

**THE PRACTICE OF SHARE REPURCHASE AND ITS SIGNALING
IMPACT
ON STOCKS QUOTED ON THE
KUALA LUMPUR STOCK EXCHANGE
(KLSE)**

by

Mohamad Nazri bin Musir

February 2004

The Practice of Share Repurchase and
Its Signaling Impact on Stocks Quoted on the
Kuala Lumpur Stock Exchange (KLSE)

by

Mohamad Nazri bin Musir

*Research Report in Partial Fulfillment of the Requirements for
Master of Business Administration*

February 2004

AKNOWLEDGEMENT

Firstly, I would like to extend my deepest appreciation to Dr. Zamri Ahmad for agreeing to be my supervisor and Dr. Yuserrie bin Zainuddin for being my co-supervisor.

Dr. Zamri has always being patient in guiding me through my first till my last chapter and Dr. Yuserrie has been giving me encouragement and advice from time to time.

I would also like to take this opportunity to thank my wife, Noriah Mohamad and my family for standing behind my decision to pursue an MBA at USM.

Lastly, I would like to thank my MBA colleagues for their words of encouragement and suggestions.

TABLE OF CONTENTS

	<u>page</u>
AKNOWLEDGEMENT	i
TABLE OF CONTENTS	ii
LIST OF TABLES	iv
LIST OF FIGURES	iv
APPENDICES	v
ABSTRAK (MALAY)	vii
ABSTRACT	viii
Chapter 1 INTRODUCTION	1
1.1 Introduction and Background	1
1.2 Problem Statement and Research Question	4
1.3 Research Objectives	5
1.4 Significance of the Study	5
1.5 Organization of the Remaining Chapters	6
Chapter 2 LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Review of the Literature	7

	<u>page</u>
2.2.1 <i>Announcement Impact</i>	10
2.2.2 <i>Firm Size Impact</i>	14
2.2.3 <i>Timing of Share Repurchase</i>	15
2.2.4 <i>Event Study</i>	16
2.3 Statement of Hypotheses	17
2.4 Summary	19
Chapter 3 METHODOLOGY	20
3.1 Introduction	20
3.2 Data Collection	20
3.3 Population and Sample	21
3.4 Methodology	22
3.5 Summary	24
Chapter 4 RESULTS	25
4.1 Introduction	25
4.2 Overall Share Repurchase Activity	25
4.3 Timing of Share Repurchase Activity	27
4.4 Abnormal Returns from Announcement Impact	30
4.5 Abnormal Returns from Firm Size Impact	33

	<u>page</u>
Chapter 5 DISCUSSION AND CONCLUSION	37
5.1 Recapitulation of the Study Findings	37
5.2 Discussion	39
5.3 Implications of the Study	41
5.4 Limitations of the Study	41
5.5 Future Research	42
5.6 Conclusion	42
 REFERENCES	 44

LIST OF TABLES

		<u>page</u>
Table 4.1	Share Repurchase by Announcement	26
Table 4.2	Share Repurchase Announcement by Quarter	26
Table 4.3	Movement of Stock Index Quarter by Quarter	27
Table 4.4	Abnormal Returns from Announcement Impact	31
Table 4.5	T-test for AAR	31
Table 4.6	T- test Result for CAR	32
Table 4.7	Abnormal Returns from Size Impact	35
Table 4.8	Paired T- test for Top 20 and Bottom 20	35
Table 4.9	T- test Result for Top 20 and Bottom 20	36

LIST OF FIGURES

Figure 1	Chart showing the KLSE index from 1999 to Jan 2004	29
----------	--	----

APPENDICES

	<u>page</u>
Appendix 1 List of Companies Announcing Share Repurchase by Year	48
Appendix 2 List of Companies by Volume Traded	49
Appendix 3 Top 20 Companies and Bottom 20 Companies by Capitalization	50
Appendix 4 SPSS Output for AAR	51
Appendix 5 SPSS Output for CAR	52
Appendix 6 AAR and CAR for All Counters	53
Appendix 7 AAR and CAR for All Counters (<i>continuation</i>)	54
Appendix 8 AAR and CAR for All Counters (<i>continuation</i>)	55
Appendix 9 AAR and CAR for All Counters (<i>continuation</i>)	56
Appendix 10 AAR and CAR for All Counters (<i>continuation</i>)	57

ABSTRAK

Pembelian balik saham merupakan satu alternatif dari bayaran dividen untuk syarikat mengagihkan wang tunai. Penyelidikan terdahulu telah mengenalpasti pembelian balik saham selalunya dijalankan pada masa pasaran saham menaik. Pembelian balik juga merupakan satu isyarat dan ia berlainan mengikut saiz syarikat. Pembelian balik saham adalah satu fenomena yang baru di Malaysia dan kajian yang kami jalankan adalah untuk mengetahui adakah trend pembelian balik saham dan kesan dari isyarat pembelian pada masa pengumuman dan saiz sama seperti apa yang telah dijumpai diluar negara. Kajian kami dari Oktober 1999 ke Oktober 2003 telah menunjukkan terdapat 134 syarikat telah menjalankan aktiviti pembelian balik saham. Trend pengumuman pembelian pada suku tahun ke suku tahun telah menunjukkan trend yang sama seperti pasaran luar negara iaitu lebih banyak pengumuman pembelian balik saham dikeluarkan pada masa pasaran sedang naik daripada masa pasaran sedang turun. Hasil kajian telah menunjukkan AAR yang tidak signifikan sejumlah 0.3% pada hari pengumuman dan CAR 5% bagi tingkap 31 hari. AAR yang tidak signifikan untuk syarikat kecil adalah 0.3% berbanding dengan -0.03 % untuk syarikat yang lebih besar pada hari pengumuman. Pulangan adalah terbalik untuk tingkap 31 hari di mana AAR untuk syarikat besar adalah 3.4% berbanding dengan 2% bagi syarikat kecil. Walaupun hasil pulangan tidak signifikan dari kosong, kita masih dapat membuat rumusan yang pembelian balik saham menunjukkan kesan apabila terdapat pengumuman pembelian balik dan kesan adalah berlainan mengikut saiz syarikat.

ABSTRACT

Share repurchase is another alternative besides dividends for companies to distribute their cash. Past research have found that the share repurchase activities are done during rising markets and also have signaling impact whenever an announcement is made and it varies due to the size of the company. Share repurchase activities is considered quite a new phenomenon in Malaysia and our study is basically to find out whether the trend of share repurchase activities and the impact of announcement date as well as size is the same as past research done in overseas market. Our study period from October 1999 to October 2003 have found that there were 134 companies practicing share repurchase during this period. The trend of share repurchase in Malaysia on quarter to quarter basis were found to be the same as overseas which is the activities are more during an uptrend as compared to downtrend. The AAR on announcement date was a positive 0.3% and the CAR for the 31 day window was 5%. Smaller capitalization companies recorded a positive AAR of 0.3% as compared to bigger capitalization companies which registered a -0.03% on announcement date. The returns however for the 31 day window was the reverse where bigger capitalization companies registered an AAR of 3.4% as compared to 2% for smaller capitalization companies. Although the findings are not significantly different from zero, we can still conclude that there are still abnormal returns whenever a company announces share repurchase and the abnormal returns differs due to the size of the company.

CHAPTER 1

INTRODUCTION

1.1 Introduction and Background

Announcements of share repurchase are one of the information which company releases from time to time. Share repurchase by companies is not a new phenomenon in the United States (Stewart ,1976). He found that the volume of share repurchased by companies listed on the New York Stock exchange (NYSE) in 1963 had risen to an annual level of 26 million shares representing an approximate dollar value of US\$ 1.3 billion. The popularity and volume has grown tremendously from then onwards and Stonham (2002) reported that the average annual value of repurchase programs between 1995 and 2000 was US \$220 billion. The same phenomenon was observed in the United Kingdom and Europe. Stonham (2002) also reported that the UK was the next highest growth whereby the absolute level of repurchase announcement was US\$100 billion in 1999.

Share repurchase has been defined as the repurchase of shares by the same company which issued the shares. A company will either pay dividend or repurchase their own shares if the company has excess cash it is more beneficial to both the company and shareholders if they carry out the said exercise. A company will usually only invest in new projects if it expects to earn a higher return or at least the same returns as on existing projects. For example if a company's return on investment (ROI) is 14

percent, the company may not invest in new projects unless the returns is at least 14%. The company maybe making a sub- optimal decision if the returns is less than 14 %. Under such circumstances, and with excess cash in their hands the company now has the alternative to either hold the cash (bearing in mind the opportunity cost) and wait for the next opportunity or if there is no further foreseeable opportunity then the company has the choice to distribute the cash to their shareholders in the form of cash dividends or share repurchase.

Jagannathan, Stephens and Weisbach (2000) and Guay and Harford (2000) found that share repurchase and dividends are used at different times from one another by different kinds of firms. Stock repurchases are pro-cyclical while dividends increase steadily over time. Dividends according to them are paid by firms with higher permanent operating cash flows whilst repurchases are used by firms with higher ‘temporary’ non operating cash flow or those which have a more volatile cash flow and distributions. Share repurchase also provides the flexibility to companies in terms of option of time to buy the share as well as the price of the share as compared to dividends. Stephens and Weisbech (1998) document that not all announced repurchase programs are completed due to the abovementioned flexibility and the average completion rate according to them is approximately 80 % of announced shares.

The company’s management is the best judge of its company’s future prospects and if it thinks that the stock is worth much higher than the actual price presently quoted on the market then share repurchase is the best option to signal to the market. More significantly studies by Stewart (1976), Masulis (1980), Comment and Jarrel (1990), Persons (1994) and Stephen and Weisbech (1998) have shown that practice of stock

repurchases on the NYSE do have a signaling impact on shares. Further, the magnitude of the impact will be influenced by targeted percentage of shares to be repurchased and also firm size (Zhang, 2002).

In Malaysia the practice of share repurchase is considered quite a new phenomenon as it was only approved by the KLSE in September 1997. Section 67A allows a company with a share capital, if so authorised by its articles, to purchase its own shares. The Act further specifies the following pre-requisite conditions that must be met:

- (a) the company is solvent at the date of purchase and will not become insolvent by incurring additional debts involved in the obligation to pay for the shares so purchased;
- (b) the purchase is made through KLSE;
- (c) the purchase is made in good faith.

Section 67A also allows a public listed company which has repurchased its own shares either to: cancel the shares purchased; retain the shares purchased in treasury; or to retained part of the shares purchased and cancel the remainder. Further, the amended subsection (3B) of section 67A provides that the treasury shares may be distributed as dividends or resold on the market in accordance with the relevant rules of the KLSE.

The stock market is considered as barometers of economic health (even though this is true only to a limited extent), thus a stock market depression can affect the economic climate of the country. This exactly happened in Malaysia in 1997. At that time the Malaysian share market was experiencing one of its biggest decline. The KLSE index

dropped from a high of 1,216.72 in January 1997 to a low of 545.44 in November 1997.

Therefore the approval to allow the companies to purchase their own shares is quite timely as it will act as a signal to the investing public that the company is very confident of their own shares and it is trading at a low price and therefore it will bring more confidence to the public to start investing in the market.

1.2 Problem Statement and Research Questions

In this study our main focus is to look at whether share repurchase sends a valid signal for the investing public. There have been many researches on stock repurchase in overseas countries. Jaganathan et.al. (2000) found that share repurchase are cyclical i.e. were high during rising markets and low during the recession of the early 1990's. Ofer and Thakor (1987) and Stephens and Weisbech (1998) have shown that there is a relationship between abnormal returns and the announcement of an open market repurchase program. Zhang (2002) found that abnormal return at the announcement is positively related to announced repurchase percentage target; negatively related to firm size.

Bhattacharya and Dittmar (2003) found that some companies only makes announcement without purchasing the shares but the mere announcement of share repurchase resulted in an increase in the share price. Comment and Jarrell (1990) and Ikenberry, Lakonisok and Vermaelen (1995) found that the abnormal returns are positively related to the fraction of shares stated in the original announcement of the repurchase program. The abovementioned studies as mentioned have been carried out in overseas market. It is therefore interesting to see whether the same findings can be found in the Malaysian market.

Based on the above, the research questions for this study are :

- (a) Is the share repurchase being cyclical in nature? i.e. Is the practice followed during rising market and not during the recession.
- (b) Does share repurchase announcement provide any signal to the market so that investors can make abnormal returns within announcement periods?
- (c) Are abnormal returns affected by the size of the company making the purchase?

1.3 Research Objectives

Based on the above research questions, the objectives of the study are:

- (a) To investigate whether companies listed on the KLSE practices share repurchase in a rising market.
- (b) To examine whether there is an abnormal return the investor can make from the share repurchase.
- (c) To examine whether there is any difference in the abnormal returns if the share repurchase is made by companies of different sizes (in terms of market capitalization)

1.4 Significance of the Study

Market players are always on the lookout for new information regarding companies listed on the KLSE. It is vital for them to be the first or among the first to buy or sell shares before the price react to any news. If it is proven that share repurchase activity in Malaysia mirrors those in overseas market i.e. it will result in a signaling impact and affect the movement of share prices in Malaysia, then this study can be used as

another tool for market players to use in their analysis of the Malaysian stock market. On a more theoretical level the behavior of the share prices surrounding the announcement of share repurchase also can give an indication of the efficiency of the KLSE.

1.5 Organization of the Remaining Chapters

This research report consists of five major chapters. In Chapter 1 we will introduce the topic of share repurchase as well as the research question, objectives and the significance of the study. The second chapter covers the literature review which will cover the reasons, methods as well as the signaling impact of the share repurchase. The hypotheses are generated and the methodology of the research is described in chapter 3. The results of the study are discussed in Chapter 4 and finally the summary and conclusion of this research are covered in Chapter 5.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Share repurchase activities are used as another alternative besides dividends to distribute cash to shareholders. The share repurchase activities can also be considered as a valid signal to shareholders that the share of a company undertaking such exercise is undervalued. In this literature review we would look at the reasons, methods as well as the impact of the announcement, the time of announcement and size on abnormal returns. The method to analyze the abnormal returns i.e. event studies would also be explained and finally we would summarize the chapter.

2.2 Review of the Literature

Corporate share repurchase of their own common stock has become an increasingly important phenomenon. Stonham (2002) reported that there were about 2773 share repurchase announcements in the US in 1998 and between 1995 and 2000, the average annual value of repurchase program was US\$ 220 billion. Due to the massive amount of money involved in the activity of share repurchase, extensive studies on the various aspects of share repurchase have been carried out not only in the US but also in countries like Germany and Japan where share repurchase activity was only approved in 1998 and 1994 respectively.

So, why do companies repurchase their shares? According to Brigham and Ehrhardt (2002) there are 3 principal reasons for repurchases of shares.

A firm will repurchase its shares :-

- (a) When it has cash available for distribution to its stockholders, and it distributes this cash by repurchasing shares rather than by paying cash dividends.
- (b) When it concludes that its capital structure is too heavily weighted with equity, and then it sells debt and uses the proceeds to buy back its stock.
- (c) When it has issued options to employees and then uses open market repurchases to obtain stock for use when the options are exercised.

Guay and Harford (2000) hypothesized that firm choose between repurchase and dividends when the firm wants to distribute its cash. Dividends are implicitly used to distribute permanent cash flow to shareholders whilst share repurchase is merely to distribute temporary cash flow which is available from time to time.

Rappaport and Mauboussin (2001) explain that in share repurchase there are 3 methods that the company could employ . The methods are:-

- (a) Open market purchases where the company purchased its share from the open market.
- (b) Dutch auction where management defines the number of shares it intends to buy and at a price range.
- (c) Fixed-price tender offer where the management offers to repurchase a set number of shares at a fixed price.

Out of the 3 methods stated above the open market purchases seems to be the best form adapted as it gives the flexibility to the company to buy its shares on whatever

the amount and at the appropriate time and price of the share it deems is advantageous to the company. Stonham (2002) stressed that open market share repurchases are a blunt instrument by which the repurchasing can be flexible over timing, size and number of 'parcels' but have less control over share price and large open market repurchases may work against the firm as they tend to push up the price simply through its own buying. Comment and Jarrell (1990) reported that open market purchases are more popular than the other two ways of stock repurchase. Baker, Powell and Veit (2003) in their research found that open market repurchase accounts for 89.5% of repurchase activities in the US as compared to the tender and fixed auction method.

In Malaysia the companies quoted on the KLSE are only beginning to practise open market stock repurchase after approval was given by the KLSE in 1997. The company needs to get relevant approval from their shareholders before the said company can start the repurchase. The company will firstly need to send circulars to the shareholders and the KLSE to inform of the company's intentions and then holding an AGM or EGM to get their approval. The KLSE website is freely available to all interested parties in this case would be the brokers as well as the investors, the said repurchase can therefore be considered common knowledge when it is published at the website. For our research the circular announcement lodged at the KLSE will be taken as a signal to the market that the company intends to start a repurchase program.

For the purpose of our study we will be looking at 3 aspects of share repurchase namely, the signaling impact of share repurchase in terms of announcement impact on

the abnormal returns on the stock , the factor of size of company on the abnormal returns of stock as well as the timing of the repurchase of shares.

2.2.1 Announcement Impact

Offer and Thakor (1987) in their research on stock repurchases and dividends stated that both dividends and stock repurchases entail deadweight losses for the firms manager who sets the levels of these signals. A firm that perceives a relatively large undervaluation in its share value will attempt a stock repurchase and when it perceives a smaller undervaluation it will be rectified through dividend increases.

Schramper (1999) in his research found that German corporations are mainly driven by signaling hypothesis. Management uses the announcement of a repurchase to signal information about the firms future prospects assuming that managers have better information about the true value of firm than other market participants. Since managers only have incentive to reveal positive information, the buy backs therefore are expected to provide the stock positive price response. Vermaelen (1981) and Ikenberry, Lakonisok and Vermaelen (1995) postulates that the motive for share repurchases concerns asymmetric information and believes that stock prices rises on the announcement of a repurchase program.

Stonham (2002) in his research found that there are mixed evidence on the signaling impact of a repurchase announcement. They postulated that the investors see the repurchase at different views namely:-

- (a) As a technical adjustment to the efficient use of capital thus reaction in terms of abnormal returns will be minimal.
- (b) Perceiving this as a major correction to share undervaluation and a stronger abnormal returns would be expected.

Stewart (1976) in his research on efficiency on repurchase of shares was one of the first researcher to look at the signaling impact of share repurchases. His research was actually not to look at the signaling impact of share repurchase but more to whether corporation should repurchase its own shares. Using 18 years of data he found that when the corporation do actually purchase their shares, it forms as a signal to the investing public and the price of the shares moved up. He however cautions that the impact was felt at a longer time frame than a shorter time.

The research on signaling impact started to move from there onwards. Researchers started to look a signaling impact of the various types of share repurchases. Masulis (1980) studied the signaling impact of repurchase of stock by tender offer.

Tender Offer is a fixed price tender offer whereby the firm offers to repurchase shares at a stated price per share, and shareholders who wish to sell their shares tender them to the firm. He looked at this angle due to his opinion that there is a bigger signaling impact on the repurchase of shares by tender offers as compared to the 2 other options which is open market repurchase and Dutch Auction. This is due to the fact that tender offers generally involve the largest number of stock and as a consequence are the most promising form of stock purchase for empirical study. Masulis (1980) studied all stock repurchases by tender offer for NYSE over the period of 1963 to

1978. To assess the price effects of tender offers, the stock rates of return were analyzed around the offer announcement date and expiration date. Persons (1994) did a comparative study on the Dutch auctions versus fixed price tenders and the signaling effect with this type of share repurchases. In a 'Dutch Auction' repurchase, the firm announces the number of shares it wishes to repurchase and shareholders specify the price at which they are willing to sell their shares to the firm. In this research he found that fixed price offers are better signals with positive price implications as compared to Dutch auctions.

Stephens and Weisbach (1998) believed that open market repurchases (which is more relevant to the Malaysian scene) are more popular to company management relative to Dutch auction or fixed price repurchases as open market repurchase program do not pre commit firms to acquire a specified number of shares and therefore has the flexibility of doing it anytime the company wants. This means that when a company pursues a share repurchase through the open-market process, the short-term trading opportunities are typically greatly reduced. With this technique the firm is repurchasing its shares by simply purchasing them on the exchange when the opportunity arises. In the case of small repurchases to fulfill the demands of employee stock option plans or dividend reinvestment plans, the company may not even announce the repurchase before the fact.

These repurchases will have little or no impact on the stock price. For announced repurchases, the amount of information the company will disclose depends upon the aim of the repurchase which is an attempt to increase the company's share price versus an attempt to purchase the shares at the lowest possible price. Typically, it will

disclose the number of shares or amount of money set aside for the repurchase, but it may leave the time frame of repurchase open-ended to allow it to buy shares on market weakness in order to provide support for the company shares. In some cases, it will provide a range of prices at which it will step in to purchase shares. The short-term market reaction of open-market purchase announcements is typically much more subdued than tender-offer repurchases and Dutch Auction , but it is nonetheless still positive. Brennan and Thakor (1990) argued that stock buybacks are simply a more efficient way for managers to pay cash to shareholders than paying a cash dividend. They further added that how people perceive signaling effectiveness is plausibly related to recent firm specific performance and not to recent general market performance. Bhattacharya and Dittmar (2003) in their research agrees with the above as they found that the mere announcement of an open market share repurchase attracts scrutiny from speculators who then discovers the time value of the firm and this causes stock prices to increase at the announcement of an open market repurchase program even though the announcement does not commit the firm to purchase any stock. They found that 46% of all firms that announces share repurchase program do not purchase a single share within the quarter or quarter following the announcement. 27% of firm that announce a share repurchase program did not even repurchase shares within 4 fiscal years after the share repurchase announcement was made.

Mathew and Ross (2002) in their study of the Australian market found that share buybacks announcements have a very positive effect on the stock market as they provided not only a positive signal to not only the companies making the announcement but also rival companies. They found that while shareholders of firms announcing share buybacks that are motivated by undervaluation of the stock price earned statistically significant abnormal returns of 1.25% on the announcement day

and shareholders of rival firms earned significant abnormal returns of .39% on Day +2. and for 3 days earned abnormal returns of 1.39%. This suggests that both the announcing firms and their industry rival were previously undervalued by the market. This could be the reason why the KLSE allowed the share repurchase activities in 1997 so as to stimulate the Malaysian stock market.

2.2.2 Firm Size Impact

Comment and Jarrell (1991) confirmed the above in their research on the relative signaling power of Dutch auction and fixed price self tenders and open market repurchases. For the open market repurchase they further found that the size of the shares to be repurchased is reflected in the abnormal returns. The average abnormal returns for open market repurchases is 2.3% for share repurchases of 10 % or less whilst there was an abnormal return of 6% for open market repurchases of 20% or more of the stock concerned.

Zhang (2003) in his research on the Japanese market also found that the abnormal returns on the announcement on the average is 5% and confirms the findings of Comment and Jarrell (1991) that the abnormal returns is positively related to the percentage target. He however found contrasting result in the comparison between fixed price tender and open market purchases. In Japan according to him announcement period abnormal returns are higher in open market repurchases as compared to fixed price tender. Zhang (2003) further extended his research on whether size of company has any impact on the abnormal returns and found that the

returns are higher for smaller capitalization companies as compared to higher capitalization companies.

Ikenberry, Lakonishok and Vermaelen (1995) examined the short run as well as the long run performance following market repurchase announcement. They studied the impact of firm size in terms of book to market ratio as well as amount of the repurchase of the shares. They found that the abnormal returns for larger share repurchase programs are received more favorably by the market. For example the mean announcement period abnormal return is 4.51% for programs which are for more than 10% of outstanding shares and for those programs which are less than 2.5% of outstanding shares the average market returns is 2.58%. The researchers also found that the market reaction shows clear differences across size groups. Firms ranked in the smallest range shows an abnormal returns on average of 8.19% and firms in the largest size group showed only an abnormal return of only 2.09%. Vermaelen (1981) in his research found that it is more likely for small companies to be misvalued and asymmetry information to be more prominent since analysts and proper press cover less of them. This could be the reason why the abnormal returns for small firms to be much more than for bigger companies.

2.2.3 Timing of Share Repurchase

Do managers time their repurchase of shares? Brockman and Chung (2001) in their research on Hong Kong market found that managers timed the market to repurchase shares to enable them to buy the shares at the lowest price. They found that the managers exhibited substantial timing ability. The managers in Hong Kong after announcement endeavors to repurchase the share at the best price for their

company. Jaganathan, Stephens and Weisbech (2000) in their research on financial flexibility and the choice between dividends and stock repurchases found that stock repurchases and dividends are used at different times from one another, by different kinds of firms. Stock repurchases according to them are procyclical and firms repurchase stock following poor stock performance. This also has been concluded by Comment and Jarrell (1991) as well as Stephens and Weisbach (1998). Jaganathan, Stephens and Weisbech (2000) added that repurchases were high during the rising market of the late 1980's in the US and dropped in the recession of 1990's.

2.2.4 Event Study

Event study is an important methodological approach to market based empirical research. Event study was made popular by Fama, Fisher, Jensen and Roll (1969) where they studied stock splits and the behavior of stock prices. They analyzed the behavior of stocks during the 60 months surrounding the months of the stock split and found that security prices adjust rapidly to the information implicit in a stock split.

According to Strong (1992) most event studies are focused on the behavior of share prices in order to test whether their stochastic behavior is affected by the disclosure of firm specific event. In our study we will be looking at the event study relating to market efficiency which involves the analysis of security price behavior subsequent to the event.

Fama (1970) states that a company's stock price will incorporate all the information that would be used to value a company and it is subject to each individual interpretation. In the efficient market hypotheses (EMH) the theory holds that the

stock is always in equilibrium as stock prices will rapidly reflect all available information and that it is impossible for an investor to consistently beat the market. The only way the investor can beat the market is the knowledge available to investors themselves. In short in a perfect market, all the information is public thus no stocks are misvalued and in an imperfect market, insiders have more information about the value of firm than outside investors.

According to Bowman (1983) the basic structure of the standard form of event study can be mapped out by firstly identifying the event date for a sample of firms and this is subject to the focused interest which in this case is share repurchase. We then group the observations into a common time event and finally a model is chosen. For our event study the model to be chosen is the market model or MM as it is probably the most popular benchmark employed in event studies.

2.3 Statement of Hypotheses

Our study is basically to test whether the research on share repurchase is applicable to our Malaysian market. Our hypotheses for this study and as seen from earlier studies done overseas is to look at whether the share repurchase activity in Malaysia is done during a rising market or recession, We will then look at whether resulting from the announcement the investors responds to the said signal resulting in abnormal returns to the share concerned and whether the abnormal returns are affected by the amount of share purchased and size of firm.

The first hypothesis is to see whether the practice of share repurchase in Malaysia is prevalent when the market is in a recovery phase of the market or the practice is more prevalent during a recession or market downturn. This hypothesis will be in line with the findings of Jaganathan , Stephens and Weisbech (2000) where they found that share repurchase were high during rising markets and low during the recession in the early 1990's at the NYSE. The first alternate hypothesis is therefore,

H1: Firms in the KLSE repurchase their shares during the bearish market.

The second hypothesis is to see when the company makes a repurchase announcement and whether there is any abnormal returns that can be seen during this time. Stewart (1976) and Stephens and Weisbech (1998) have found that there are abnormal returns whenever a company makes a share repurchase announcement. In this hypothesis we will also be testing whether the said is true in Malaysia. The second alternate hypothesis is therefore,

H2: Abnormal returns within announcement period for firms announcing *share repurchase is not 0*.

The third hypothesis is to look at whether the abnormal returns is affected by the firm size of the company making the announcement. Zhang (2003) and Ikenberry. Lakonishok and Vermaelen (1995) found that the returns are negatively related to company size. This means that the returns are higher for smaller capitalization companies as compared to higher capitalization companies. We will also test this under our third hypothesis to see whether the said holds for our Malaysian companies.

The third alternate hypothesis is therefore,

H3: Abnormal returns for smaller firms are higher than bigger firms

2.4 Summary

In conclusion, in our literature review we see that researchers have found that share repurchase are practised widely by companies due to it being a very efficient tool in the disbursement of the company's cash to the shareholders. The abnormal returns recorded by the researchers through empirical studies whenever a share repurchase activity is carried out shows that it is a valid signaling tool and investors intend to respond to it. The abnormal returns are recorded whenever there is an announcement and the abnormal returns is also different if the size of the company differs. It was also found that share repurchase activity are more pronounce during rising markets as compared to when the economy is in a recession. The hypotheses formulated under our statement of hypotheses will be in line with the above and we will test whether the results in Malaysia will be similar to those found overseas.

CHAPTER 3

DATA AND RESEARCH METHODOLOGY

3.1 Introduction

In this Chapter we will start by explaining how and where we collected the data to be used in our study. Next we will explain how we did the sampling. We then describe the computational methods we will be using in our research.

3.2 Data collection

The data to be used is secondary in nature. The data is obtained from various sources namely:-

(a) Yahoo Finance.com.

Yahoo Finance. Com is freely available on the Internet and provides the data on individual stock prices as well as the composite index from 1984 until the present moment.

(b) The KLSE website

The KLSE provides us with all the announcements made by the companies quoted on the stock exchange. The data from this website is only from October 1999 onwards. Therefore our share repurchase announcements made by companies are from that date onwards.

(c) Dynaquest Sdn Bhd.

Dynaquest is an independent stock analysis company. It produces yearly the full financial details of all the companies listed on the KLSE. We obtained the details regarding the amount of shares available for each company.

(d) The Daily Star

The Daily Star provides the full details of the daily trading activity on the KLSE. It also provides us with information on the exact number of companies listed on the KLSE as well as the total number of shares currently available for each individual company.

3.3 Population and Sample

The population under study is all the companies listed on the KLSE and which have carried out share repurchase activities. Although the share repurchase was approved by the KLSE in September 1997 and we wanted to see the extent of companies practicing the activity, we are only able to obtain the data (from circulars from the companies to KLSE) from October 1999 onwards. The sample will therefore be from October 1999 to October 2003. Using this selection method, we are able to obtain/identify 134 companies. From the 134 companies we are only using 40 companies in our sample. The 40 companies selected are based on the higher volume of shares transacted as compared to the other 97 companies. For the 40 companies we had to take out 3 companies as their data available for these companies was not enough for us to calculate α and β for market model estimation. We therefore had to replace with the next 3 highest volume. From these 40 companies we also divided it into 2 equal numbers which is 20 each. The top 20 represents those companies with higher market capitalization whilst the bottom 20 represents those companies with lower market capitalization. We used this to test the third hypothesis where we wanted to find out whether the abnormal returns are affected by company size.

3.4 Methodology

We used the event study to measure the impact of the share repurchase on the stock prices. The day when the announcement was made is termed as the event day. The announcement in consideration is the announcement when the company send its circular to the KLSE and at this point of time is known to the investing public.

We will be following the event study window used by Ikkenberry, Lakonishok and Vermaelen (1995) where they used 20 days before to 10 days following the announcement. We feel that the short window as used by the researchers would also be sufficient for us to see the impact of the share repurchase activity in the KLSE. The information provided by the companies announcing share repurchase to the KLSE is accessible to all the brokers as well as the investing public who has access to internet facilities. Thus since the information is immediately available the impact should be felt in a short time thus a short window should be enough.

We used the SPSS to analyse the data and to obtain the alpha and beta factor. We used the data for a period of 230 days for our linear regression analysis. Daily theoretical returns and daily stock return were computed from the raw data available.

The calculations for the return of stock I in day t are as below:-

$$(a) \quad R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Where,

P_{it} is the price of stock i at end of day t

P_{it-1} is the price of stock i at the beginning of day t

R_{it} is the return of stock on day t

- (b) The return for the market is based on the KL composite index and calculated as

$$R_{it} = \frac{CI_{it} - CI_{it-1}}{CI_{it-1}}$$

Where CI_{it} is KL composite index at end of day t and,

CI_{it-1} is the KL composite index at end of day $t-1$

- (c) The market model to be used is computed as below :-

$$R_{it} = \alpha_i + \beta_i R_{mt} + E_{it}$$

Where R_{it} is the return stock i in the day t ,

R_{mt} is the return on the market index in the day t

E_{it} = stochastic error term for the stock i in the day t with zero mean

α_i, β_i = regression coefficients estimated from the market model, regressed using 230 days data prior to the event window.

- (d) Abnormal returns (AR) are calculated for each of the 20 days trading before and 10 days trading immediately after the share repurchase announcement i.e. the event window.

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$$

- (e) The average abnormal returns (AAR) is calculated by summing AR_{it} by day and dividing by the number of counters (N).

$$AAR = \frac{\sum AR_{it}}{N}$$

(f) The Cumulative abnormal returns (CAR) are calculated by

$$CAR = \sum AR_{it}$$

In this study we will only be using the t- test for our statistical analysis. The t- test used is to measure whether there is any significance difference between the market returns and the expected returns. The difference calculated is for the entire 30 days and for the 40 counters. The t- value is calculated for all the values specified.

3.5 Summary

In this chapter we described the sample data which we will be using as well as the source of the said data. We then elaborated on the event study as well as the method we will be using in our analysis of the impact of share repurchase on the KLSE.