



## **The Wealth Effect of Share Buybacks: Evidence from Malaysia**

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### **ABSTRACT**

This paper investigates stock market reactions surrounding the announcement of actual share buybacks by companies listed on the Main Market of Bursa Malaysia from 2007 through 2011. An event study methodology was used to examine stock price reactions to 100 announcements of share buybacks involving 100 different listed companies. The market-adjusted return model (MARM) was used to capture the abnormal returns as share buybacks mostly involved actively traded companies. Overall, the CAAR, which was used to measure the wealth effect, showed an uptrend, but was not statistically significant for about 12 days after the event day before stabilising. This showed a positive wealth effect arising from the announcement. Thus, one can weakly conclude that the market generally responded favourably to the announcement of share buybacks. The evidence tends to support the signalling hypothesis and is consistent with the under valuation hypothesis.

**JEL Classification:** G14, G34

**Keywords:** Share Buybacks, Signalling, Abnormal returns, Cumulative Abnormal Returns

### **INTRODUCTION**

It has now become common practice for publicly listed companies in Malaysia to buy back their own shares on the open market. Being convinced of the many benefits that can be derived from these buybacks, companies that once were perceived as conservative have also embarked on these share buyback programmes.

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Two common methods that companies use to buy back their own shares are the single-price tender offer buyback and the open market buyback. Tender offer buybacks are executed using a fixed-price tender offer (Dann, 1981). Open market buybacks involve buying back small quantities of shares through a broker in the open market. The open market buyback is more flexible than a tender offer and often takes longer. Our study focuses on open market buybacks as only open market buybacks are allowed in Bursa Malaysia under the Malaysian legal framework (Ramakrishnan, Ravindran & Ganesan, 2007).

Share buybacks have long been allowed in the developed markets and, therefore, many studies have been conducted in these markets (Ikenberry, Lakonishok & Vermaelen, 1995; Chan, Ikenberry & Lee, 2004; Grullon & Michaely, 2004). These studies examined, among other topics, the reasons for buybacks and market reactions to buybacks or buyback announcements. In view of the differences in buyback laws and regulations and the maturity and size of the developed markets, these results might not be relevant to the Malaysian market. Furthermore, within the Malaysian market, studies in this area have been rare (Isa, Ghani & Lee, 2011). For example, we found only a few published studies on share buybacks in the Malaysian market: Isa, Ghani and Lee (2011), Wong, Lim and Chong (2011), Ramakhrisnan et al. (2007), Shahar and Abdullah (2007) and Lim and Bacha (2002). In view of the scarcity of empirical research on share buybacks in Malaysia, we hope our study will update and enrich the current literature on share buybacks. Thus, the objective of this study is to analyse the reaction of the share price pursuant to an announcement of share buybacks by companies listed on the Main Market of Bursa Malaysia Securities Bhd (BMSB) for 2007 through 2011. The organisation of this paper is as follows: (a) an overview of share buybacks in Malaysia, (b) previous research on share buybacks worldwide, including Malaysia, (c) data and methodology and (d) findings and implications of the study.

### **Overview of Share Buybacks in Malaysia**

Prior to September 1997, companies in Malaysia were not allowed to deal in their own shares. Section 67 of the Companies Act 1965 prohibits a company from holding in its name any of its issued share capital. The prohibition also extends to the giving of financial assistance to any person, whether directly or indirectly, and whether by means of a loan, guarantee or the provision of security or otherwise, for the purpose of dealing in the company's own shares. In September 1997, the provisions of Section 67 of the Act were affected by insertion of a new Section 67A. For the first time in Malaysia, this section allows a publicly traded company to buy back its own shares or to give financial assistance to any person for the purpose of purchasing its shares. When section 67A of the Companies Act 1965 was first introduced, it required the cancellation of shares repurchased and an amount equivalent to the nominal value of the shares cancelled to be transferred to a capital redemption reserve. This effectively precluded use of the treasury stock method of accounting for share buybacks. However, the Companies (Amendment) (No. 2) Act 1998, passed in parliament in October 1998, allows share buybacks to be retained as treasury shares (Tan, 2009).

According to Section 67A (as amended), the following conditions must be met before a share buyback can be executed by a publicly listed company:

- (a) it is solvent at the date of the purchase and will not become insolvent by incurring the debts involved in the obligation to pay for the shares so purchased;
- (b) the purchase is made through the Malaysian Stock Exchange on which the shares of the company are quoted and in accordance with the rules of the Stock Exchange; and
- (c) the purchase is made in good faith and in the interests of the company.

According to the amended subsection (3A) of Section 67A of the Companies Act 1965, a publicly listed company that has bought back its own shares is allowed:

- (a) to cancel the shares so purchased;
- (b) to retain the shares so purchased in treasury shares, or
- (c) to retain part of the shares so purchased as treasury shares and cancel the remainder, according to the company's needs.

Furthermore, according to subsection (3B) of Section 67A, a publicly listed company that has bought back its own shares may:

- (a) distribute the treasury shares as dividends to shareholders or
- (b) in accordance with the rules of the stock exchange, resell the treasury shares on the market of the stock exchange on which the shares are quoted.

In summary, the amendment to Section 67A has provided further flexibility to publicly listed companies in allowing shares repurchased to be held as treasury shares, which subsequently can either be distributed as share dividends to shareholders or reissued by resale in the open market. Additionally, the amendment allows for the consideration of the shares repurchased to be offset against the share premium account (MASB, 2004).

### **Motivation for Share Buybacks**

Studies in the US and other developed economies have shown that share buybacks are prompted by various and often interrelated motives. Some of the reasons or motives for share buybacks are discussed below.

#### **(a) Signalling Hypothesis**

One of the most influential motivators for share buybacks by companies is the signalling hypothesis. However, in an efficient market, share buybacks are unlikely to influence the share price. Advocates of the efficient market would argue that the share price of a company is fairly priced in the market. Thus, any repurchase by the company is simply a means of transferring a certain value (in cash terms) of the company to the selling shareholders for the fair value of their shares. Accordingly, there should be no effect on the value of the remaining shares in issue.

If the signalling hypothesis is true, then an inference which can be made is that the market's initial assessment of information is likely to be imperfect due to information asymmetry between management and outside investors. Logically, one can assume that the management has better information about a firm's current and sustainable future earnings. The management announces a

share buyback when it perceives that its shares are undervalued compared to the shares' intrinsic value. So, in times of depressed stock market prices, share buybacks provide an avenue for companies to take advantage of investment opportunities to buy back their shares at low prices. Hence, the announcement of a share buyback serves to communicate or signal the market regarding the management's belief that the company's value is higher than the current depressed market price suggests.

**(b) Free Cash Flow Hypothesis**

The next most influential motivator for share buybacks by companies is the free cash flow hypothesis. Companies can buy back their own shares when they have surplus cash and are unable to find investment assets with lucrative returns (Grullon & Ikenberry, 2000; Jensen, 1986). The purpose is to use up the surplus cash to prevent the management from investing in unprofitable projects. Oswald and Young (2004) argued that management used share buybacks as a mean to distribute surplus cash while at the same time taking advantage of investment opportunities to buy back their own shares which were perceived to be undervalued. In addition, management may choose share buybacks over dividends as a mean to distribute surplus cash due to the flexibility of the former, which will be discussed in part (f) on the dividend substitution hypothesis.

**(c) Prevent EPS Dilution Hypothesis**

Other motives of share buybacks include the prevention of earnings per share (EPS) dilution. EPS is equal to profits after taxes divided by the number of shares outstanding. EPS will increase if the number of shares in the denominator is reduced. When stock options are issued to employees, a potential dilution to EPS occurs. In general, studies have shown that stock option programmes are related to increased share purchases and decreased earnings retention (Weisbenner, 2001). Furthermore, large companies execute a gradual buyback of shares to neutralise the dilution of EPS caused by the exercising of stock options (Weisbenner, 2001). The decision to buy back should be related to options recently exercised and to options expected to be exercised in the foreseeable future (Kahle, 2002). The option-funding hypothesis predicts that share buybacks are intended to finance the exercise of employee stock options. Since only a small amount of shares per transaction is being bought back on the open market, there may not be a large change in the denominator to affect EPS.

**(d) Optimal Capital Structure**

Share buybacks have the effect of increasing a company's gearing ratio. Holding the debt capital constant, any shares repurchased will reduce the shareholders' equity in the financial statements and thus increase the debt-to-equity ratio. The effect of an increase in the debt-to-equity ratio holds true even if gearing is measured on the market value basis. In this case, the market value of the company's equity may decrease by the extent of the cash outflow after the repurchase.

The optimal leverage hypothesis was proposed to explain abnormal returns during buyback announcements (Vermaelen, 1981). If a company's gearing is low, increased use of debt capital will increase the interest tax shield, which may lower its cost of capital and thereby lead to an increase in the company's value (Skjeltorp & Seggaard, 2004). Thus, the management can use share buybacks to move towards the company's optimal capital structure and to lower the cost of capital. On the other hand, if a company's gearing is already high, share buybacks will likely increase the cost of capital. Thus, when a company's gearing is low, the leverage hypothesis predicts that if a share buyback is financed by debt capital, the equity shares' value may increase by the present value of the tax-savings on interest accrued to the equity holders (Tan, 2009).

**(e) Takeover Defence Hypothesis**

The management entrenchment hypothesis argues that when managements embarks on a share buyback, members of management are acting in their own interests at the expense of shareholders (Lamba & Ramsay, 2000). Under this hypothesis, share buybacks can be exploited as a defensive tactic against hostile takeovers by increasing the company's leverage. This would make the target of the takeover less attractive. At the same time, it would also reduce the number of shares available to potential offerors. The shareholders' interest hypothesis argues that when managers undertake share buybacks as a defence against hostile takeovers, they are acting in the interest of shareholders. If managers are constantly faced with threats of hostile takeovers, they may adopt a short-term focus with respect to their investment decisions, which may not be in the interests of shareholders. Through a share buyback, the threat of a hostile takeover may be reduced as the number of shares available to the public and potential offerors would be reduced, thereby allowing managers to focus on strategic and long-term investment decisions that are in the interests of shareholders (Tan, 2009).

**(f) Dividend Substitution Hypothesis**

Dividend payment is a very important element to attract prospective investors to invest in a company's shares. Since dividends are under the close examination of the market, managements are very careful with their dividend payout policy. They are less likely to increase dividends if the increase cannot be sustained in the future. Likewise, managements are also less likely to lower the dividends due to the adverse signal that it can send to the market. Thus, management may choose to distribute the temporary excess cash flow in the form of a share buyback rather than distributing an increased cash dividend that cannot be sustained in the future. Furthermore, due to signalling effects, companies should not amend their dividend policy often as doing so affects investors' confidence in the company and, as a result, may negatively affect its cost of equity and share price. To resolve this issue, a company can maintain a low dividend policy to avoid constraining the cash flow needed for its daily operating activities and use the share buyback to distribute excess cash (Bhattacharya & Dittmar, 2004;

Weigand, 2005). This method provides regular dividends and at the same time distributes excess cash to shareholders.

**(g) Earnings Management**

Managements that have insider information may also use share buybacks for window-dressing purposes. Studies have shown that share buybacks can be used by companies experiencing slowdowns to conceal detrimental results with respect to financial indicators such as EPS (Chan, Ikenberry, Lee & Wange, 2010; Li & McNally, 2003). However, as mentioned earlier, the effect is likely to be trivial as the given current maximum limit of 10 percent of the issued share capital allowable for share buybacks is usually executed in small quantities in the open market.

**Evidence from Overseas Markets**

In the overseas context, studies conducted by Vermaelen (1981) and Dann (1981) on US open market repurchases found that on average share prices increased by approximately 3 percent. However, for tender offer repurchases, both Dann (1981) and Vermaelen (1981) indicated that the positive response was much higher with an average price increase of about 16 percent and between 13.3 percent and 17.9 percent, respectively, in the analysis of cumulative average abnormal return for a period of 60 days after the tender offers were announced. Furthermore, Vermaelen's (1981) findings suggested that the price increase was not temporary but tended to last well after the repurchases and concluded that, on average, there was a permanent rise in share price for companies that repurchased their own shares.

Ikenberry, Lakonishok and Vermaelen (1995) studied long-run firm performance following open market share buyback announcements from 1980 through 1990. Their results showed an abnormal four-year buy-and-hold return of 12.1 percent on average after the initial announcement. An average abnormal return of 54.3 percent was found for value stocks where companies were more likely to repurchase their shares due to undervaluation. As for glamour stocks where undervaluation was less likely to be an important motive, no positive drift in abnormal returns was observed when repurchases were announced. The study also showed that the market erred in its initial response and appeared to ignore the information signalled through buyback announcements with respect to value stocks.

Chan, Ikenberry and Lee (2001) examined buyback announcements by focusing on whether the stocks bought back by the managers were consistent with the increased shareholders' value. Generally, when managers bought back their shares, the long-horizon return drifts following repurchase announcements were higher, consistent with the undervaluation hypothesis. A high abnormal performance for purchase companies with high free cash flow was evident. However, mixed results were found for the overall support for this hypothesis.

Oswald and Young (2004) surveyed the impact of agency problems on payout decisions and excess cash's role in explaining actual open market share buybacks. Using data from the UK, they found that buyback activity clustered in the cash-generative industries was rare where investment opportunities were available. They also found that abnormally high cash flows from investing and operating activities drove both the amount spent reacquiring shares and the probability of a buyback. The buyback companies reported improvements in post-repurchase operating performance. The findings also showed that managers used share buybacks as a flexible tool for distributing temporary cash surpluses.

Koerniadi et al. (2007) investigated the stock market reactions to both on-market and off-market share buyback programmes in New Zealand for 1995 through 2004. In New Zealand, share buybacks had become common during those years, although the number and size of buybacks were small. This was mainly due to the presence of the dividend imputation system, which diminished the tax consequences of cash dividends compared with capital gains. Overall, the market reacted favourably and significantly to share buyback announcements. On the announcement day, the on- and off-market buybacks had average abnormal returns of 3.25 percent and 3.12 percent, respectively. The reasons companies executed share buybacks were also consistent with the investment and free cash flow agency hypotheses.

However, in Australia, an empirical study conducted by Harris and Ramsay (1995) revealed that the share returns of companies announcing buybacks appeared to have little impact on subsequent earnings. The results indicated that the information signalling explanation for share buybacks could not, without further study, be supported for buybacks by Australian companies listed on the Australian Stock Exchange.

In India, Hyderabad (2009) found an average announcement return of 3 percent to 3.5 percent. The study was intended to test the signalling ability of buybacks in the Indian context. The market reaction in India was relatively higher than in the US and the UK. This indicated a greater degree of information asymmetry and the Indian capital markets were more undervalued. The year-wise movement in AAR and CAR was also analysed and CAR was lower in years with both a lower and higher number of buyback announcements. This independence of CAR to number of buyback announcements indicates that CAR was explained by other factors. An analysis of buyback methods showed that open market repurchases had greater signalling ability than fixed-price tender offers in the Indian context, contradicting the result found in the US context.

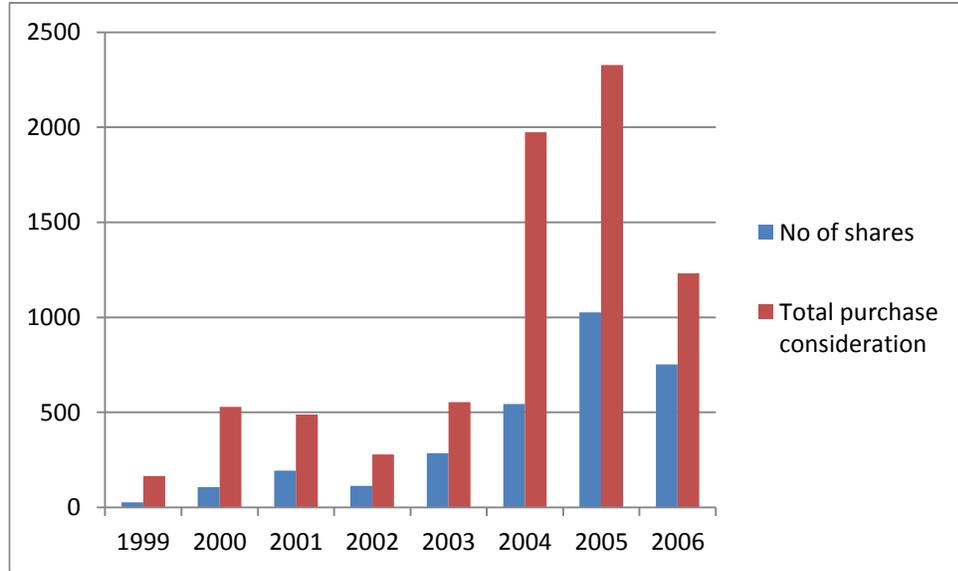
### **Evidence from Malaysian Market**

In the Malaysian context, Lim and Bacha (2002) analysed 131 observations from the large listed companies (Main Board) and small listed companies (Second Board) that announced share buybacks over a period of four years. The findings showed that 43 companies carried out share buybacks while the remaining 88 only announced the plan but did not proceed with it. For Main Board companies, announcement of the share buyback plan seemed to be more significant than the actual buyback. For instance, the windows for CAAR (0,+2) and CAAR (0,+60) for the companies announcing a share

buyback were 2.97 percent and 14.31 percent, respectively, while for companies with an actual buyback the windows were 2.29 percent and 9.03 percent. However, for the Second Board, the actual share buyback had a larger effect than just the announcement. The price reactions were all significantly higher by 42.31 percent for the post-event windows of 15, 30 and 60 days as compared to 31.11 percent when only an announcement was made.

Isa, Ghani and Lee (2011) examined the reaction of share prices surrounding the actual share buyback executed by companies listed on the Malaysian Stock Exchange from 2001 through 2005. Using the market model and the event study methodology, the result indicated a significant increase in share prices in a three-day period starting from the buyback day. They also found an overall price decrease in the pre-event period that suggested that companies timed their share buyback after a period of consecutive price decreases. This finding clearly demonstrates the presence of a signalling effect and is consistent with the undervaluation hypothesis. The findings also indicated that the share buyback programme can be used as an effective tool for price stabilisation.

Ramakrishnan et al. (2007) studied share buyback impacts on share prices within Bursa Malaysia jurisdiction. Using the t-test, this study tested for changes in prices and the standard deviations of prices before, during and after the share buyback for 1999 through 2006. A “still water pond analogy” was used to classify the before, during and after share buyback periods. The study was restricted to open market buybacks through a stockbroker as this is the only buyback method recognised by Bursa Malaysia. The authors found positive effects for share prices during and after the buyback as compared to before the buyback. The standard deviations for prices also differed significantly during the three periods. The average buyback per company in Bursa Malaysia from 1999 through 2006 is 37 transactions. In view of this high frequency of share buybacks, this study construed that company managements used the share buyback as a vehicle to signal information to investors. The robust results confirmed this signalling effect. The empirical findings supported the undervaluation hypothesis eulogised in the financial literature as the primary motive for share buybacks. The findings also showed a tremendous increase in share buyback activities for Malaysian companies, as shown in Figure A. Malaysian listed companies embarked on share buybacks on a big scale from 2004 onwards, with a tremendous increase in both considerations paid and buyback volume to acquire shares.



Source: Adapted from Ramakrishnan et al. (2007)

**Figure A** Summary of share buyback between 1999 to 2006 in Malaysia

Shahar and Abdullah (2007) investigated the market reactions to the announcement of a share buyback in relation to the fixed-price tender offer arrangement. The price reactions of 30 observations involving 21 listed companies surrounding the announcement dates were examined using an event study methodology. The market-adjusted return model (MARM) and the single-index market model (SIMM) were used to calculate the abnormal returns. Although many studies in the Western market have shown positive abnormal returns, this study found zero abnormal returns gained from these announcements. This implies that the stock market in Malaysia was semi-strongly efficient. Last, this study did not support any of the implications of the theories.

Wong, Lim and Chong (2011) investigated the share performance of companies listed on the Bursa Malaysia Top 100 index from 2006 through 2009 following a share buyback between the financial crisis period and the period prior to that in sub-groups based on size and book-to-market ratio and the management’s ability to time the market. The results showed that for the three event windows surrounding the share buyback, the overall CAR was significantly different from zero. The findings indicated that the management was able to identify the undervaluation of share price and time the market for share buyback. The share price performance also significantly improved after the share buyback. Across the market size quartile and BTM quartile, the t-test showed a significant difference from zero but not for buyback volume. However, only market size in the cross-sectional regression was significantly negatively related to CAR, while buyback volume and BTM ratio were not significantly different from zero. The CAR (-20, -1) also was not significantly different from zero.

## DATA AND METHODOLOGY

A random sample of 20 different companies (observations) was chosen for each year from 2007 through 2011. Altogether, 100 different companies (observations) were chosen from 2007 through 2011. If another share buyback announcement fell within these 61-day windows, the observation was not selected. This avoided the clustering effect arising from multiple share buyback announcements. Our study only measures the pure effect arising from only one share buyback announcement during these 61-day windows.

MARM is a simple method that assumes that a model of equilibrium expected returns exists where the average systematic risk is equal to one and the alpha ( $\alpha$ ) is equal to zero. This implies that no estimation of systematic risk or alpha is required. Shahar and Abdullah (2007) employed this model.

The actual buyback day is the event day (known as day 0). To obtain the abnormal returns, we use the market model. The event window is the 61 days, from day -30 to day +30, surrounding the event day. Daily returns of stock were computed using the formula below:

$$R_{i,t} = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}}$$

where,

$R_{i,t}$  = the daily return of stock for stock  $i$  on day  $t$ ,

$P_{i,t}$  = the closing price of stock  $i$  on day  $t$ ,

$P_{i,t-1}$  = the closing price of stock  $i$  on day  $t-1$ .

The returns of stock are computed from day -30 to day +30.

Next, we used the Kuala Lumpur Composite Index (now known as FTSE Bursa Malaysia KLCI) as the market return's proxy. The return of the market index was calculated as follows:

$$R_{m,t} = \frac{C_{i,t} - C_{i,t-1}}{C_{i,t-1}}$$

where,

$R_{m,t}$  = the daily return of market on day  $t$ ,

$C_{i,t}$  = the closing KLCI on day  $t$ ,

$C_{i,t-1}$  = the closing KLCI on day  $t-1$ .

After 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:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Next, the daily average abnormal returns ( $AAR_t$ ) for a specific day,  $t$  was computed by adding all the daily abnormal returns for each of the event day  $t$  and then dividing the figure with the number of observations.

$$AAR_t = \sum_{i=1}^N AR_{i,t} / N_t$$

Where  $N_t$  is the number of observations on day  $t$

Next, the cumulative average abnormal returns (CAAR) surrounding the announcement day were calculated by adding up the average abnormal returns (AAR) which is shown as follows:

$$CAAR_t = \sum_{k=t-T}^t AAR_k$$

Where  $T$  is the number of event days before day  $t$

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:

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

$$\text{where } S_t = \sqrt{\frac{\sum_{i=1}^N (AR_{i,t} - AAR_t)^2}{N_t - 1}}$$

where  $i = 1, 2, 3, \dots, N$ ,

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.

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

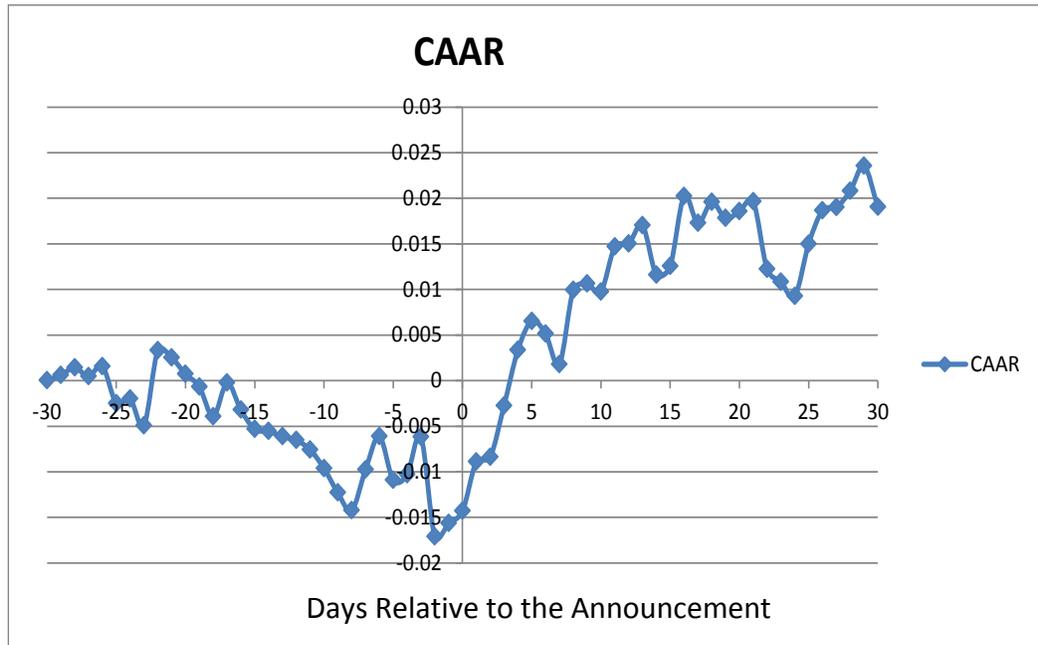
$$\text{where } S_t = \sqrt{\frac{\sum_{i=1}^N [(AAR_T - (CAAR_T)/T)]^2}{T - 1}}$$

where  $t = 1, 2, 3, \dots, T$

## FINDINGS

### Returns Analysis for All Observation

Figure 1 shows the analysis of abnormal returns for 100 observations from 2007 through 2011, with the event day (day 0) defined as the actual buyback day.



**Figure 1** Graph of CAAR surrounding the announcement of share buybacks for all 100 observations from 2007 to 2011

The overall results for 2007 through 2011 show some upward effects on share prices after a buyback announcement. Starting from day 0, which is the event day, the CAAR trends upward for about 12 days and then stabilises until day +24. Thereafter, the CAAR continues a slight upward trend until day +29. This shows a positive wealth effect arising from the announcement. One can conclude that the market generally responded favourably to the announcement of share buybacks.

Figure 1 also indicates that about 20 days before the event day, prices trended downwards. This finding may indicate that companies tend to plan and execute their buybacks after a period of decrease in share prices.

In Panel 1 of Table 1, except for day -22 and day -2, the t-test shows that none of the AAR is significantly different from zero at the level of 5 percent during these 61-day periods. Panel 2 of Table 1 also shows that none of the CAAR's event periods is significantly different from zero at the level of 5 percent. The post-event period CAAR (0, +30) shows a positive value of 3.469 percent as compared to a value of -1.566

percent shown in the pre-event period CAAR (-30, -1). This corroborates that share buybacks have a positive impact on share prices.

The results are consistent with the signalling hypothesis and with many prior studies (Isa et al., 2011; Chan et al., 2004; Koerniadi et al., 2007). The market interprets companies' decision to buy back their shares as a positive signal. Generally, the result indicates that a share buyback can be a useful device for price stabilisation if properly executed, consistent with Isa, Ghani and Lee (2011).

**Table 1** Average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) surrounding the share buyback of companies for all observations from 2007 to 2011 (N=100)

Panel 1: Daily AAR and CAAR relative to actual share buyback day

Day	AAR (%)	AAR t-test	CAAR (%)	Day	AAR (%)	AAR t-test	CAAR (%)
-30	0.0008	0.0033	0.0008	0	0.1342	0.3699	(1.4521)
-29	0.0600	0.2208	0.0608	1	0.5429	1.8052	(0.9092)
-28	0.0608	0.3013	0.1216	2	0.0492	0.2056	(0.8600)
-27	(0.0958)	(0.3357)	0.0259	3	0.5635	1.6582	(0.2965)
-26	0.1106	0.3308	0.1365	4	0.6096	1.7969	0.3131
-25	(0.4061)	(1.1308)	(0.2696)	5	0.3173	1.6289	0.6304
-24	0.0504	0.1971	(0.2191)	6	(0.1369)	(0.5354)	0.4935
-23	(0.2940)	(1.2666)	(0.5131)	7	(0.3358)	(1.7188)	0.1578
-22	0.8224	2.3627 *	0.3093	8	0.8145	1.8418	0.9723
-21	(0.0784)	(0.1991)	0.2309	9	0.0713	0.2237	1.0436
-20	(0.1795)	(0.8579)	0.0514	10	(0.0889)	(0.3767)	0.9547
-19	(0.1395)	(0.8540)	(0.0881)	11	0.4925	1.4301	1.4472
-18	(0.3264)	(1.3994)	(0.4146)	12	0.0338	0.0802	1.4810
-17	0.3693	1.2334	(0.0453)	13	0.2000	1.0270	1.6810
-16	(0.2977)	(1.0958)	(0.3430)	14	(0.5413)	(1.7124)	1.1398
-15	(0.2101)	(0.7754)	(0.5531)	15	0.0942	0.3278	1.2340
-14	(0.0223)	(0.0692)	(0.5753)	16	0.7679	1.9525	2.0019
-13	(0.0574)	(0.1440)	(0.6328)	17	(0.2958)	(0.9825)	1.7061
-12	(0.0418)	(0.1616)	(0.6746)	18	0.2309	0.6920	1.9371
-11	(0.1037)	(0.4620)	(0.7783)	19	(0.1764)	(0.4757)	1.7606
-10	(0.2041)	(0.7115)	(0.9824)	20	0.0752	0.2695	1.8358
-9	(0.2675)	(0.8413)	(1.2499)	21	0.1080	0.5251	1.9438
-8	(0.1951)	(0.5238)	(1.4450)	22	(0.7416)	(1.8283)	1.2023
-7	0.4482	1.1770	(0.9968)	23	(0.1412)	(0.5836)	1.0610
-6	0.3657	0.7162	(0.6310)	24	(0.1565)	(0.6526)	0.9046
-5	(0.4809)	(1.7941)	(1.1119)	25	0.5742	1.4905	1.4787
-4	0.0603	0.1829	(1.0516)	26	0.3673	1.1736	1.8460
-3	0.4133	1.1399	(0.6383)	27	0.0356	0.1175	1.8816
-2	(1.0933)	(2.7205) *	(1.7315)	28	0.1767	0.7632	2.0583
-1	0.1452	0.4770	(1.5863)	29	0.2757	1.2729	2.3340
				30	(0.4513)	(1.1373)	1.8827

Panel 2: CAAR over different event periods

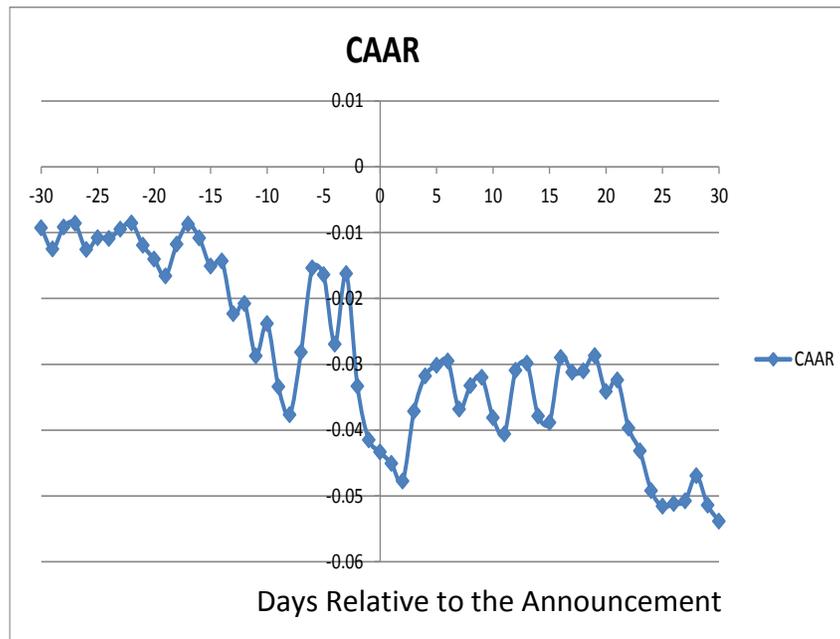
CAAR t1,t2	CAAR (%)	CAAR t-test
Day -30 to -1	(1.5658)	(0.8303)
Day 0 to 2	0.7263	1.5889
Day 3 to 30	2.7427	1.3359
Day 0 to 30	3.4690	1.8299
Day -30 to 30	1.9032	0.6629

Note : \* significant at 0.05 level

**Year by year analysis from 2007 to 2011**

**Returns Analysis for 2007**

For 2007, the period of the study coincides with the subprime crisis in the US. Figure 2 indicates that about 15 days before the event day, prices tended to trend downwards. Beginning from the event day, the CAAR drops slightly for 2 days and then recovers slightly for about 4 days before stabilising until day +22. Thereafter, the CAAR continues to trend downwards until day +30. This result could be due to the effects of the subprime crisis in the US on the Malaysian stock market. During these periods, the results show that the actual share buybacks by companies, at the most, can only support and stabilise the share prices for about 16 days. The CAAR continues its downward trend again after day +22.



**Figure 2** Graph of CAAR surrounding the announcement of share buybacks for 20 observations for year 2007

For Panel 1 of Table 2, the t-test shows that none of the AAR is significantly different from zero at the level of 5 percent during these 61-day periods. This might imply that when the market was bearish the reactions to the share buyback announcements were subdued and insignificant. Except for the event period from day 0 to day +2, which is significant at the level of 1 percent, Panel 2 of Table 2 shows that none of the CAAR’s event periods is significantly different from zero at the level of 5 percent. This result also shows that share buybacks have the temporary effect of supporting a decline in share prices of companies in a weakening market before the continuation of a downtrend

in prices. The post-event period CAAR (0, +30) shows a smaller negative value of 1.234 percent as compared to a larger negative value of 4.148 percent during the pre-event period CAAR (-30, -1). We reason that the share buyback signalling effect may not be able to continuously support the selling pressure in a downtrend market. Furthermore, the market participants may also pay less attention to such announcements to support the market during those times.

**Table 2** Average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) surrounding share buyback of companies for 20 observations in 2007 (N=20)

Panel 1: Daily AAR and CAAR relative to actual share buyback day

Day	AAR (%)	AAR t-test	CAAR (%)	Day	AAR (%)	AAR t-test	CAAR (%)
-30	(0.9269)	(1.7603)	(0.9269)	0	(0.1859)	(0.2212)	(5.9155)
-29	(0.3216)	(0.6779)	(1.2485)	1	(0.1734)	(0.2815)	(6.0889)
-28	(1.2485)	0.4097	(2.4970)	2	(0.2664)	(0.4505)	(6.3553)
-27	0.0541	0.0894	(2.4430)	3	1.0582	1.0942	(5.2971)
-26	(0.3951)	(0.8587)	(2.8380)	4	0.5387	0.6154	(4.7584)
-25	0.1797	0.3212	(2.6583)	5	0.1619	0.2705	(4.5965)
-24	(0.0158)	(0.0264)	(2.6741)	6	0.0635	0.1495	(4.5331)
-23	0.1433	0.2791	(2.5308)	7	(0.7302)	(1.8011)	(5.2633)
-22	0.0958	0.1555	(2.4350)	8	0.3568	0.3688	(4.9065)
-21	(0.3394)	(0.9899)	(2.7744)	9	0.1275	0.2600	(4.7789)
-20	(0.2121)	(0.5772)	(2.9865)	10	(0.6151)	(1.3165)	(5.3941)
-19	(0.2556)	(0.7132)	(3.2421)	11	(0.2460)	(0.4674)	(5.6401)
-18	0.4847	0.5866	(2.7575)	12	0.9651	0.8589	(4.6749)
-17	0.3032	0.4985	(2.4542)	13	0.1108	0.2361	(4.5641)
-16	(0.2089)	(0.4254)	(2.6632)	14	(0.8059)	(1.7593)	(5.3700)
-15	(0.4294)	(1.0954)	(3.0926)	15	(0.0974)	(0.1575)	(5.4675)
-14	0.0772	0.1423	(3.0153)	16	0.9893	0.7927	(4.4781)
-13	(0.8005)	(1.8975)	(3.8158)	17	(0.2258)	(0.2399)	(4.7040)
-12	0.1566	0.2341	(3.6592)	18	0.0217	0.0265	(4.6823)
-11	(0.7968)	(1.6931)	(4.4560)	19	0.2298	0.4308	(4.4525)
-10	0.4922	0.8460	(3.9638)	20	(0.5448)	(1.2120)	(4.9973)
-9	(0.9584)	(1.4407)	(4.9222)	21	0.1778	0.2627	(4.8195)
-8	(0.4263)	(0.7470)	(5.3484)	22	(0.7323)	(1.7963)	(5.5518)
-7	0.9497	1.0568	(4.3987)	23	(0.3455)	(0.6919)	(5.8973)
-6	1.2776	0.7507	(3.1212)	24	(0.6048)	(0.9648)	(6.5021)
-5	(0.1013)	(0.1978)	(3.2225)	25	(0.2370)	(0.3522)	(6.7391)
-4	(1.0530)	(2.2507)	(4.2755)	26	0.0404	0.0990	(6.6988)
-3	1.0699	1.0303	(3.2055)	27	0.0430	0.0610	(6.6557)
-2	(1.7077)	(1.9741)	(4.9133)	28	0.3807	0.5933	(6.2750)
-1	(0.8163)	(0.7939)	(5.7295)	29	(0.4478)	(1.0841)	(6.7228)
				30	(0.2411)	(0.4915)	(6.9639)

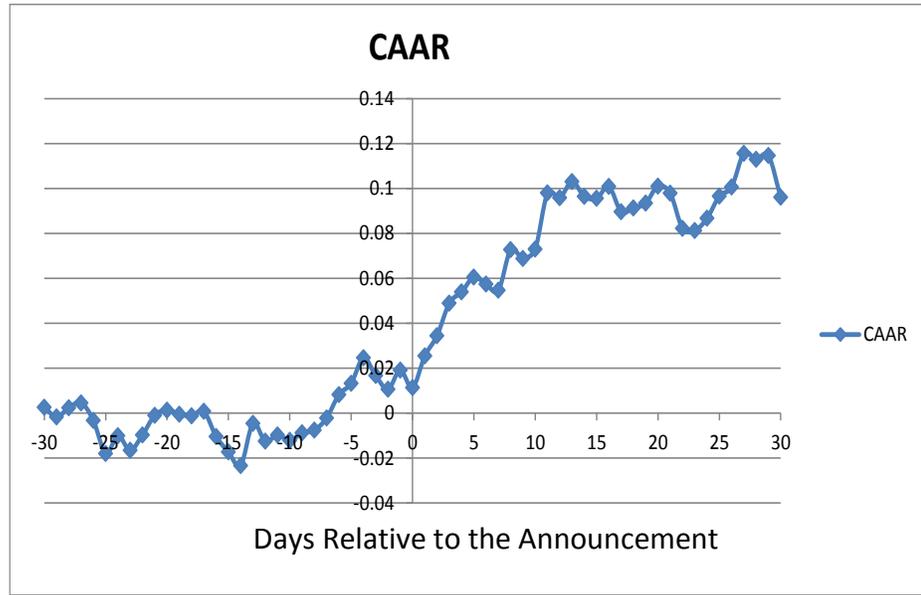
Panel 2: CAAR over different event periods

CAAR t1,t2	CAAR (%)	CAAR t-test
Day -30 to -1	(4.1482)	(1.1521)
Day 0 to 2	(0.6257)	(7.1580) **
Day 3 to 30	(0.6087)	(0.2253)
Day 0 to 30	(1.2344)	(0.3775)
Day -30 to 30	(5.3825)	(1.1991)

Note : \*\* significant at 0.01 level

### Returns Analysis for 2008

For 2008, the period of the study corresponds to the recovery of the subprime crisis in the US. Figure 3 indicates that before the event day, prices tend to stabilise. Starting from day 0, the CAAR trends upward for about 12 days and then stabilises until day +29. After day +29, the price may fall. Generally, for 2008, the CAAR trends upward after the event day. This result could be due to the effects of recovery in the stock market.



**Figure 3** Graph of CAAR surrounding the announcement of share buybacks for 20 observations for year 2008

For Panel 1 of Table 3, except for day +5, the t-test shows that none of the AAR is significantly different from zero at the level of 5 percent during these 61-day periods. Panel 2 of Table 3 also shows that none of the CAAR's event periods is significantly different from zero. The post-event period CAAR (0, +30) shows a larger positive value of 7.697 percent as compared to a smaller positive value of 1.907 percent shown in the pre-event period CAAR (-30, -1). This reveals that share buybacks had a strong positive impact on share prices during the recovery period.

**Table 3** Average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) surrounding share buyback of companies for 20 observations in 2008 (N=20)

Panel 1: Daily AAR and CAAR relative to actual share buyback day							
Day	AAR (%)	AAR t-test	CAAR (%)	Day	AAR (%)	AAR t-test	CAAR (%)
-30	0.2601	0.4328	0.2601	0	(0.7695)	(0.7054)	0.5475
-29	(0.4347)	(0.5867)	(0.1745)	1	1.4031	1.5858	1.9506
-28	(0.1745)	0.7728	(0.3490)	2	0.9065	1.2790	2.8571
-27	0.2163	0.2366	(0.1327)	3	1.4497	1.8733	4.3067
-26	(0.7780)	(0.8331)	(0.9107)	4	0.4945	0.3977	4.8012
-25	(1.4768)	(1.9826)	(2.3876)	5	0.6676	2.2772 *	5.4688
-24	0.7897	1.3319	(1.5979)	6	(0.3217)	(0.4078)	5.1471
-23	(0.6483)	(1.0280)	(2.2461)	7	(0.2735)	(0.5136)	4.8737
-22	0.6879	0.8594	(1.5583)	8	1.8083	1.4381	6.6820
-21	0.8677	1.5107	(0.6906)	9	(0.3917)	(0.4318)	6.2903
-20	0.2344	0.3161	(0.4562)	10	0.4244	0.7402	6.7146
-19	(0.1828)	(0.3228)	(0.6390)	11	2.4923	1.6779	9.2069
-18	(0.0687)	(0.1656)	(0.7077)	12	(0.2065)	(0.1684)	9.0005
-17	0.1952	0.3123	(0.5125)	13	0.7106	2.0505	9.7111
-16	(1.1197)	(1.7364)	(1.6322)	14	(0.6511)	(1.0216)	9.0601
-15	(0.6804)	(1.3915)	(2.3126)	15	(0.0935)	(0.1015)	8.9666
-14	(0.6102)	(0.7517)	(2.9228)	16	0.5288	0.7542	9.4954
-13	1.8779	1.5234	(1.0448)	17	(1.1181)	(1.6591)	8.3773
-12	(0.7949)	(1.0578)	(1.8398)	18	0.1683	0.1978	8.5456
-11	0.2710	0.5740	(1.5687)	19	0.2121	0.8131	8.7577
-10	(0.2334)	(0.3537)	(1.8021)	20	0.7577	0.7904	9.5154
-9	0.3293	0.6608	(1.4728)	21	(0.3181)	(0.5151)	9.1973
-8	0.1287	0.2337	(1.3441)	22	(1.5613)	(0.9892)	7.6360
-7	0.5335	0.4062	(0.8107)	23	(0.1011)	(0.1835)	7.5349
-6	1.0393	0.5676	0.2287	24	0.5447	1.4193	8.0797
-5	0.5029	0.9623	0.7316	25	0.9889	0.7182	9.0686
-4	1.1388	0.8458	1.8704	26	0.4053	0.3163	9.4739
-3	(0.7910)	(0.7248)	1.0795	27	1.5013	1.4365	10.9752
-2	(0.6060)	(1.0503)	0.4735	28	(0.2634)	(0.4175)	10.7118
-1	0.8435	1.2251	1.3170	29	0.1648	0.3889	10.8766
				30	(1.8625)	(1.1271)	9.0141

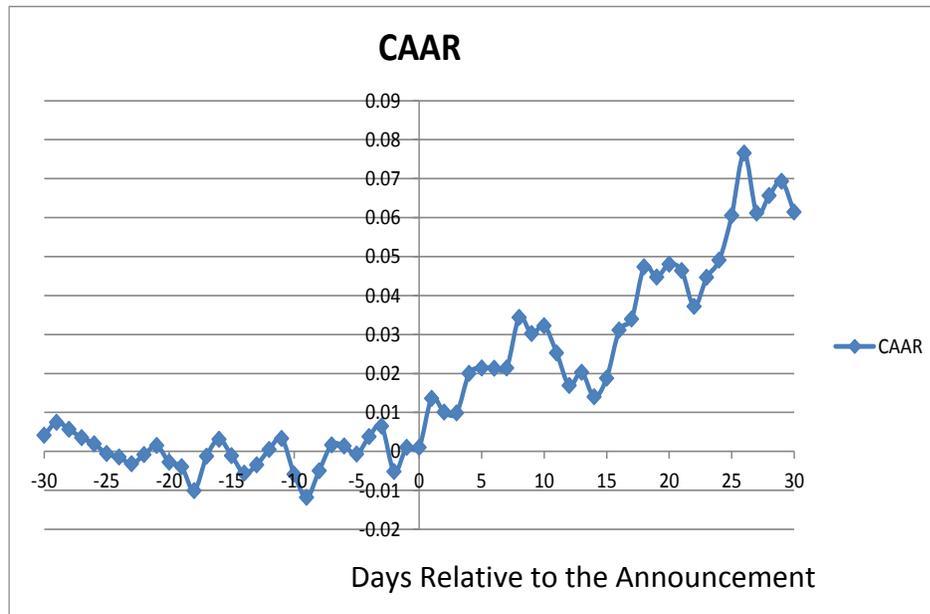
  

Panel 2: CAAR over different event periods		
CAAR t1,t2	CAAR (%)	CAAR t-test
Day -30 to -1	1.9066	0.4592
Day 0 to 2	1.5401	0.7811
Day 3 to 30	6.1570	1.2241
Day 0 to 30	7.6971	2.0162
Day -30 to 30	9.6038	1.4294

Note : \* significant at 0.05 level

**Returns Analysis for 2009**

For 2009, Figure 4 indicates that before the event day, prices tend to stabilise. Starting on day 0, the CAAR trends upwards for about 10 days, then moves downwards slightly until day +14 before continuing its upward trend until day +26. Thereafter, the CAAR stabilises until day +29 and the price may fall after day +29.



**Figure 4** Graph of CAAR surrounding the announcement of share buybacks for 20 observations for year 2009

For Panel 1 of Table 4, the t-test shows that none of the AAR and CAAR is significantly different from zero at the level of 5 percent during these 61-day periods. Panel 2 of Table 4 also shows that none of the CAAR’s event periods is significantly different from zero. The post-event period CAAR (0, +30) shows a larger positive value of 6.045 percent as compared to a smaller positive value of 0.1004 percent shown in the pre-event period CAAR (-30, -1). This again reveals that the share buybacks have a positive but insignificant impact on share prices. This result is consistent with the result obtained for 2008.

**Table 4** Average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) surrounding share buyback of companies for 20 observations in 2009 (N=20)

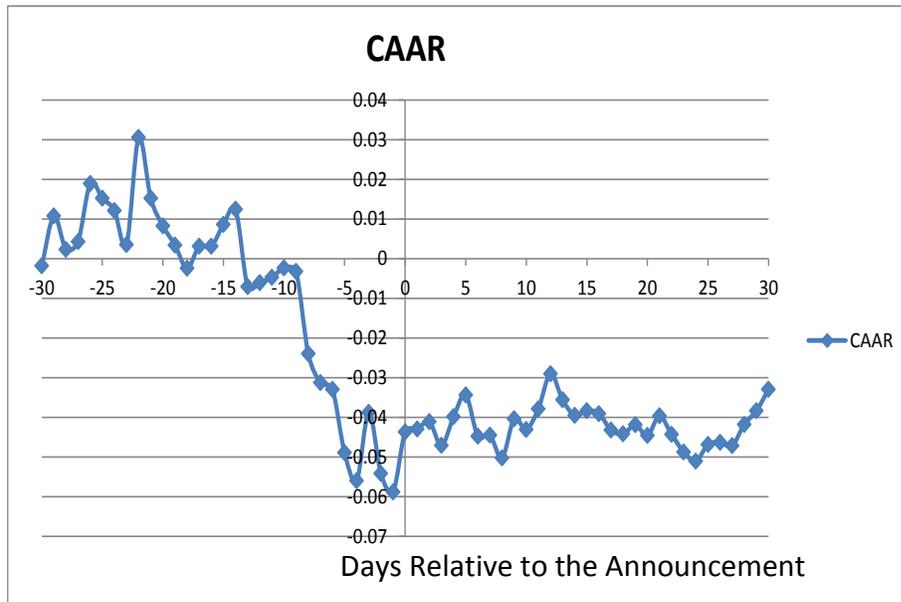
Panel 1: Daily AAR and CAAR relative to actual share buyback day							
Day	AAR (%)	AAR t-test	CAAR (%)	Day	AAR (%)	AAR t-test	CAAR (%)
-30	0.4101	0.9823	0.4101	0	0.0023	0.0058	1.0292
-29	0.3368	0.4295	0.7469	1	1.2537	1.8164	2.2829
-28	0.7469	(0.2334)	1.4937	2	(0.3499)	(0.6429)	1.9330
-27	(0.2174)	(0.2748)	1.2763	3	(0.0179)	(0.0304)	1.9150
-26	(0.1561)	(0.2487)	1.1203	4	1.0103	1.7344	2.9253
-25	(0.2541)	(0.5409)	0.8661	5	0.1429	0.3970	3.0682
-24	(0.0897)	(0.1756)	0.7764	6	(0.0089)	(0.0203)	3.0593
-23	(0.1679)	(0.2544)	0.6085	7	0.0090	0.0146	3.0683
-22	0.2326	0.4115	0.8412	8	1.2940	1.8525	4.3623
-21	0.2347	0.3340	1.0759	9	(0.4152)	(0.6037)	3.9472
-20	(0.4252)	(0.8336)	0.6507	10	0.2034	0.3427	4.1506
-19	(0.1227)	(0.3958)	0.5280	11	(0.6996)	(1.0334)	3.4510
-18	(0.6089)	(0.7964)	(0.0809)	12	(0.8327)	(0.7124)	2.6183
-17	0.8836	0.9707	0.8027	13	0.3357	0.5918	2.9540
-16	0.4319	0.5557	1.2347	14	(0.6297)	(0.8111)	2.3242
-15	(0.4180)	(0.4317)	0.8166	15	0.4808	0.8777	2.8050
-14	(0.4521)	(0.8101)	0.3645	16	1.2315	1.0733	4.0364
-13	0.2155	0.5604	0.5800	17	0.2877	0.6840	4.3242
-12	0.3964	0.6670	0.9764	18	1.3393	1.4199	5.6635
-11	0.2830	0.5380	1.2594	19	(0.2619)	(0.1554)	5.4016
-10	(0.9212)	(0.8362)	0.3382	20	0.3289	0.4134	5.7306
-9	(0.5936)	(1.0054)	(0.2554)	21	(0.1672)	(0.5735)	5.5633
-8	0.6858	1.6691	0.4303	22	(0.9192)	(0.7989)	4.6441
-7	0.6595	0.6577	1.0898	23	0.7465	0.8951	5.3906
-6	(0.0297)	(0.1025)	1.0601	24	0.4423	0.5404	5.8330
-5	(0.2059)	(0.4856)	0.8542	25	1.1485	1.0453	6.9815
-4	0.4507	0.7968	1.3050	26	1.6021	2.0314	8.5836
-3	0.2675	0.6170	1.5724	27	(1.5401)	(1.6982)	7.0435
-2	(1.1681)	(1.5404)	0.4043	28	0.4448	0.6918	7.4884
-1	0.6226	1.5546	1.0269	29	0.3652	0.6633	7.8536
				30	(0.7817)	(1.0444)	7.0719

Panel 2: CAAR over different event periods		
CAAR t1,t2	CAAR (%)	CAAR t-test
Day -30 to -1	0.1004	0.0374
Day 0 to 2	0.9061	0.6207
Day 3 to 30	5.1389	1.2497
Day 0 to 30	6.0450	1.5548
Day -30 to 30	6.1454	1.2119

Note : \* significant at 0.05 level

**Returns Analysis for 2010**

For 2010, Figure 5 indicates that about 10 days prior to the event day, prices tend to trend downwards. Beginning from the event day, the CAAR stabilises until day +30.



**Figure 5** Graph of CAAR surrounding the announcement of share buybacks for 20 observations for year 2010

For Panel 1 of Table 5, the t-test shows that, except for day -18, none of the AAR and CAAR is significantly different from zero at the level of 5 percent during these 61-day periods. Panel 2 of Table 5 also shows that none of the CAAR’s event periods is significantly different from zero. In 2010, the results suggest that the overall reactions to the share buyback announcement were insignificant. The post-event period CAAR (0, +30) shows a positive value of 2.588 percent as compared to a negative value of 5.883 percent shown in the pre-event period CAAR (-30, -1). The result shows that share buybacks have a minor positive and insignificant impact on share prices.

**Table 5** Average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) surrounding the share buyback of companies for 20 observations in 2010 (N=20)

Panel 1: Daily AAR and CAAR relative to actual share buyback day							
Day	AAR (%)	AAR t-test	CAAR (%)	Day	AAR (%)	AAR t-test	CAAR (%)
-30	(0.1811)	(0.3933)	(0.1811)	0	1.5167	1.4898	(2.4489)
-29	1.2573	2.1464	1.0762	1	0.0728	0.1167	(2.3761)
-28	1.0762	(1.6472)	2.1524	2	0.1856	0.3745	(2.1905)
-27	0.1933	0.5030	2.3457	3	(0.5985)	(0.5917)	(2.7890)
-26	1.4635	1.2909	3.8093	4	0.7224	1.1682	(2.0666)
-25	(0.3667)	(0.2392)	3.4426	5	0.5507	0.9658	(1.5160)
-24	(0.3152)	(0.3575)	3.1274	6	(1.0401)	(2.0925)	(2.5561)
-23	(0.8582)	(1.4979)	2.2692	7	0.0279	0.0868	(2.5282)
-22	2.7052	1.9548	4.9744	8	(0.5754)	(0.6607)	(3.1035)
-21	(1.5346)	(0.9208)	3.4398	9	0.9856	1.7744	(2.1179)
-20	(0.6940)	(1.6168)	2.7458	10	(0.2718)	(0.4733)	(2.3897)
-19	(0.4850)	(1.2471)	2.2608	11	0.5230	0.8501	(1.8667)
-18	(0.5848)	(2.5203) *	1.6761	12	0.8829	1.1272	(0.9839)
-17	0.5551	0.9427	2.2311	13	(0.6586)	(1.8830)	(1.6425)
-16	(0.0011)	(0.0020)	2.2300	14	(0.3859)	(0.3489)	(2.0284)
-15	0.5482	0.7201	2.7782	15	0.1146	0.1560	(1.9138)
-14	0.3832	0.3134	3.1614	16	(0.0737)	(0.1578)	(1.9875)
-13	(1.9538)	(1.5454)	1.2077	17	(0.4138)	(0.4404)	(2.4012)
-12	0.1020	0.1950	1.3096	18	(0.0965)	(0.1289)	(2.4977)
-11	0.1375	0.2369	1.4471	19	0.2273	0.5121	(2.2705)
-10	0.2369	0.4699	1.6840	20	(0.2679)	(0.6941)	(2.5384)
-9	(0.0900)	(0.0724)	1.5941	21	0.4921	0.9233	(2.0462)
-8	(2.0731)	(1.3017)	(0.4791)	22	(0.4655)	(1.0736)	(2.5117)
-7	(0.7307)	(1.7605)	(1.2098)	23	(0.4442)	(1.2856)	(2.9560)
-6	(0.1632)	(0.2860)	(1.3730)	24	(0.2278)	(0.6955)	(3.1838)
-5	(1.5987)	(1.7199)	(2.9717)	25	0.4141	1.1109	(2.7697)
-4	(0.7080)	(1.3378)	(3.6797)	26	0.0547	0.1768	(2.7150)
-3	1.7227	1.6560	(1.9570)	27	(0.0786)	(0.3284)	(2.7935)
-2	(1.5387)	(1.0033)	(3.4957)	28	0.5358	1.4380	(2.2577)
-1	(0.4700)	(0.7238)	(3.9656)	29	0.3403	0.6404	(1.9173)
				30	0.5400	0.8080	(1.3773)

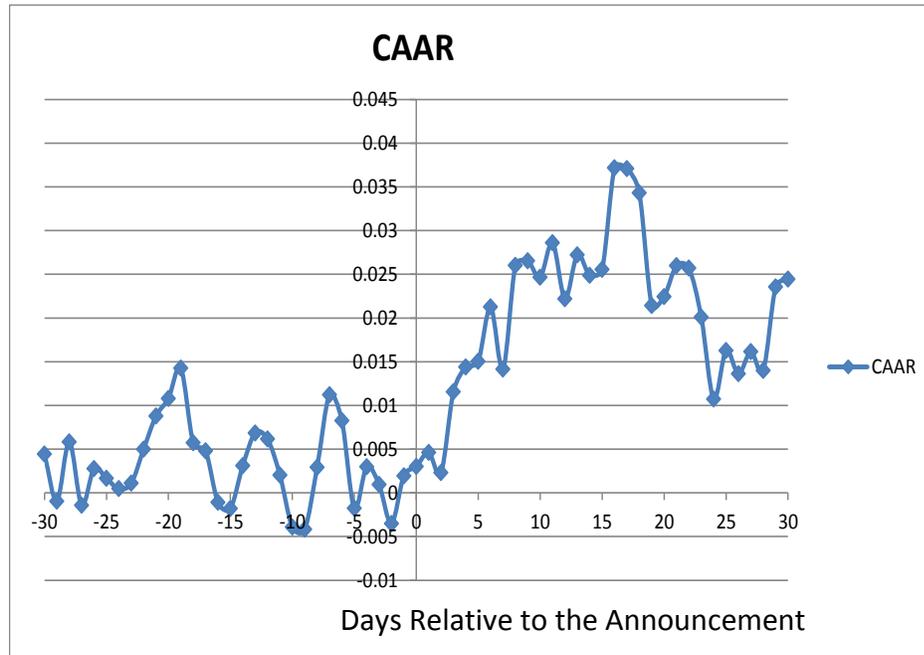
  

Panel 2: CAAR over different event periods		
CAAR t1,t2	CAAR (%)	CAAR t-test
Day -30 to -1	(5.8827)	(1.0040)
Day 0 to 2	1.7752	1.2762
Day 3 to 30	0.8132	0.2984
Day 0 to 30	2.5884	0.4184
Day -30 to 30	(3.2944)	(0.4943)

Note : \* significant at 0.05 level

**Returns Analysis for 2011**

For 2011, Figure 6 indicates that before the event day, prices tend to stabilise. Starting from day 0, the CAAR trends upwards for about 16 days, then trends downwards until day +24 before continuing its upward trend until day +30.



**Figure 6** Graph of CAAR surrounding the announcement of share buybacks for 20 observations for year 2011

For Panel 1 of Table 6, the t-test shows that none of the AAR and CAAR is significantly different from zero at the level of 5 percent during these 61-day periods. Panel 2 of Table 6 also shows that none of the CAAR’s event periods is significantly different from zero. The post-event period CAAR (0, +30) shows a larger positive value of 2.249 percent as compared to a smaller positive value of 0.195 percent shown in the pre-event period CAAR (-30, -1). This again shows that share buybacks have a positive but insignificant impact on share prices. This result is consistent with the results obtained for 2008, 2009 and 2010.

**Table 6** Average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) surrounding the share buyback of companies for 20 observations in 2011 (N=20)

Panel 1: Daily AAR and CAAR relative to actual share buyback day							
Day	AAR (%)	AAR t-test	CAAR (%)	Day	AAR (%)	AAR t-test	CAAR (%)
-30	0.4417	0.6764	0.4417	0	0.1074	0.1492	(0.4728)
-29	(0.5376)	(0.9014)	(0.0960)	1	0.1581	0.2691	(0.3146)
-28	(0.0960)	1.4434	(0.1919)	2	(0.2297)	(0.4879)	(0.5443)
-27	(0.7252)	(1.2631)	(0.9171)	3	0.9259	1.8212	0.3816
-26	0.4186	0.7691	(0.4985)	4	0.2824	0.8922	0.6640
-25	(0.1124)	(0.3205)	(0.6109)	5	0.0637	0.1342	0.7276
-24	(0.1167)	(0.4233)	(0.7275)	6	0.6226	0.8271	1.3503
-23	0.0612	0.1458	(0.6663)	7	(0.7120)	(1.7437)	0.6383
-22	0.3905	1.2579	(0.2758)	8	1.1888	1.0251	1.8271
-21	0.3797	0.6506	0.1039	9	0.0502	0.0503	1.8773
-20	0.1994	0.5750	0.3032	10	(0.1853)	(0.3444)	1.6921
-19	0.3484	0.9679	0.6516	11	0.3928	1.0305	2.0848
-18	(0.8545)	(1.8206)	(0.2028)	12	(0.6399)	(1.2806)	1.4449
-17	(0.0909)	(0.1242)	(0.2938)	13	0.5017	0.9470	1.9467
-16	(0.5905)	(0.8263)	(0.8843)	14	(0.2337)	(0.4388)	1.7130
-15	(0.0707)	(0.1856)	(0.9550)	15	0.0666	0.1542	1.7796
-14	0.4905	1.4709	(0.4646)	16	1.1639	1.5518	2.9434
-13	0.3736	0.4629	(0.0909)	17	(0.0090)	(0.0314)	2.9345
-12	(0.0689)	(0.1336)	(0.1599)	18	(0.2783)	(0.7358)	2.6562
-11	(0.4135)	(0.7408)	(0.5733)	19	(1.2893)	(1.9879)	1.3669
-10	(0.5951)	(1.4482)	(1.1684)	20	0.1018	0.2524	1.4687
-9	(0.0249)	(0.0771)	(1.1933)	21	0.3556	1.4975	1.8243
-8	0.7097	1.3603	(0.4836)	22	(0.0296)	(0.0578)	1.7947
-7	0.8291	1.8269	0.3455	23	(0.5619)	(1.0870)	1.2328
-6	(0.2953)	(0.4743)	0.0502	24	(0.9368)	(1.8480)	0.2961
-5	(1.0014)	(1.5159)	(0.9512)	25	0.5563	1.2854	0.8524
-4	0.4730	1.2470	(0.4783)	26	(0.2660)	(0.8175)	0.5863
-3	(0.2024)	(0.4545)	(0.6807)	27	0.2521	0.9567	0.8384
-2	(0.4459)	(0.9332)	(1.1266)	28	(0.2142)	(0.4591)	0.6242
-1	0.5464	1.0522	(0.5802)	29	0.9557	1.6919	1.5799
				30	0.0890	0.1564	1.6689

Panel 2: CAAR over different event periods		
CAAR t1,t2	CAAR (%)	CAAR t-test
Day -30 to -1	0.1949	0.0715
Day 0 to 2	0.0359	0.0983
Day 3 to 30	2.2132	0.6935
Day 0 to 30	2.2491	0.4905
Day -30 to 30	2.4439	0.5850

Note : \* significant at 0.05 level

## SUMMARY AND CONCLUSION

This study analyses the reaction of share prices around the announcement of share buybacks by Malaysian companies listed on the Main Market of Bursa Malaysia for 2007 through 2011. Overall, the CAAR, which was used to measure the wealth effect, shows an uptrend for about 12 days after the event day before stabilising. The result shows a positive wealth effect arising from the announcement, but it is not statistically significant. One can conclude that the market generally responded favourably to the announcement of share buybacks.

Before the day of the announcement of the buyback, there was an overall decrease in share prices. This indicates that companies tend to plan and execute their buybacks after a period of consecutive drops in share prices. The result also indicates that the price may fall after day +29.

We also found that when the market is bearish, share buybacks have the temporary effect of supporting a decline in share prices before the continuation of down trending prices. We reasoned that the share buyback signalling effect may not be able to continuously support the selling pressure in a downtrend market. Furthermore, the market participants may also pay less attention to such announcement to support the market during those times. During the recovery period from 2008 onwards, we found that the results were quite consistent; this implies that share buybacks have a positive impact on share prices, but it is not statistically significant.

Generally, the results were consistent with the signalling hypothesis in which the share buyback announcements reflect management's assessment that the value of the company is greater than the current market price suggests. The results also indicate that share buybacks, if properly executed, are a useful device for price stabilisation and serve as a market signal. This is consistent with Isa, Ghani and Lee (2011).

### **Implication of the Study**

Our study has implications for at least two parties: companies and investors. Companies should be aware that share buybacks can be a useful device for price stabilisation if they are properly executed. As for investors, share buybacks may be able to increase their wealth as the findings indicate a general upward movement in share prices after the announcement date of a buyback. However, the movement is statistically insignificant.

## REFERENCES

- Bhattacharya, U. and Dittmar, A. (2004), “Costless Versus Costly Signalling: Theory and Evidence”, Working Paper, Kelley School of Business, University of Indiana.
- Chan, K., Ikenberry, D. and Lee, I. (2004), “Economic sources of gain in stock Repurchases”, *Journal of Financial and Quantitative Analysis*, Vol. 39 No. 3, pp. 461-480.
- Chan, K., Ikenberry, D. and Lee, I. (2001) Do Firms Knowingly Repurchase Stock for Good Reason? Working Paper, University of Illinois.
- Chan, K., Ikenberry, D. L., Lee, I. and Wange, Y. (2010), “Share Repurchases as a Tool to Mislead Investors: Evidence from Earnings Quality and Stock Performance”, *Journal of Corporate Finance*, Vol. 16 No. 2, pp. 137-158.
- Dann, L. Y. (1981), “Common stock repurchases: An analysis of returns to bondholders and stockholders” *Journal of Financial Economics*, Vol. 9 No. 2, pp. 113-138.
- Grullon, G. and Ikenberry, D. L. (2000), “What do we know about stock repurchases?” *Journal of Applied Corporate Finance*, Vol. 13 No. 1, pp. 31-51.
- Harris, T. C. and Ramsay, I. M. (1995), “An empirical investigation of Australia share buy-backs”, *Australian Journal of Corporate Law*, Vol. 4, pp. 393-416.
- Hyderabad, R. L. (2009), “Price Performance Following Share Buyback Announcements in India”, *Vision-The Journal of Business Perspective*, Vol. 13 No. 1, pp. 59-78.
- Ikenberry, D., Lakonishok, J. and Vermaelen.T. (1995), “Market under reaction to open market share repurchases”, *Journal of Financial Economics*, Vol. 39 No. 2&3, pp. 181-208.
- Isa, M., Ghani, Z. and Lee, S. P. (2011), “Market Reaction to Actual Share Repurchase in Malaysia”, *Asian Journal of Business and Accounting*, Vol. 4 No. 2, pp. 27-46.
- Jensen, M. C. (1986), “Agency costs of free cash flow, corporate finance, and takeovers”, *American Economic Review*, Vol. 76 No. 2, pp. 323-329.
- Kahle, K. M. (2002), “When a buyback isn’t a buyback: Open market repurchases and employee options”, *Journal of Financial Economics*, Vol. 63 No. 2, pp. 235-261.
- Koerniadi, H., Liu, M.H. and Tourani-Rad, A. (2007), “Share repurchases in New Zealand”, *Advances in Financial Economics*, Vol. 12, pp. 481-498.

- Lamba, A. and Ramsay. I. (2000), “Share Buybacks: An Empirical Investigation”, Working Paper, The Centre for Corporate Law and Security Regulation, University of Melbourne.
- Li, K. and McNally, W. (2003), “The Decision to Repurchase, Announcement Returns and Insider Holdings: A Conditional Event Study”, *he ICAFI Journal of Applied Finance*, Vol. 9 No. 6, pp. 55-70
- Lim, E. H. and Bacha, O. I. (2002), “Price Reaction to Stock Repurchases: Evidence from KLSE”, *Paper presented at the Malaysian Finance Association 4th Annual Symposium, Kuala Lumpur*.
- Malaysian Accounting Standard Board (MASB). (2004) *MASB Technical Release 1 (revised) on Share Buybacks-Accounting and Disclosure*. Retrieved March 13, 2013, from <http://www.masb.org.my/images/stories/TR%20&%20SOP/TR%201%20%28Rev%29%282004%29.pdf>
- Oswald, D. and Young, S. (2004) Open Market Share Reacquisitions, Surplus Cash, and Agency Problems. *Journal of Banking and Finance*, Vol. 32 No. 5, pp. 795-806.
- Ramakrishnan, S., Ravindran, R. and Ganesan (2007), “Share Buyback Signalling Tool: Malaysian Perspective” Working Paper, Metropolitan College.
- Shahar, H. K. and Abdullah, N. A. H. (2007) Does Price React to Fixed Tender Offer Share Buyback Announcement? *International Journal of Management Studies*, Vol. 14 No. 1, pp. 39-59.
- Skjeltop, J. A. and Seggaard, B. A. (2004), “The ownership structure of repurchasing firms”, Working Paper, Research Department, Norwegian School of Management, Oslo.
- Tan, L. T. (2009) *Financial Accounting & Reporting in Malaysia*. Kuala Lumpur: Professional Advancement Achievement Centre Sdn. Bhd.
- Weigand, R. A. (2005), “Changing perspectives on corporate payout policy: from cash dividends to share repurchase”, *Managerial Finance*, Vol. 2, pp. 479-492.
- Weisbenner, S. J. (2001), “Corporate Share Repurchases in the 1990s: What Role Do Stock Options Play?”. AFA 2002 Atlanta Meetings; FEDS Working Paper No. 2000-29.
- Wong, S. K., Lim, K. T. and Chong, W. Y. (2011), “Cumulative Abnormal Returns on Share Buyback: Malaysian Perspectives”, *Australian Journal of Basic and Applied Sciences*, Vol. 5 No. 12, pp. 2168-2175.

Vermaelen, T. (1981), “Common stock repurchases and market signalling: An empirical Study”, *Journal of Financial Economics*, Vol. 9 No. 2, pp. 139-183.