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A Conceptual Paper on the Behavioral Pattern of Malaysian Public Listed Companies in their Share Buyback Programs.

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Abstract

This conceptual paper intends to identify and analyze the reasons and motives that influence Malaysian Listed firms in their participation of share-buyback schemes. The study will focus on the 212 companies on Bursa Malaysia that had announced their decisions to buy back their own shares over a six-year period from 2010 to 2016. This is done with a view to establish why only 127 of the 212, which make up about 60% of the companies, actually carried out the buyback program, using data and companies' announcements to the Bursa Malaysia. The main aim of the study is also to examine the factors behind the peculiar buy-back patterns of Malaysian companies in relation to their Book to Market (BTM) ratios and the size of the companies. The analysis hopes to establish a view on why these companies opt to buyback less than 1% and doing it on a daily basis. The outcome of this paper will be helpful in the study of the need of the current restriction of 10% cap on buyback of shares and to assess the impacts of prevailing stringent rules on the treatment of treasury shares.

Purpose:

This conceptual paper intends to identify the reasons that motivate Malaysian listed firms in their participation of share buyback schemes.

Design/methodology/approach:

This paper hopes to carry out the two-step analysis in its findings and data analysis to derive acceptable conclusions for the main research questions. The first method involves the use of the standard event study methodology to analyse market reactions to the three announcements. The second method involves the use of multiple regressions to check the responsiveness of the event study results in the first analysis.

Findings:

This conceptual paper intends to provide an analogy to explain the peculiar motives of Malaysian buybacks outlined below;

(1) To study the market reaction to the buyback announcements;
This will indicate extent of information asymmetry on undervaluation for Main board and ACE companies.

(2) To study whether the effects of concentration of ownership of companies affect decisions to buy back shares.
Bursa Malaysia's requirement of shareholders' approval prior to share buybacks, family controlled companies with large entrenched shareholding structures have the ultimate decisions in share buybacks. Government GLCs run by political appointees may have less interest on share price performance than to fulfil specific objectives of government's agenda.

(3) To analyze the long term effects of price and earnings sustainability after the share buybacks ; and
The analysis would focus on abnormal return (AR) and long term cumulative abnormal return (CAAR) during the length of event period, to assess whether these companies would report positive returns.

Research limitations/implications:

This study has three limitations. First, this study is limited to the immediate announcement effect surrounding shares events. Besides signaling theory and information asymmetry, other underpinning theory of equity issuance can also affect share price.

The second limitation is on the assessment for frequent and infrequent buybacks and to identify whether the frequency of buybacks has an effect on the long-term performance of the company. Similar studies have been done in U.S. market by Yook (2010) and Chan et al. (2007) and Korean market by Lee et al. (2005). They found that infrequent buybacks earned much better price performance than frequent buybacks.

The third limitation of this study is the implication effects on the benefits of buyback to the interested parties, namely the companies. At this moment, in the Malaysian market, studies by Isa et al. (2011) and Wong et al. (2011) found no evidence of abnormal returns with respect to buyback volume.

Practical implications:

The practical implication of this study is to determine the effects of buyback on smaller companies. Even though Ramakrishnan et al. (2007) found an increasing number of small firms participating in buyback activities, there is weak evidence that relates to the value gained by small as compared to the larger firms. Thus, although the smaller firms are relatively undervalued, repurchasing shares may not benefit their long-term shareholders. Future studies may need to focus on the effects on smaller firms and the benefits they derive for their long term shareholders.

Originality/value:

Previous studies on share buybacks by Malaysian companies are mainly on signaling undervaluation of share prices and the eventual price effects on those buyback companies (Nasruddin and Angappan (2004), Mansor Isa (2011); Mohd (2013). Excess cash flow hypothesis is the prime motive for share buyback in most companies. These studies focus on examining the returns surrounding buyback announcements. Studies by Edward Wong et al. (2011) and Abdul Latif et al. (2013) however, focus on actual and long-run price performance of the companies.

This conceptual paper attempts to analyze the buyback behavioral pattern and motives of Malaysian companies in relation to their market to book values and size of companies. This study will attempt to evaluate the effects and implications of the current 10% restriction on share buybacks and the accounting treatment of Treasury shares.

As this study moves away from conventional attempts on price effects, it is hoped that the findings will form a basis for the regulators and investors to comprehend the reasons and factors that motivate Malaysian companies' buyback policies.

Keywords: buyback, signaling effects, behavioral pattern, treasury shares, Bursa Malaysia

Introduction

Share buyback is a process in which listed companies buy back their own shares from the open market. It is a common practice in the developed western markets and a common theme of financial research on performance of US companies. However, in the Asia-Pacific markets, there is a noticeable scarcity of research on this specific area. Perhaps, it is due to the fact that only rather recently share buybacks have emerged as an alternative investment strategy in the Asia-Pacific markets following the widespread financial liberalization in the 1990s. For example, Australia allowed buybacks in 1989, Hong Kong in 1991, Korea and New Zealand in 1994, Japan in 1995, and Malaysia in 1997. (Isa & Lee, 2014).

Conventional wisdom has often reckoned that company CEOs tend to malignantly misuse share buyback schemes in their manipulation of share prices. Analysts' perception is that these companies would indiscriminately channel funding into share buybacks at the expense of future profitable investments which could ultimately jeopardise the firms' values in the long run.

Professor William Lazonick of University of Massachusetts, in his famous lecture on '*Profit without Prosperities*' propounded the idea that '*downsize- and-redistribute*' in resource allocation via share buybacks would contribute adversely to the long term growth of companies. (Lazonick,2014). Lazonick reiterates that buybacks will accelerate value extraction rather than value creation of companies, resulting in further employment instability and income inequality in an economy.

The Economist in its September 12, 2014 issue categorised share buybacks as 'corporate cocaine' that provided a temporary mask of weaknesses in corporate performance. In 2011, the Oracle of Omaha, Warren Buffet however, in his annual letter to Berkshire Hathaway shareholders supported the notion of share buybacks as the most sensible way to distribute cash to shareholders in the absence of worthy investments. He dubbed it "*The best chance to deploy capital, when things are getting down,*" in his interview with CNBC in February 2018. Berkshire is currently the seventh largest company in S&P 500 Index by market capitalization. (Forbes 2018)

The UK government as part of the broader package of corporate governance reforms announced in August 2017 that there is a need to review and to address concerns that companies may misuse share buybacks to inflate executive pays to the detriment of minority shareholders.

The continued sluggishness in the global business outlook from 2010 to 2016 has led to many giant American corporations seeking an urgent need for an alternative source of investments for their mountains of retained earnings. Goldman Sachs estimates that the $1.5 trillion tax cut in 2018 on corporate tax by Trump administration will return $1.2 trillion via share buybacks in 2018. (Financial Times 10th July, 2018)

Share buybacks in Malaysia

In Malaysia, share buybacks were permitted soon after the 1997 Asian Financial Crisis. Unlike countries in the West, Malaysian authorities only allow listed firms to buyback from the open market and each repurchase is restricted to not more than 10% of the companies' prevailing total number of shares, subject to shareholders' approval.

Since the ruling to allow share buybacks in Malaysia, only 305 Malaysian firms (25% of all listed companies then) participated in the buyback activities from 1997 to 2005 (Rohaida, 2010).From another study by Albaity el at (2016) between January 2000 and December 2010, there were 132 companies participated in buyback with reported 221 daily events, which means on average half of the firms repurchased within 25 days intermittently. In the study by Lim & Bacha (2002) of the 100 large companies in Malaysia, only 88 companies announced the intention to buyback, but only 43 or 48% of companies actual bought back shares.

According to The Edge Financial Daily (January 18, 2017) in Malaysia only one company - 7 Eleven Berhad, a mid- capital company - utilized up to a total of RM191.5 million of its cash reserves to acquire 9.97% of its shares, while its reported earnings in 2015 was only RM56 million. "*The rest of the companies mimic the good news by announcing the buybacks but only buy back a little*" according to the Edge Financials(2017).

Table 1 : Number of Malaysian listed companies in share buybacks from 2010 to 2016

Classification of firms	Total firms	Non buyback firms	Buyback firms	
			Announced firms	Actual buyback firms
Construction	48	34	14	10
Trading & Services	218	155	63	31
Industrial Products	225	164	61	35
Plantations	43	31	12	9
Properties	96	74	22	17
Technology	88	78	10	9
Consumer Products	130	100	30	16
Finance #	(32)	(14)	(18)	0
Hotels	4	4	0	0
Mining	1	1	0	0
Total	853	641	212	127

Source: Data compiled by researcher based on announcements in Bursa Malaysia.
#Note: The financial sector is excluded due to separate legislation

Table 1 shows a marked improvement of 60% of companies which carried out actual buyback compared to only 48% in an earlier study by Lim & Bacha (2002). But the 127 companies that participated in buybacks comprised only 15% of the total of 853 companies listed on Bursa

Malaysia as at 2016. Glaringly, 75% or 641 companies out of 853 companies did not participate in the share buyback.

Table 2: Computation of companies' actual buyback by classification (2010 to 2016)

Classification	Buyback firms less than 1%	Buyback firms 1 % to 5%	Buyback firms more than 5%	Frequency of buybacks.
Trading & Services	9	15	7	Daily
Industrial Products	11	21	3	Daily
Consumer Products	7	7	2	Weekly
Construction	7	3	0	Weekly
Plantation	5	3	1	Weekly
Technology	5	3	1	Weekly
Property	11	5	1	Alternate day
Total	55	57	15	

Source: Data based compiled by researcher based on Bursa announcements.

Table 2 confirms the early Edge financials report that 43% of companies buyback less than 1% of their total market capitalization, while 45% of companies buyback 1% to 5% of their total market capitalization. Further, 52% or 66 companies carry out their buybacks on a daily basis while another 35% or 44 companies carry out buybacks on a weekly basis. This peculiar pattern of buyback behavior of shares by Malaysian companies rarely happens in western markets. This buyback behavior is dominated by companies in the Trading & Services and Industrial Products sectors, both of which make up the largest group of companies in the buying back-activities. These 2 groups of companies account for 66 companies or 52% of the total buyback companies, represent a good indication of behavioral pattern of buybacks by Malaysian companies.

This peculiar pattern of buybacks lacks clear evidence and explanation, leading to the actual intents and purpose of share buybacks in Malaysia being misunderstood. Some studies have suggested that this pattern of buyback may be pertinent to the fledgling Malaysian economy, where most companies do not have large enough cash reserves as compared to the mountain of reserves in those of US giants. In a study by Zuriawati et al (2013) on 327 companies in Malaysia from the 2005 to 2010 period, it is found that many companies preferred to buy back shares to prevent agency problems.

Table 3 :Share Buyback regulations of selected countries around the world (Kim 2005)

Country	Shareholders' Approval	Timing restriction	Price restriction	Volume restriction	Disclosure requirement
UK	√	√	√	√	√
US	×	×	×	×	×
France	√	√	√	√	√
Germany	√	√	√	√	√
HK	√	√	×	√	√
Singapore	√	√	√	√	√
Malaysia	√	√	√	√	√

In Table 3, although US may appear as the only country in the world that has no restriction in share buyback policy, all other countries like Germany, UK, and France are having similar 10% restrictions as in Malaysia (Kim et al 2005). Although HK has a similar 10% restriction, companies may still buy back up to 25% of their stocks traded in previous month, providing a leeway for those liquid stocks. Singapore SGX had in November, 2013 relaxed the restriction upwards to 20% of its shares issued to encourage more vibrancy in stock investing.

Around the world, there are two prevailing systems of buyback regulations (Kim, et al 2005)), -- the first system being modeled on the U.S. system and followed by Australia, Canada, India, New Zealand, Taiwan and Thailand, in which companies only require board approval to buy back shares. The second system is adopted by the rest of the world, similar to what is practised in Malaysia - where companies are required to obtain explicit approval of their shareholders prior to announcement of share buybacks. The first system is obviously much more flexible and less cumbersome than the system adopted in Malaysia.

Ownership Structure of Listed Companies in Malaysia

Ownership concentration in Malaysian listed companies is prevalent, Table 5 below shows that families hold around 44.7% of their shares while public holds 13.2% of shares as at 2008. With such a high level of ownership concentration, there would be a strong influencing power over the decisions of companies. Similar situation can also be found in Indonesia, Singapore and Philippines that holds 50%, 52% and 76% respectively of companies (Claessens et al., 2000). In these companies, family CEOs easily get entrenched, since ownership controll conveys additional voting power. They are less likely to be removed from the position, even though they perform poorly compared to non-family CEOs (Dahya, Lonie, & Power, 1998). The evidence of Korean firms suggests that the ownership concentration unveils the voting rights that positively affect share buybacks but negatively affect cash dividends.(Hyo Jin Kim 2013).

Table 5: The Control of Publicly Traded Companies in East Asia, 2008

Country	Widely held (%)	Family (%)	State (%)	Widely held Financial (%)	Widely held Corporation (%)
Malaysia	13.2	44.7	33.5	0.6	4.3
Indonesia	13.1	50	13.5	2.2	13.2
Thailand	38.6	33.3	12.1	2.3	7.8
Philippine	7.6	76	5.3	4.1	95.9
Singapore	18.5	51.9	19.6	1.7	3.9

Source: Adapted from "Changes to the Ownership and Control of East Asian Corporations between 1996 and 2008: The primacy of Politics," by R. W. Carney & T. B. Child, 2013, Journal of Financial Economics, 107, pp. 494–513.

Government-controlled institutions also hold significant shares in the Malaysian listed companies. Government ownership is established when company shares are held by federal/state institutions, agencies, and government-linked companies (GLCs). However, instead of placing more emphasis on their social objectives, government-controlled companies in Malaysia appear to be more closely politically oriented (Mohd Ghazali & Weetman, 2006). Nevertheless, problem of agency costs still arise in government-controlled companies (Eng & Mark, 2003). Thus, shareholder wealth maximization might not be the priority for GLCs. Managers of these types of companies are more likely to be indifferent to the market on corporate control. This is because the Government, a long-term investor of the GLCs, is unlikely to support unsolicited takeover offers.

Statutory Development in Malaysia

Prior to 1997, Malaysian companies were not allowed to deal and trade in their own shares. After the financial crisis, Section 67 of the Malaysians Companies Act 165 was amended to include Section 67A, to allow listed companies in Malaysia to buy back their own shares.

Malaysian Companies Act subsection (3A) of section 67A allows a public listed company which has repurchased its own shares either: to cancel the shares so purchased, to retain the shares so purchased in treasury (referred to as "treasury shares" in the Act), or to retain part of the shares so purchased as treasury shares and cancel the remainder.

However, the same provision states that while the shares are held as treasury shares, the rights attached to them as to voting, dividends and participation in other distribution and otherwise are suspended and the treasury shares shall not be taken into account in calculating the number or percentage of shares or of a class of shares in the company for any purposes. Specifically, Section 3 (C), 3(D) and 3 (E) of Section 67 of Companies Act deal with the strict accounting treatments of treasury shares.

Literature Review

Academic literatures have documented the common motives of share buybacks in Malaysia as signaling price undervaluation, disgorging of excess cash, substituting cash dividend-payouts, satisfying management forecasts, reducing taxes, and maintaining optimal leverage level (Mohd 2013).

This paper intends to focus on the following five main common motives, to review the buyback activities by corporate Malaysia.

1) Signaling effects

One of the often-quoted motives of share buyback by companies is to correct the undervaluation of share prices by sending signals to potential investors about the company's future earnings prospects. This signaling effect is often used when the share price of a company falls below its book value. The announcements of buyback activities are meant to signify investors on the earnings prospects of companies. The fundamental belief is premised on the fact that potential investors usually do not possess any information on companies' future prospects due to information asymmetry implicit in listed companies (Wahid 2013).

2) Disgorge excess cash flow

In Malaysia, companies are using share buybacks to reduce the equity ratio by disgorging excessive cash from their reserves (L. Y. Chong 2015). The action hence reduces the company's cash flow, and simultaneously increases its debt ratio when it needs to borrow. The net effect of tax shield will reduce costs of capital of the company. But the study highlighted that if the company's existing debt ratio is already high, further increase in debt ratio will increase costs of capital of the company.

However, studies have shown that Malaysian companies are generally risk-adverse and would prefer to issue new equity shares than resort to raising of debts from external borrowings (Mansor Isa 2011). Their findings are in line with the research by Isa (2008) that the long-term debts ratios of Malaysian listed companies are generally below 20 per cent of the companies' capital. This finding thus contradicts the Peking Order hypothesis, where companies prefer to use internally generated funds, found to be applicable to most companies in the West.

3) To increase Earnings per Share (EPS)

The other commonly cited motive for share buybacks is to improve earnings per share (EPS) of companies (Wahid 2013) One of the ways to increase annual return on equity (ROE) and earnings per share (EPS) of companies is to participate in share buyback schemes. The buyback of shares will reduce the total number of shares outstanding and results in increase in the reported EPS of the company. It is also noted that market share prices are theoretically determined by using EPS multiples thus supporting the evaluation claim that a company's performance and share price evaluation is commonly based on reported EPS of the company.(Mansor Isa 2011).

Chong et al (2015) stressed that share buybacks are used to counteract dilution of EPS of companies due to implementation of employees stock option schemes (ESOS). New shares are issued when implementing share option schemes for employees, hence increasing the total number of shares in a company. The EPS will be diluted as the denominator (total number of shares) increases as more option shares are exercised by employees. To prevent dilution of EPS, companies buy back shares to neutralize the net effects of the increase in total number of shares.

4) Substitution to cash dividends

One of the key drivers for share buybacks has been to distribute cash to shareholders. Good performance companies annually would follow a consistent pattern of dividend pay-out policy to shareholders. Any variation of dividend payments would imply changes in companies' annual financial performance. Hence, for companies with abundant cash reserves and thirsting for profitable investments, the distribution of cash by repurchasing shares serves as an effective means of reducing agency problems.(Dimitris Andriosopoulosa 2010).

In a study of three countries in Europe, namely France, Germany and UK, only France showed that repurchasing firms pay higher dividends. On comparison, repurchasing firms are larger in size in all three countries, and only in UK and Germany repurchasing firms have higher growth rates. In France, the repurchasing firms have significantly lower levels of ownership concentration but larger in size.(Dimitris Andriosopoulosa 2010) The analysis did not support the motive of companies using repurchase as a substitute for dividend payments.

The study by (Mohd 2013) of 305 companies in Malaysia from 1997 to 2005 supported the findings that there is no substantive evidence to prove that companies bought back shares to substitute dividend payments. Another study of 509 Malaysian companies between 1997 and 2011 by (Isa 2015) noted that due to the current single tier tax system, there is no difference in terms of shareholder's wealth between cash dividends and repurchases. Therefore, there is no clear reason for companies to use repurchases as a substitute for cash dividend.

Conversely a study by (Yarram 2013) on Australian companies found that firms may at times buyback shares as a way to substitute dividend payments. Results show that consistency in dividend pay-outs had a significant influence on the buyback decisions of Australian firms.

Dispelling the notion that share buybacks stifle future investments of companies, a joint study by (Huei-Hwa Lai;Szu-Hsien Lin;Ai-Chi 2017) on 3802 Taiwanese companies from 2002-2011 found that the companies implemented share buybacks as well as cash dividend payments in order to attract investors. The same study concluded that low buyback companies have positive higher future earnings, while high buyback companies have lower future earnings. Poor performing companies will continue to pay dividends depicting the need to project an optimistic future earnings prospect of the firms and the use of buyback of shares to co-manage price fluctuations.

5) Take-over defence

Companies faced with hostile takeovers may opt to adopt share buyback as a strategy to discourage hostile suitors. The strategy is to push up share prices by reducing the total number of shares available in the market using carefully intended buyback schemes (Lambda & Ramsay, 2000). By adopting such share buyback strategy, the potential acquirers would be dispirited in mounting any possible take-over bids. At the same time by increasing company's leverage, the management is exploiting the 'poison pills' tactic as an effective defensive mode to any intended bidder (Chong et al, 2015).

It should be noted that if a company continues to report poor earnings and deterioration in share price, it is often due to the company's management inefficiency. Under such circumstances, a take-over of the company by a more efficient new bidder may actually bring better benefits to the minority shareholders and enhance its long term profitability and share price level.

Hence, to determine the rational and motives of buyback strategy in Malaysia, Lee & Isa (2015) adopted the data survey questionnaire method in analyzing management perception of share buybacks. The study is based on response of Malaysian chief financial officers (CFO) covering the period from 1997 to 2011. As at 2012, 118 CFOs responded to the questionnaires and the respondents' answers became the main data source of the analysis.

The results that Lee & Esa (2015) have summarized in Table 4 showed that the most compelling reason for companies to buy back their shares was to arrest declining share prices. The reason seems to support the signalling hypothesis, which is based on the premise of symmetry information of potential investors that would respond positively to share buyback announcements. Other share buyback motives such as to improve EPS, to disgorge excessive cash, takeover defence and to substitute dividend pay outs assumed lesser prominence in the study.

Table 4: Reasons for share buyback as provided by respondents in Malaysia

Repurchase motives	No. of respondents	Relative frequency (%)
1. To prevent share price decline	43	36.44
2. To support undervalued share prices	38	32.20
3. To stabilise share prices	36	35.51
4. To improve EPS	8	6.78
5. To accumulate treasury stock	7	5.93

Source : Adapted from Lee & Isa (2015) pg. 107

Method

As the most recent study by (Lee 2014) was from 1991 to 2010 on the Malaysian market reaction to share purchase, this conceptual paper will focus on the sample period from 2010 to 2016. This study intentionally skips the two years period of 2008 to 2009 that coincided with the global financial crisis in 2008 which inadvertently affected the Malaysian Capital market's performance. As the period from 2010 to 2016 covered the non-crisis period, it would provide a more stable analysis of the capital market response without any external disruptions and shocks.

This paper hopes to carry out the two-step analysis in its findings and data analysis to derive acceptable conclusions for the main research questions.

First, to use the standard event study methodology to analyse market reactions to the three announcements;

Second, to use the multiple regressions to check the responsiveness of the event study results in the first analysis.

1) Event study methodology

The traditional event study methodology of Fama, Fisher, Jensen, and Roll (1969) involves calculating cumulative average abnormal returns ("*CAAR*s").

By obtaining both values for the return of stock and return of market for each event day, the daily abnormal return for each day t was computed as follows:

$$AR_{i,t} = R_{i,t} + \beta i R_{m,t} \qquad (1)$$

Such an analysis performed for multiple events of the same event type will produce certain stock market response patterns. This choice of event window is similar to that in Hatakeda and Isagawa (2004), Zhang (2005) and Koerniadi et al. (2007).

Typical abnormal returns associated with a distinct point of time before or after the event day are defined as follows.

$$\text{AAR} = \sum_{i=1}^{1N} NAR_{i,t} \qquad (2)$$

To measure the total impact of an event over a particular period of time (event window), to add up individual abnormal returns (ARs) to create a cumulative abnormal return (CAR)

The most common event window used is a three day event window starting at $t1=-1$ and ending at $t2=1$.

$$CAR_{(t1,t2)} = \sum_{t=t1,t2}^{1} AR_{i,t} \quad (3)$$

Equation 3 shows the formal equation for CAARs and CAARs represent the average stock market responses (in percent) to announcements to share buyback decisions.

$$CAAR_t = \sum_{k=t-T}^{t} AAR_t \quad (4)$$

A t-statistic was calculated to test the null hypothesis that the daily average abnormal returns (AAR) on event day t were equal to zero. This test was carried out in order to find if the returns of individual stock were statistically different from zero given their distribution about the average. The test can also determine whether the change in stock prices due to the share buyback announcement is significant. The equation for the t-test for AAR is as shown below:

$$T_{test} \text{ for } AAR = \frac{AAR_t}{S_t \,/ {N_t}^{0.5}} \quad (5)$$

A t-statistic was computed after the CAAR has been determined for each observed period to test whether the null hypothesis, CAAR over a period of T days is equal to zero.

$$T_{test}\ for\ CAAR = \frac{[(CAAR)/T)^2}{[S_t/(T)^{0.5}]} \quad (6)$$

2). Regression Analysis

To complement the event study analysis, there is a need to examine the relationship between the repurchase abnormal returns and firm characteristics in the form of a multiple regression.(Lee 2014).

2.1) Multivariate analysis

To examine the relationship between the repurchase abnormal returns and firm's characteristics in the form of a multiple regression. There is a need to run three regressions using the two-day announcement returns as the dependent variable.

The regression equations are as follows:

2.2.) Regression 1: Announcement of the board's decision

CAR(0,1) = α1 + β1(PRE) + β2(SIZE) + β3(PER) + β4(MTBV) + β5(ROA) + β6(ACTPUR) + ε

Purpose

For the first regression (on the announcement of the board's decision), the analysis is to test whether the event-period return is significantly related to SIZE, PER, ROA and MTBV.

2.3.) Regression 2: Announcement of shareholders' approval

CAR(0,1) = α1 + β1(PRE) + β2(SIZE) + β3(PER) + β4(MTBV) + β5(ROA) + β6(ACTPUR) + β7(FAAR) + ε

Purpose

The second regression is on the announcement of shareholders' approval. The analysis is to test whether there is any significant relationship between the announcement return and the SIZE, ROA and ACTPUR variables.

2.4). Regression 3: Announcement of actual repurchase

CAR(0,1) = α1 + β1(PRE) + β2(SIZE) + β3(PER) + β4(MTBV) + β5(ROA) +β6(ACTPUR) + β7(FAAR) + β8(SAAR) + ε

Purpose

The third regression is on the announcement of actual repurchases. If the results indicate a positive intercept, it indicates a positive relationship between the announcement return and PRE (the pre-purchase abnormal returns). If the result is positive, the finding is consistent with the signalling hypothesis which indicates that a company repurchase after a period of price decline. The decline is consistent with the phenomenon of price declines to below its intrinsic value, symbolising a low market to book ratio (MTB). (Lee 2014)

Where

CAR (0,1) = the combined announcement return over days 0 and 1;

PRE = the pre-event abnormal return,

SIZE = measured by the log of the prior month's market value.

PER = the price-earnings ratio is measured at the month end prior to the announcement. The coefficient is predicted to be negative;

MTBV = the ratio of market to book value is measured using the month-end prices prior to the announcement. The coefficient is predicted to be negative;

ROA = the return on assets. This coefficient is predicted to be negative;

ACTPUR = a dummy variable to denote that the firm actually purchases its shares after the initial announcements. The variable takes the value of 1 if a repurchase is made and 0 otherwise.

Conclusion

Since concentration of ownership does not influence decisions to buy back shares, there is no clear reason for companies to use repurchases as a substitute for cash dividend (Isa 2015). The study hopes to derive a conclusion in terms of the unbidden effects of 10% statutory limits and the effects of stringent requirements of treasury shares in Malaysia. This is particularly of essence to the anomaly of buyback pattern, where less than one fifth of companies in Bursa Malaysia participate in share buybacks and majority of whom buyback less than 1% of the limits. Further studies should be carried out to determine why cash rich companies in Malaysia are staying away from the share buyback activities while cash deficient and smaller capital companies dominate the buyback scene.

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Operational Definition of Terms

ACE companies	Formerly known as Second Board. A sponsor driven companies with promising potential of future profit with minimum 200 public shareholders but no requirement of financial performance.
AR	Abnormal Return
AAR	Average Abnormal Return
Book to Market ratio	Equity ÷ Market capitalization
Buyback	Amount used for share buyback
Bursa Malaysia	Malaysian Stock Exchange
CAAR	Cumulative Average Abnormal Return
Dividends	Pre-tax dividend pay-out
Equity	Equity supply by shareholders or Retained earnings
Earnings	Earnings available for dividend pay out
Earnings per share (EPS)	Earnings ÷ Shares
Market Capt.	Market Capitalization = Total number of shares x Share price
Market to Book (MTB) ratio	Market capitalization ÷ Equity
Main Board	Companies listed on KLSE with minimum 3 to 5 years of aggregate profit of RM $20 million with a minimum of RM $ 500 million market capitalization.
Return on Assets (ROA)	Earnings ÷ Assets
Return on Equity (ROE)	Earnings ÷ Equity
Shares	Number of shares outstanding
Share price	Market price per Share
Treasury share	Share bought back by issuing company

Appendix 1: **Summary of empirical studies on determinants of share buybacks.**

Author(s) & Year	Country & Period of Study	Method used	Research Findings
Dittmar(2000)	USA (1977-1996)	Tobit Model	Undervaluation is the prime motive for share repurchase followed by excess capital.
Jagannathan and Stephens (2003)	USA (1986-1996)	Logit Model	Frequent repurchases are characterized by larger firm size, less variation in operating income than infrequent repurchases.
Li & McNally (2007)	Canada (1987-2000)	conditional Even Study	The repurchases motivated by agency cost followed by undervaluation hypothesis.
Mitchell and Dharmawan (2007)	Australia (1996-2001)	Logit Model	The repurchases motivated by signalling of undervaluation

			followed by leverage hypothesis.
Andriosopoulos and Hoque (2013) UK,	Germany, and France (1997-2006)	Logit Model	Excess cash flow hypothesis is the prime motive for share repurchase in all the three countries
Yarram (2014)	Australia (2004-2010)	Probit Model.	The repurchases motivated by signalling, leverage and agency cost hypothesis
Lee (2014)	Malaysia 1997 to 2007	Tobit Model and CAAR	Use event-type analysis to examine abnormal returns and multivariate regressions indicate that firm characteristics.
Hyo Jin Kim et al 2013	Korea 2004 to 2010	Logit model	Ownership is measured by cash-flow rights, while control is measured by voting Rights. The wedge is measured as the gap between the voting rights and cash-flow rights.
Keasler, Terrill, and Robin T. Byerly (2015),	US 2006 to 2010	CAAR	Considers the stock buyback, its potential drawbacks, and Empirically explores the longer term results in terms of market capitalization changes.
Paul Fruin & Li Ma (2014)	US 2004 to 2013	CAAR , Factor analysis	Examine the returns surrounding buyback announcements to test, buyback programs signal subsequent outperformance and shareholder value.
Margaret (Peg) Horan (2012)	USA 2005 to 2008	EPS Model	Study a new EPS model that reports EPS in segments; those from operations and those from buybacks effect.

Adapted from (Sarthak Kumar Jena 2016)[The last 5 entries are compiled by the researcher]

Appendix 2 : Summary of share buybacks in Bursa Malaysia from years 1999-2016.

Year	Total number of companies
1999	12
2000	13
2001	26
2002	32
2003	62
2004	70
2005	127
2006	145
2007	154
2008	204
2009	196
2010	126
2011	127
2012	124
2013	128
2014	126
2015	130
2016	137

Source: Nadarajan et. al. (2009). Citation from Ramakrishnan et. al. (2007).
Information from 2010 to 2016 were compiled by researcher based on Bursa Malaysia companies announcements.