embarked with share buybacks.

Besides that, the findings also show a consistent result with the previous studies (Jagannathan and Stephen and Weisbach, 2000; Ridder and Rasbrant, 2014) which indicate a strong relationship between market-to-book value and firms frequency of

share buyback. Besides, the result also supports the signalling hypothesis regarding the share buyback programs.

From the findings, it empirically led to some differences in the relationship between dependent and independent variables since there are lack of information that discuss on the buyback frequencies in Malaysia. Hence, with limited literature on the area of share buyback frequencies, the findings have to some extend contributed to the understanding of the concept and further enhance the knowledge in this area, especially in the Malaysian context.

5.4.2 Practical Implication

The findings of this study might provide some insights to the firms and investors in formulating strategies in order to gain returns in their trading. This is critical since the market players are always searching for new information and this could help them to develop new strategies of investment.

This study also could help the manager of firm to understand more clear about the buyback's motivation and how they can attract the investors and also enhance the financial performance of their companies. By understand well about the firm financial characteristic relationship with share buyback frequencies, the investors can make the right choice in their investment in choosing the right and potential firms in their trading.

5.5 Limitations of the Study

This study has some limitations. First, this study measured the frequency share repurchase by yearly basis. All the data of variables are also collected by yearly basis for five years. It is more accurate to collect for quarterly or monthly basis, since it can help to give a clearer understanding about the trend of the frequency share buyback.

Second, this study uses a very simple measurement of the variables. Earnings per share just collected from the data stream. A more details measurement is by looking at accruals. Previous studies in the US, (Gog et al, 2008) find that the manager may accruals to depress in prior periods, so they can buy their share back at a lower price later. Thus, the use of this method is more appropriate to get an emphasize result.

5.6 Suggestion for Future Research

Since this study just focused solely on the characteristic of financial performance and the different frequency share buyback, it is suggested for the future research to examine more deeper on why manager do buybacks. To get accurate and emphasize information, it is suggested to use another technique of data collection like in-depth interview, case study and observation in order to acquire rich data collection of the manager's intention buyback shares.

The researcher also can implement a details study onthe frequency of share buyback. Since this study measured by yearly frequency basis, they can implement for monthly of frequency since Malaysia has a very aggressive buybackprogram. This can help the future researcher to get more precise result and can help the investor to understand more about the behaviour of the emerging market.

5.7 Chapter Summary

Based on the evidence in this research, we can advocate that a number of selective approach and suggestion than future research should follow in studying the buyback activities. Since this study has some limitation, the future research should investigate deeper in order to enhance the literature of share repurchase frequency in Malaysia.

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APPENDIX 1

Listed of firm were selected in Main Board of Bursa Malaysia

Construction

Number	Firm
1	ARK RESOURCES BHD
2	AHMAD ZAKI RESOURCES BHD
3	BENALEC HOLDINGS BERHAD
4	BINA GOODYEAR BHD
5	BINA PURI HOLDINGS BHD
6	BREM HOLDINGS BHD
7	CREST BUILDER HOLDINGS BHD
8	DKLS INDUSTRIES BHD
9	EKOVEST BHD
10	FAJARBARU BUILDER GRP BHD
11	GADANG HOLDINGS BHD
12	GAMUDA BHD
13	GABUNGAN AQRS BERHAD
14	HO HUP CONSTRUCTION COMPANY
15	HOCK SENG LEE BHD
16	IJM CORPORATION BHD
17	IREKA CORPORATION BHD
18	JAKS RESOURCES BERHAD
19	KUMPULAN JETSON BHD
20	KEN HOLDINGS BHD
21	KUMPULAN EUROPLUS BHD
22	KIMLUN CORPORATION BERHAD
23	LEBTECH BERHAD
24	MELATI EHSAN HOLDINGS BHD
25	MERGE ENERGY BHD
26	MITRAJAYA HOLDINGS BHD
27	MALAYSIAN RESOURCES CORP
28	MTD ACPI ENGINEERING BHD
29	MUDAJAYA GROUP BHD
30	MUHIBBAH ENGINEERING (M) BHD
31	PLB ENGINEERING BHD
32	PROTASCO BHD
33	PRINSIPTEK CORPORATION BHD
34	PINTARAS JAYA BHD
35	EVERSENDAI CORPORATION BERHAD
36	SYCAL VENTURES BHD
37	TRC SYNERGY BHD
38	TRIPLC BHD
39	TSR CAPITAL BHD
40	WCT BHD

Consumer Product

1	ACOUSTECH BHD
2	APEX HEALTHCARE BHD
3	AJINOMOTO (M) BHD
4	APOLLO FOOD HOLDINGS BHD
5	ASIA BRANDS BERHAD
6	ASIA FILE CORPORATION BHD
7	BIOSIS GROUP BHD
8	CAB CAKARAN CORPORATION BHD
9	CAELY HOLDINGS BHD
10	CAM RESOURCES BHD
11	CARLSBERG BREWERY MALAYSIA BHD
12	CCK CONSOLIDATED HOLDINGS BHD
13	CHEE WAH CORPORATION BHD
14	C.I. HOLDINGS BHD
15	CHINA OUHUA WINERY HLDGS LTD
16	COCOALAND HOLDINGS BHD
17	CLASSIC SCENIC BHD
18	D.B.E. GURNEY RESOURCES BHD
19	DEGEM BHD
20	DUTCH LADY MILK INDUSTRIES BHD
21	EKA NOODLES BERHAD
22	EKOWOOD INTERNATIONAL BHD
23	EMICO HOLDINGS BHD
24	EURO HOLDINGS BHD
25	EUROSPAN HOLDINGS BHD
26	FRASER & NEAVE HOLDINGS BHD
27	FCW HOLDINGS BHD
28	FORMOSA PROSONIC INDUSTRIES
29	GUINNESS ANCHOR BHD
30	GOLDIS BHD
31	HB GLOBAL LIMITED
32	HUP SENG INDUSTRIES BHD
33	HYTEX INTEGRATED BHD
34	IQ GROUP HOLDINGS BHD
35	JT INTERNATIONAL BHD
36	KAREX BERHAD
37	LION FOREST INDUSTRIES BHD
38	MAXWELL INT HOLDINGS BERHAD
39	MSM MALAYSIA HOLDINGS BERHAD
40	PELIKAN INT.CORPORATION BHD

Property Development

1	A & M REALTY BHD
2	BCB BHD
3	BINA DARULAMAN BHD
4	BERJAYA ASSETS BERHAD
5	COUNTRY HEIGHTS HOLDINGS BHD
6	CRESCENDO CORPORATION BHD
7	DAIMAN DEVELOPMENT BHD
8	DAMANSARA REALTY BHD
9	ECO WORLD DEVELOPMENT GROUP BERHAD
10	EUPE CORPORATION BHD
11	FARLIM GROUP (M) BHD
12	GOLDEN PLUS HOLDINGS BHD
13	GUOCOLAND (MALAYSIA) BHD
14	HUA YANG BH
15	IGB CORPORATION BHD
16	IJM LAND BERHAD
17	IOI PROPERTIES GROUP BERHAD
18	KSL HOLDINGS BHD
19	LAND & GENERAL BHD
20	LBI CAPITAL BHD
21	LBS BINA GROUP BHD
22	MAGNA PRIMA BHD
23	MAH SING GROUP BHD
24	MALTON BHD
25	MENANG CORPORATION (M) BHD
26	MAJUPERAK HOLDINGS BHD
27	MK LAND HOLDINGS BHD
28	MALAYSIA PACIFIC CORP BHD
29	NAIM HOLDINGS BHD
30	ORIENTAL INTEREST BHD
32	PARAMOUNT CORPORATION BHD
33	PJ DEVELOPMENT HOLDINGS BHD
34	PAN MALAYSIAN INDUSTRIES BHD
35	PETALING TIN BHD
36	SAPURA RESOURCES BHD
37	SBC CORPORATION BHD
38	SP SETIA BHD
39	TA GLOBAL BHD
40	TITIJAYA LAND BERHAD

Plantation

1	ASTRAL ASIA BHD
2	BATU KAWAN BHD
3	BLD PLANTATION BHD
4	BOUSTEAD HOLDINGS BHD
5	CEPATWAWASAN GROUP BHD
6	CHIN TECK PLANTATIONS BHD
7	DUTALAND BHD
8	FAR EAST HOLDINGS BHD
9	FELDA GLOBAL VENTURES HLDG BHD
10	GENTING PLANTATIONS BERHAD
11	GOLDEN LAND BERHAD
12	GOPENG BHD
13	GREENYIELD BERHAD
14	HARN LEN CORPORATION BHD
15	HAP SENG PLANTATIONS HOLDINGS
16	IJM PLANTATIONS BHD
17	INCH KENNETH KAJANG RUBBER PLC
18	IOI CORPORATION BHD
19	KUALA LUMPUR KEPONG BHD
20	KLUANG RUBBER CO (M) BHD
21	KIM LOONG RESOURCES BHD
22	KRETAM HOLDINGS BHD
23	KULIM (M) BHD
24	KWANTAS CORPORATION BHD
25	MALPAC HOLDINGS BHD
26	MHC PLANTATIONS BHD
27	NPC RESOURCES BHD
28	NEGRI SEMBILAN OIL PALMS BHD
29	PINEHILL PACIFIC BERHAD
30	PLS PLANTATIONS BERHAD
31	RIMBUNAN SAWIT BHD
32	RIVERVIEW RUBBER ESTATES BHD
33	SUNGEI BAGAN RUBBER CO (M) BHD
34	SARAWAK OIL PALMS BHD
35	SARAWAK PLANTATION BHD
36	TDM BHD
37	TH PLANTATIONS BHD
38	TSH RESOURCES BHD
39	UNITED MALACCA BHD
40	UNITED PLANTATIONS BHD

Industrial Product

1	ABLEGROUP BERHAD
2	ABRIC BHD
3	ACME HOLDINGS BERHAD
4	ADVANCED PACKAGING TECHNOLOGY
5	AE MULTI HOLDINGS BHD
6	ABM FUJIYA BERHAD
7	AMALGAMATED INDUSTRIAL STEEL
8	AJIYA BHD
9	ASIA KNIGHT BERHAD
10	ALUMINIUM COMPANY OF MALAYSIA
11	ANCOM BHD
12	ANN JOO RESOURCES BHD
13	ASIA POLY HOLDINGS BHD
14	BOUSTEAD HEAVY INDUSTRIES CORP
15	B.I.G. INDUSTRIES BHD
16	BP PLASTICS HOLDING BHD
17	BRIGHT PACKAGING INDUSTRY BHD
18	BSL CORPORATION BERHAD
19	CB INDUSTRIAL PRODUCT HOLDING
20	CHEMICAL COMPANY OF MALAYSIA
21	CAHYA MATA SARAWAK BHD
22	COASTAL CONTRACTS BHD
23	CSC STEEL HOLDINGS BERHAD
24	CYL CORPORATION BHD
25	DOMINANT ENTERPRISE BHD
26	EG INDUSTRIES BHD
27	EMAS KIARA INDUSTRIES BHD
28	EP MANUFACTURING BHD
29	EVERGREEN FIBREBOARD BHD
30	FACB INDUSTRIES INCORPORATED
31	FIMA CORPORATION BHD
32	FOCUS LUMBER BERHAD
33	FURNIWEB INDUSTRIAL PRODUCTS
34	GE-SHEN CORPORATION BHD
35	GSB GROUP BHD
36	HIAP HUAT HOLDINGS BHD
37	JADI IMAGING HOLDINGS BHD
38	JASA KITA BHD
39	JAYA TIASA HOLDINGS BHD
40	KNM GROUP BHD

APPENDIX 2

Regression Analysis Table

Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
SR	1000	0	1	.50	.500
MTBV	1000	-1.8400	121.0900	2.142370	6.8950494
ROA	1000	-48.7100	79.1600	5.944520	10.7288413
DY	1000	-8.3100	1010.0000	20.485800	395.4809822
EBIT	1000	-206.6220	3050.6000	237.814788	790.1476122
EPS	1000	.0000	13.1100	21.7670	.6962813
Valid N (listwise)	999				

Pearson Correction test

Table 4.2: Result on the Pearson Correlations Test

		SR	MTBV	ROA	DY	EBIT	EPS
SR	Pearson Correlation	1	-.089**	-.063*	-.044	.022	.061
	Sig. (2-tailed)		.005	.046	.169	.488	.053
	N	1000	1000	1000	1000	999	1000
MTBV	Pearson Correlation	-.089**	1	.116**	-.005	-.005	.020
	Sig. (2-tailed)	.005		.000	.874	.874	.532
	N	1000	1000	1000	1000	999	1000
ROA	Pearson Correlation	-.063*	.116**	1	.086**	.002	.022
	Sig. (2-tailed)	.046	.000		.007	.950	.481
	N	1000	1000	1000	1000	999	1000
DY	Pearson Correlation	-.044	-.005	.086**	1	-.013	-.011
	Sig. (2-tailed)	.169	.874	.007		.688	.728
	N	1000	1000	1000	1000	999	1000
EBIT	Pearson Correlation	.022	-.005	.002	-.013	1	.232**
	Sig. (2-tailed)	.488	.874	.950	.688		.000
	N	999	999	999	999	999	999
EPS	Pearson Correlation	.061	.020	.022	-.011	.232**	1
	Sig. (2-tailed)	.053	.532	.481	.728	.000	
	N	1000	1000	1000	1000	999	1000

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

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

Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.128[a]	.016	.012	.497	0.034

a. Predictors: (Constant), EPS, DY, MTBV, ROA, EBIT

b. Dependent Variable: SR

F-test

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.116	5	.823	3.328	.005[a]
	Residual	245.633	993	.247		
	Total	249.750	998			

a. Predictors: (Constant), EPS, DY, MTBV, ROA, EBIT

b. Dependent Variable: SR

Coefficient

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.518	.019		26.765	.000		
	MTBV	-.006	.002	-.084	-2.663	.008	.986	1.014
	ROA	-.002	.001	-.052	-1.644	.100	.979	1.022
	DY	-4.903E-5	.000	-.039	-1.228	.220	.992	1.008
	EBIT	4.324E-6	.000	.007	.211	.833	.946	1.057
	EPS	.044	.023	.062	1.911	.056	.945	1.058

a. Dependent Variable: SR

Model Summary

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1365.708[a]	.19	.25

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Binary Logistic Regression

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	MTBV	-.035	.015	5.290	1	.021	.966	.937	.995
	ROA	-.009	.006	2.289	1	.130	.991	.979	1.003
	DY	-.001	.001	.391	1	.532	.999	.998	1.001
	EBIT	.000	.000	.029	1	.866	1.000	1.000	1.000
	EPS	.253	.148	2.932	1	.087	1.288	.964	1.720
	Constant	.077	.081	.902	1	.342	1.080		

a. Variable(s) entered on step 1: MTBV, ROA, DY, EBIT, EPS.