PERTANIKA
JOURNALS

The Impact of Accretive Share Buyback on Long-term Firm Performance

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ABSTRACT

This study examined the long-term performance of firms that utilized real activity earnings management the accretive share buyback. Based on 220 sample observations of accretive share buyback firms, the results showed positive firm performance over the three year periods. The existence of positive significant relationship between long-term performance and accretive share buyback indicates that accretive share buyback is an efficient earnings management where the corporate players of the firms work towards a positive direction for firms' growth and shareholders wealth. The results of the additional analysis compared the performance of accretive and non-accretive firms showed that accretive firms performed favourably than non-accretive firms over the three year periods. The additional results validated further on the cash invested by the firms in accretive share buyback to MBEF caused no-harmful effect to the long-term firm performance. The outcome of this study acknowledged that accretive share buyback is an efficient earnings management caused no negative effect to firms and shareholders. Further, the long-term firm performance analysis results ascertain on earnings management classification whether is efficient and opportunistic and the corporate players direction on the existence of aligned interest in accordance with agency theory.

JEL Classification : M4, Y8, Z0

INTRODUCTION

Does earnings management benefit firms in the long run or is it merely an action that is taken to ensure their short-term survival? Earnings management is a popular topic among corporate players and academics. Corporate players use earnings management in the preparation of financial statements. The two common methods of earnings management are accruals-based and real activities-based. The accruals approach is applied through making accounting adjustments. The real activities approach involves cash flows where corporate players or managers need to be mindful on the impact of transactions on cash flows as obviously shown in the statement for cash flows for certain transactions, for example the share buyback amount. Wise action is required in real earnings management because rather than investing in real earnings management, it can be invested in value-added projects to increase the value of firms.

Earnings management is not an illegal or fraudulent activity. Dechow and Skinner (2000) draws a distinction between earnings management and fraudulent accounting. Graham, Harvey, and Rajgopal (2005) state that earnings management acts as a screw driver; in effect it involves turning the screw to make it fit better. However, there are two sides to earnings management, one is efficient earnings management and the other is opportunistic earnings management. Earnings management is known as efficient earnings management when it is to the advantage of the firm (Jiraporn, Miller, Yoon, & Kim, 2008; Rezaei & Roshani, 2012). This is a positive type of earnings management that benefits the firm and is to the advantage of shareholders, which reflects the aligned interests of the two key parties in agency theory, namely the shareholders and the managers. The negative type of earnings management is known as opportunistic earnings management. This type of earnings management is for the managers' benefit but has a negative outcome for the firm and the shareholders. Opportunistic earnings management increases the agency cost (Jiraporn *et al*., 2008).

The academic community has published an enormous number of works on and around the topic of earnings management, for example on earnings management modeling and the relationship of earnings management with corporate governance mechanisms. From these papers we have gathered evidence on what earnings management is; how earnings management can be computed; and the nature of the relationship between earnings management and corporate governance mechanisms. A few studies (e.g. Gunny, 2010; Jiraporn *et al*., 2008; Rezaei & Roshani, 2012) examine whether earnings management is efficient or opportunistic. Studies (e.g. Jiraporn *et al*., 2008; Rezaei & Roshani, 2012) focus on accruals as the earnings management proxy to determine firm performance. Gunny (2010) use some proxies for real earnings management, such as cost of goods sold, research and development expenses and gain from disposal of assets to assess the effect of earnings management on firm performance in the subsequent year.

The earnings per share (EPS) is often used as the indicator for a firm's financial performance (Seetharaman & Raj, 2011). Earnings management proxies can be used to change the EPS value. The earnings management proxies used by the most previous studies alter the numerator in the EPS calculations, but there is gap in our knowledge with respect to the effect on firm performance particularly long-term firm performance of using an earnings management proxy that alters the denominator in the EPS calculation, for example accretive share buyback activities

the real earnings management. Accretive share buyback is an earnings management tool used for meeting earnings targets (Hribar, Jenkins & Johnson, 2006). The earnings target is met where the actual/reported EPS meets or beats the EPS forecast (MBEF).

Managers believe that meeting or beating the EPS forecast is important for building a firm's credibility and to maintain share prices (Graham *et al*., 2005). Chandren, Ahmad and Ali (2015) opine that a positive stock price reaction from investors results from delivering good earnings news to the market via the MBEF strategy. Further, managers explain that there is a trade-off between the short-term necessity of achieving earnings targets and long-term value-added investments (Graham *et al*., 2005). Thus, how is the long-term performance of those firms that are engaged in real earnings management to meet or beat the EPS forecast as doing so involves the use of a huge amount of cash which could instead be used for value-added projects to increase firm value? To answer this question, it is important to determine the long-term performance of firms that are engaged in real earnings management to identify whether earnings management gives positive (efficient) or negative (opportunistic) signals to the firm and shareholders. This is because long-term performance provides a stronger indication of the type of earnings management in which the corporate players are engaged.

Therefore, this paper aims to investigate whether earnings management is efficient or opportunistic by using accretive share buyback as the real earnings management due to growing share buyback activities in Malaysia. Chandren and Nadarajan (2013) found that from 2001 to 2008, 55% of Malaysian firms were involved in accretive share buyback activities. This shows how important it is to identify the long-term performance of firms that are engaged in real earnings management particularly accretive share buyback which alters the EPS denominator. Further, the corporate players, and in particular the finance players of the firm, must possess good chemistry in aligning the business strategy and finance for the firm's positive performance in the future because surplus cash could possibly be used in other ventures and achieve a positive return (Badrinath & Varaiya, 2001). A positive firm performance is indicative of efficient earnings management, whereas a negative firm performance reflects the presence of opportunistic earnings management. Basically, it is important to harmonize a firm's strategic and financial objectives before undertaking a share buyback in order to achieve maximum results (Badrinath & Varaiya, 2001). Thus, it is essential to investigate firm performance and particularly the long-term performance of firms that are involved in accretive share buyback to see whether this represents an efficient earnings management or opportunistic earnings management.

The significant contribution of this paper is that it provides evidence for both corporate players and academics on the long-term performance of firms that engaged in accretive share buyback the real earnings management/ activity. In sum, the results of the current study will show whether the real earnings management benefits the firm and maximizes shareholder wealth, and thus, indicates efficient earnings management, or whether this action can be defined as a form of opportunistic earnings management that increases the agency cost to the disadvantage of shareholders.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Earnings Management

Investors are interested in a firm's net income (Ball & Brown, 1968). Managers use accounting choices and estimates to determine the firms' income level (Saleh, Iskandar & Rahmat, 2005. Schipper (1989, p. 92) defines earnings management as "a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain (as opposed to say, merely facilitating the neutral operation of the process)." Based on the previous literature, some of the reasons why managers engage in earnings management include the need to avoid reporting losses, the desire to meet the market expectations and the need to avoid debt covenant violations (Habbash & Alghamdi, 2015). However, Habbash and Alghamd (2015) found that the main reasons that managers in Saudi Arabia engage in earnings management are to gain better remuneration, to justify reporting profits and avoid reporting losses, to get bank loans and achieve growth in the firm's share price. These reasons reflect how earnings management can be for the benefit of both managers and shareholders. Corporate players have the scope to choose substitute ways to record transactions and to select options within accounting treatments in order to secure the benefits of shareholders and managers. Earnings management is the right choice for a certain desired level of income (Goel, 2014). Earnings management is categorized into accruals manipulation and real activities manipulation (Gunny, 2010). Firm insiders can hide changes in a firm's economic performance either through accounting choices or real operations resolution (Leuz, Nanda & Wysocki, 2003). The real operations resolution is the real activities action of earnings management (real earnings management). Managers tend to use either accruals manipulations or real activities manipulations to meet the earnings target (zero earnings surprises) (Burgstahler & Eames, 2006). Corporate players or managers use real activities manipulation to avoid reporting losses (Roychowdhury, 2006). Roychowdhury (2006) states that real activities manipulation occurs when management departs from the normal business practices of the firm and instead employs a strategy to meet the earnings target. Accretive share buyback is a type of real earnings management (Hribar *et al.*, 2006). Accretive share buyback occurs if there is a difference of 0.01 cents between the EPS with buyback and the EPS without share buyback. In other words, if the EPS with share buyback is more than 0.01 cents higher than the EPS without share buyback, this is known as accretive share buyback (Hribar *et al.*, 2006).

Earnings Management and Firm Performance

Accounting is the language of business. Standard setters acknowledge the accounting language that managers use to communicate with external shareholders (Healy & Wahlen, 1999). Financial reporting is used to differentiate between the performance of the best and worst firms in terms of resource allocation and stakeholders' stewardship decision making (Healy & Wahlen, 1999). In accounting, earnings take center stage and the accounting summary measures the firm's performance (Dechow, Kothari & Watts, 1998). Firm performance is an important measurement for a firm's financial status and growth potential. Further, earnings are one of the

important indicators of a firm's financial performance (Alves, 2012). Corporate players use the accounting judgment in financial reporting to enhance the accounting value information in communication and certain accounting judgments are a reasonable signal of the firm's actual performance (Healy & Wahlen, 1999). The accounting judgment used by corporate players may create opportunities for earnings management which hides the true economic position of the firm (Healy & Wahlen, 1999). This raises questions about a firm's performance and particularly its long-term performance if it is engaged in real earnings management.

Healy and Wahlen (1999) reported state that the accounting judgment used by corporate players is composed of costs and benefits. However, is the accounting judgment arrived at through earnings management a cost or a benefit? Healy and Wahlen (1999) assert that the accounting judgment through earnings management is classified as a cost due to the possibility of resource misallocations. However, the current study believes it is necessary to investigate the effect of earnings management on long-term performance to determine whether the accounting judgment through earnings management used by corporate players is a cost or a benefit to a firm and its shareholders. Hence firm performance will be used as the yardstick in ascertaining whether earnings management is a cost or a benefit to firms and shareholders.

Earnings management is considered harmless to stakeholders if corporate players use it to deliver relevant and quality information on firm performance to shareholders and debt holders (Rezaei & Roshani, 2012). Jiraporn *et al*. (2008) highlight the relationship between earnings management and agency conflicts. The authors report that the agency cost will be high when earnings management is used opportunistically by corporate players for their own benefit. Conversely, if earnings management is employed for the benefit of shareholders, the agency cost will be lighter. The authors investigate the relationship between earnings management (proxy: accruals manipulation) and firm value. Their results show that earnings management and firm value are positively related when the firm value is greater for firms with more earnings management. Further, Jiraporn *et al*. (2008) also state that earnings management is beneficial to firms as it is negatively related to agency cost. Based on this finding, earnings management is considered as a cost if it increases the agency cost. This kind of earnings management is known as opportunistic earnings management as the managers of the firms use earnings management opportunistically for their own private gain (Rezaei & Roshani, 2012).

In contrast, according to Rezaei and Roshani (2012), efficient earnings management carries positive firm values for the benefit of shareholders. The authors investigated whether earnings management (proxy: accruals manipulation) is efficient or opportunistic by analyzing the future profitability of firm performance (1 year after the earnings management year). They state that positive firm performance denotes efficient earnings management, whereas negative firm performance indicates opportunistic earnings management. Both Rezaei and Jiraporn found a positive association between earnings management and firm performance. Gunny (2010) investigated the subsequent-year firm performance of firms that engaged in real earnings management to meet their earnings target. The author discovered that firms that are engaged in real earnings management with expenses are positively associated with subsequent-year firm performance. The author further states that this is not opportunistic earnings management and that it leads to a better future firm performance. However, Roychowdhury (2006) claims that earnings management assists corporate players in meeting short-term earnings thresholds

which are unlikely to enhance the long-term value of the firm. The author encouraged a deeper future analysis on earnings management in meeting the forecast. Bhojraj, Hribar, Picconi, and McIinis (2009) identified that firms that manage earnings to meet earnings threshold performed well in short-term stock price compared to firms with high quality earnings. However, after a period of 3 years the results are reversed. The authors provide evidence that managers' myopic decisions have an impact on a firm's long-term performance.

Managers can exercise control over a firm for their own benefit at the expense of shareholders (Leuz *et al*., 2003). Managers can use earnings management opportunistically for their own benefit and the position of the other stakeholders is put at risk (Gulzar & Wang, 2011). Failure to monitor managers is one of the factors that can lead to resource misallocations and corporate scandals (Johari, Saleh, Jaffar & Hassan, 2008). Graham *et al*. (2005) state that management try to avoid a positive net present value if their firm fails to meet its short-term earnings target. Further, failing to meet the short-term earnings target leads to a serious market reaction. Thus, firms would rather sacrifice the economic firm value to meet the short-term earnings threshold. This highlights that corporate players are focused more on short-term earnings targets than on the long-term development of firms. The findings in Roychowdhury and Bhojraj reveal the presence of opportunistic earnings management, which is in contrast to the findings of Jiraporn, Gunny and Rezaei. Either way, basically, there is a relationship between earnings management and firm performance regardless of whether earnings management is efficient or opportunistic.

However, the nature of the relationship is rather unclear, so there is a need for further investigation particularly of earnings management through accretive share buyback the real earnings management that alters the EPS denominator calculation and the impact on long-term firm performance. Therefore, the current study used the accretive share buyback as the real earnings management that uses cash flows to meet or beat the EPS forecast, in order to determine the long-term firm performance. Gunny (2010) uses return on assets (ROA) to measure firm performance. Rouf (2011) identifies a positive relationship between corporate governance and firm performance by using ROA and return on equities (ROE) to measure the firm performance. Rouf (2001) states that ROA and ROE are appropriate financial ratios for quantifying the firm performance. The ROA indicates management effectiveness in terms of how much profit is earned from every asset held by the firm. On the other hand, the ROE reflects how well the firm manages its investors' funds (Keown, Martin, Petty & Scott, 2005). Jiraporn *et al*. (2008) use Tobin's Q to determine firm performance. Tobin's Q is a market-based measurement tool that places emphasis on the firm's growth opportunities that maximize firm value (Lang & Litzenberger, 1989). A Tobin's Q result of less than 1 denotes that the firm does not have growth potential (Tobin, 1969) or that there are no opportunities for investment (Lang & Litzenberger, 1989). Thus, Tobin's Q is a tool that can be used to quantify the success of a firm (Wolfe & Sauaia, 2003). Due to the inconclusive findings reported in earlier studies and the necessity of identifying the long-term performance of firms that use accretive share buyback to meet or beat the EPS forecast, the current study used ROA, ROE and Tobin's Q to measure long-term firm performance. Thus, both accounting-based and market-based measurements are employed to validate the effect of real earnings management on long-term firm performance. Thus, the following two hypotheses are developed:

Hypothesis 1: There is a relationship between earnings management through accretive share buyback and long-term firm performance with an accounting-based measurement.

Hypothesis 2: There is a relationship between earnings management through accretive share buyback and long-term firm performance with a market-based measurement.

DATA AND METHODOLOGY

The sample of the current study consisted of 220 accretive share buyback listed companies on the Bursa Malaysia for the period 2001–2008. The current study focused on accretive share buyback firms that meet or beat the forecast EPS. In line with Hribar *et al*. (2006), the current study used the EPS forecast (FEPS), which is the basic and beginning EPS forecast and data on these forecasts were collected from the Institutional Brokers' Estimate System. The actual earnings per share (AEPS) were collected from the annual reports available from Bursa Malaysia websites. The term meet or beat the EPS forecast applies where AEPS ≥ FEPS.

In the current study the accretive share buyback value is the independent variable and the model in Hribar *et al*. (2006) is used to compute the accretive share buyback values. A difference between actual EPS with share buyback (AEWSB) and EPS without share buyback (EWSB) of more than 0.01 cents indicates the existence of accretive share buyback (ASB):

The computation for EWSB is as follows:

$$EWSB = RANP/ (BOS + [Av* IS])$$

Where:
EWSB   = EPS without share buyback
RANP   = Reported annual net profit
BOS   = Beginning outstanding shares of the year
Av   = Average (0.5) share units issued during the year
IS   = Shares units issued for the year

To estimate accretive share buyback:

$$ASB = AEWSB–EWSB$$

Where:
ASB   = Accretive share buyback
AEWSB = Actual EPS with share buyback
EWSB   = EPS without share buyback

In the current study ROA and ROE are the dependent variables that are used to represent the accounting-based measurement. The ROA (Net income/Total assets) and ROE (Net income/ Total equity) are measured following Ponnu (2008). Tobin's Q is the dependent variable that is used to represent the market-based performance. The Tobin's Q formula is market value of equity + book value of debt/total assets (in book value) (Shah, Butt, & Saeed, 2011). The current study investigated ROA, ROE and Tobin's Q performance for the current year and for 3 years after the firms' financial year end, which constitutes long-term performance. Hence,

ROA, ROE and Tobin's Q data were collected up to the year 2011. The control variables for the current study were firm size, leverage, profitability and capital expenditure. Firm size is positively related to firm performance (Haniffa & Hudaib, 2006). Jiraporn *et al*. (2008) found that firm performance is better for firms with a lower debt ratio (leverage). Jiraporn *et al*. (2008) also found that firm performance and profitability are positively related. This highlights that profitability signals strong firm growth. Capital expenditure relates to the firm's investment in the purchase of property, plant and equipment. Haniffa and Hudaib (2006) found that capital expenditure is positively related to firm performance.

The current study carried out a regression analysis to investigate the relationship between real activities earnings management through accretive share buyback and long-term firm performance in a similar manner to that presented in Jiraporn *et al*. (2008). However, Jiraporn *et al*. (2008) only investigated the current-year performance (Tobin's Q) of earnings management firms. In contrast, this study investigated long-term firm performance (ROA, ROE and Tobin's Q) of earnings management firms from the current to the third year after that (a total of four years). Therefore, the current study expanded the time frame and broadened the scope of the performance measurement to include both accounting-based (ROA and ROE) and market-based (Tobin's Q) measurements. Table 1 presents a summary of the variables used in the current study including the formulas used to compute the mean changes for the accounting and market-based measurements. Mean formulas are used for the accounting-based (ROA & ROE) and market-based (Tobin's Q) measurement from the current to third year in order to apply the consistency principle, which is one of the generally accepted accounting principles. The reason for adopting the consistency principle is to ensure that the financial statements for all the years are materially consistent regardless of any changes.

Table 1: Summary of Variables for Hypotheses 1 and 2

Independent Variable	Dependent Variable
Accretive share buyback MBEF (in RM)	Mean ROA [(ROA Current + ROA 1st Yr + ROA 2nd Yr + ROA 3rd Yr)/4 years]
Accretive share buyback MBEF (in RM)	Mean ROE [(ROE Current + ROE 1st Yr + ROE 2nd Yr + ROE 3rd Yr)/4 years]
Accretive share buyback MBEF (in RM)	Mean Tobin's Q [(Tobin's Q Current + Tobin's Q 1st Yr + Tobin's Q 2nd Yr + Tobin's Q 3rd Yr)/4 years]

The regression model for Hypothesis 1 is as follows:

$$ROA_i = \beta_0 + \beta_1 BUYVALUE_i + \beta_2 TA_i + \beta_3 LEV_i + \beta_4 PROFIT_i + \beta_5 CAPEX_i + \varepsilon_i \qquad [1]$$

Where:
ROA: Mean of ROA current year to ROA 3rd year ([Current Yr + 1st Yr + 2nd Yr + 3rd Yr]/4 years)
ROA = Net income/Total assets
BUYVALUE: Accretive share buyback MBEF in Malaysian ringgit (RM) (log)

Control Variables

Firm Size (TA):   Logarithm of total assets during the year
Leverage (LEV):   Ratio of total debt to total assets during the year
Profitability (PROFIT):   Earnings before interest and tax (EBIT)/Sales during the year
Capital Expenditure (CAPEX)   Capital expenditure/Sales during the year
ε: The residual

$$ROE_i = \beta_0 + \beta_1 BUYVALUE_i + \beta2TA_i + \beta_3 LEV_i + \beta_4 PROFIT_i + \beta_5 CAPEX_i + \varepsilon_i \qquad [2]$$

Where:
ROE: Mean of ROE current year to ROE 3rd year ([Current Yr + 1st Yr +
            2nd Yr + 3rd Yr]/4 years)
            ROE = Net income/Total equity
BUYVALUE: Accretive share buyback MBEF in Malaysian ringgit (RM) (log)

Control Variables

Firm Size (TA):   Logarithm of total assets during the year
Leverage (LEV):   Ratio of total debt to total assets during the year
Profitability (PROFIT):   Earnings before interest and tax (EBIT)/Sales during the year
Capital Expenditure (CAPEX): Capital expenditure/Sales during the year
ε: The residual

The regression model for Hypothesis 2 is as follows:

$$TOBIN'S\ Q_i = \beta_0 + \beta_1 BUYVALUE_i + \beta_2 TA_i + \beta_3 LEV_i + \beta_4 PROFIT_i + \beta_5 CAPEX_i + \varepsilon_i \qquad [3]$$

Where:
TOBIN'S Q: Mean of TOBIN'S Q current year to TOBIN'S Q 3rd year ([Current Yr +
             1st Yr + 2nd Yr + 3rd Yr]/4 years)
             TOBIN'S Q = Market value of equity + book value of debt/Total of
             assets (in book value)
BUYVALUE: Accretive share buyback MBEF in Malaysia ringgit (RM) (log)

Control Variables

Firm Size (TA):   Logarithm of total assets during the year
Leverage (LEV):   Ratio of total debt to total assets during the year
Profitability (PROFIT):   Earnings before interest and tax (EBIT)/Sales during the year
Capital Expenditure (CAPEX): Capital expenditure/Sales during the year
ε: The residual

Additional Analysis

The current study analyzed the mean changes for ROA, ROE and Tobin's Q of 220 accretive share buyback firms that meet or beat the EPS forecast compared to 157 non-accretive share buyback firms that failed to do so over the next 3-year period after the financial year. The objective of this additional analysis was to determine which group of firms did better in the

long- term. The current study classified MBEF firms as accretive firms and non-MBEF firms as non-accretive firms. The current study chose to concentrate on accretive and non-accretive Malaysian listed firms because of the possibility that non-buyback firms might be involved in accruals manipulation to achieve MBEF. This additional analysis used the independent-sample t-test as this type of test is used to compare two groups of unequal sample size (Creswell, 2004) and is designed to investigate whether there is a significant difference between two unrelated groups (Creswell, 2004; Coakes, Steed & Ong, 2009).

RESULTS

Table 2 represents the descriptive statistics for the variables used in the current study to investigate the relationship between long-term firm performance and accretive share buyback.

Table 2. Descriptive Statistics for Accretive Share Buyback (MBEF) and Long-term Firm Performance

	Mean	Median	Std Dev	Skew	Min	Max	Percentiles	
							25% Low	75% High
Accretive Share Buyback (RM Mil.)	23.313	2.705	99.731	8.046	0.0007	1,079.91	0.863	7.988
ROA	0.596	0.582	0.460	1.106	-0.050	0.340	0.034	0.082
ROE	0.104	0.095	0.147	6.964	-0.530	1.760	0.060	0.134
TOBIN'S Q	0.827	0.743	0.385	3.215	0.010	3.850	0.619	0.911
Control Variables								
Firm Size (TA)	20.236	20.000	1.317	0.827	18.000	24.000	19.000	21.000
Leverage (LEV)	0.364	0.349	0.176	0.439	0.020	0.810	0.229	0.479
Profitability (PROFIT)	0.161	0.123	0.128	1.734	-0.010	0.770	0.075	0.210
Capital Expenditure (CAPEX)	0.070	0.046	0.079	3.091	0.010	0.520	0.023	0.087

The result in Table 2 shows that for the sample of 220 firms, the mean of accretive share buyback is RM23.313 million. The ROA mean is 0.596 with a minimum value of -0.05 and a maximum value of 0.34. The ROE mean is 0.104 with a minimum ratio of -0.53 and a maximum ratio of 1.76. The positive mean results for ROA and ROE represent the positive long-term performance of accretive firms. The average and median for Tobin's Q is 0.827 and 0.743, respectively. The Tobin's Q results are near to 1, which indicates that the firms have growth potential. As for firm size (TA), the average is 20.236 with a median of 20, a minimum value of 18 and a maximum value of 24. This shows that the majority of the samples are small firms. The leverage (LEV) result of 0.364 for the mean and 0.349 for the median indicates that the firms' leverage level is controllable. The results reported for profitability (PROFIT)

are 0.161 for the mean and 0.123 for the median. This highlights that most firms have positive profitability ratio. The capital expenditure (CAPEX) average is 0.070 with a median of 0.046, a minimum value of 0.010 and a maximum value of 0.520.

Tables 3, 4 and 5 present the Pearson's correlation results for the three firm performance indicators, ROA, ROE, Tobin Q with accretive share buyback and the control variables for the 220 sampled firms, respectively. Separate Pearson's correlations were performed for ROA, ROE and Tobin's Q to improve the presentability of the results. The reason for conducting a Pearson's correlation test is to identify whether there is any multicollinearity problem within the independent variables. Gujarati (1995) states that the multicollinearity problem arises if the correlation between the independent variables exceeds 0.8. The results in Tables 3, 4 and 5 show that there are no multicollinearity issues within the independent variables.

Table 3. Correlations of ROA and Accretive Share Buyback

	ROA	ACCBUYBACK (BUYVALUE)	TA	LEV	PROFIT	CAPEX
ROA	1	.196**	-.098	-.174**	-.010	.015
ACCBUYBACK (BUYVALUE)	-	1	.065	-.042	.020	.063
TA	-	-	1	.340**	.385**	.173**
LEV	-	-	-	1	-.018	.148*
PROFIT	-	-	-	-	1	.056
CAPEX	-	-	-	-	-	1

Notes: ** Significant at the 0.01 level ; * Significant at the 0.05 level

Table 4. Correlations of ROE and Accretive Share Buyback

	ROE	ACCBUYBACK (BUYVALUE)	TA	LEV	PROFIT	CAPEX
ROE	1	.308**	-.134*	-.288**	-.079	.093
ACCBUYBACK (BUYVALUE)	-	1	.065	-.031	.021	.018
TA	-	-	1	.287**	.385**	.157**
LEV	-	-	-	1	-.050	.124*
PROFIT	-	-	-	-	1	.051
CAPEX	-	-	-	-	-	1

Notes: ** Significant at the 0.01 level ; * Significant at the 0.05 level

Table 5. Correlations of Tobin's Q and Accretive Share Buyback

	TOBINQ	ACCBUYBACK (BUYVALUE)	TA	LEV	PROFIT	CAPEX
TOBINQ	1	.273**	-.044	-.222**	-.026	.248**
ACCBUYBACK (BUYVALUE)	-	1	.065	-.099	.021	.103
TA	-	-	1	.314**	.385**	.202**
LEV	-	-	-	1	.000	-.055
PROFIT	-	-	-	-	1	.150*
CAPEX	-	-	-	-	-	1

Notes: ** Significant at the 0.01 level ; * Significant at the 0.05 level

Table 6 shows the regression results for Model 1, which represents the relationship of long-term firm performance (ROA) with accretive share buyback and the control variables for the 220 sampled firms. The results in Table 6 as well as those in Tables 7 and 8 which represent the same relationship based on ROE and Tobin's Q, respectively, report the overall F-statistics as significant at the 1% level.

Table 6. Regression Results for ROA and Accretive Share Buyback

Dependent variable: Return on asset (ROA)			
Independent Variable	**Coefficients**	**t**	**VIF**
Accretive Share Buyback (BUYVALUE)	0.192	2.891**	1.013
Control Variables			
Firm Size (TA)	-0.069	-0.890	1.393
Leverage (LEV)	-0.148	-2.060*	1.182
Profitability (PROFIT)	0.008	0.106	1.209
Capital Expenditure (CAPEX)	0.036	0.539	1.044
F-statistic: 3.243**			
R-squared: 0.070, Adjusted R-squared: 0.049			

Notes: ** Significant at 0.01 level; * Significant at 0.05 level

From Table 6, it can be seen that the coefficient result for ROA is positive and significant at the 1% level with a t-value of 2.891, which shows that ROA and accretive share buyback are positively related. The result signifies that accretive share buyback firms have positive long-term ROA. As for the control variables, only leverage shows a negative relationship with firm performance (ROA) at the 5% significance level at a t-value of -2.060. This indicates that firms with less financial distress have better firm performance in the long run.

Table 7 presents the regression results for Model 2, which represents the relationship of long-term firm performance (ROE) with accretive share buyback and the control variables for the sample of 220 firms.

Table 7. Regression Results for ROE and Accretive Share Buyback

Dependent variable: Return on equity (ROE)			
Independent Variable	Coefficients	t	VIF
Accretive Share Buyback (BUYVALUE)	0.302	4.933**	1.007
Control Variables			
Firm Size (TA)	-0.062	-0.877	1.346
Leverage (LEV)	-0.281	-4.317**	1.139
Profitability (PROFIT)	-0.082	-1.223	1.215
Capital Expenditure (CAPEX)	0.137	2.199*	1.033
F-statistic: 10.805**			
R-squared: 0.202, Adjusted R-squared: 0.183			

Notes: ** Significant at 0.01 level; * Significant at 0.05 level

From Table 7, there is a coefficient of 0.302 at the 1% significance level with a t-value of 4.933 for the ROE and accretive share buyback (ACCSB) relationship. This shows that the accretive share buyback value increases by 1%, which makes the ROE value increase by 0.302. The relationship between ROE (long-term performance) and accretive share buyback is significant and positive. The leverage result is highly significant at the 1% level, which indicates that firms with a lower debt ratio have a positive firm performance. Further, the CAPEX result shows that high capital expenditure firms show positive long-term performance. The result for capital expenditure contradicts the findings of Jirapon who report an insignificant relationship for firm performance and capital expenditure.

Table 8 provides the regression results for Model 3, which represents the relationship of long-term firm performance (Tobin's Q) with accretive share buyback and the control variables for the sample.

Table 8. Regression Results for Tobin's Q and Accretive Share Buyback

Dependent variable: TOBIN'S Q			
Independent Variable	Coefficients	t	VIF
Accretive Share Buyback (BUYVALUE)	0.235	3.698**	1.027
Control Variables			
Firm Size (TA)	-0.029	-0.389	1.388
Leverage (LEV)	-0.177	-2.621**	1.163
Profitability (PROFIT)	-0.054	-0.790	1.203
Capital Expenditure (CAPEX)	0.228	3.521**	1.071
F-statistic: 8.293**			
R-squared: 0.162, Adjusted R-squared: 0.143			

Notes: ** Significant at 0.01 level; * Significant at 0.05 level

Table 8 shows that there is a positive coefficient of 0.235 for the accretive share buyback result with a t-value of 3.698 at the 1% significance level. The result describes the relationship direction between accretive share buyback and Tobin's Q. The accretive share buyback has a positive impact on long-term Tobin's Q results. The leverage result for long-term performance

(Tobin's Q) at 0.177 negative coefficients with the 1% significance level is similar to the result in Table 7. The capital expenditure result provides a positive relationship with long-term firm performance. The results are similar to Table 7 regression results. However, stronger significance level and higher t-value are found in Table 8 regression results to validate the positive relationship between capital expenditure and long-term performance. This suggests that firms with greater capital expenditure experience positive long-term firm performance.

As regards Hypotheses 1 and 2 on the existence of a relationship between earnings management through accretive share buyback and long-term firm performance according to accounting- and market-based measurements, respectively, the regression results presented in Tables 6, 7 and 8 suggest that real activity earnings management in the form of undertaking accretive share buyback has a positive impact on long-term firm performance. The outcome of the results for accretive share buyback is consistent regardless of whether accounting- or market-based measurements are used as the proxy for long-term firm performance. The consistent regression results found in Tables 6, 7 and 8 appear to confirm that accretive share buyback is not unhealthy for firms as this costly real activity is compensated by positive long-term firm performance. Thus, this is an efficient earnings management strategy that benefits the firm in the long run.

Lastly, the current study compared the 3 years firm performance for accretive firms and non-accretive firms. Table 9 shows the results of this comparison, which examined the mean changes in ROA, ROE and Tobin's Q for 3 years of firm performance after the current financial period for 220 accretive firms and 157 non-accretive firms.

Table 9: Summary of Annual Performance Results for Accretive and Non-Accretive   Buyback Firms (Mean Difference)

ROA

		1st Year	2nd Year	3rd Year	Total
ACCRETIVE	a	0.0580*	0.0578*	0.0600*	0.1758
NON-ACCRETIVE	b	0.0235*	0.0368*	-0.0110*	0.0493
DIFFERENCE	(a-b)	0.0345	0.0210	0.0710	0.1265 (12.7%)

* Significant at 0.05 level

ROE

		1st Year	2nd Year	3rd Year	Total
ACCRETIVE	a	0.0940*	0.1228	0.0965*	0.3133
NON-ACCRETIVE	b	0.0161*	0.0486	-0.0346*	0.0301
DIFFERENCE	(a-b)	0.0779	0.0742	0.1311	0.2832 (28.3%)

* Significant at 0.05 level

TOBIN'S Q

		1st Year	2nd Year	3rd Year	Total
ACCRETIVE	a	0.8533	0.8471*	0.8429*	2.5433
NON-ACCRETIVE	b	0.8427	0.8268*	0.8128*	2.4823
DIFFERENCE	(a-b)	0.0106	0.0203	0.0301	0.0610 (6.1%)

* Significant at 0.05 level

From Table 9 it can be seen that the mean changes show evidence of the existence of a relationship between earnings management through accretive share buyback and long-term firm performance. It can also be seen that there are significant differences between accretive and non-accretive firms over the 3-year period. Basically, the accretive firms performed well in the long run compared to the non-accretive firms. In 3 years (first, second and third year) the mean results for ROA, ROE and Tobin's Q show that there is favorable long-term growth for accretive firms relative to non-accretive firms. Further, the total difference recorded between the accretive and non-accretive firms is 12.7% for ROA, 28.3% for ROE and 6.1% for Tobin's Q over the 3-year period. This indicates that over the 3-year period, the accretive firms are performed much better than the non-accretive firms. The accretive firms displayed positive long-term growth relative to non-accretive firms. In sum, the results in Table 9 confirm that earnings management through real earnings management in the form of accretive share buyback is beneficial and efficient for firms in the short term to enable them to achieve MBEF and also for the long term in relation to firm performance.

DISCUSSION AND CONCLUSION

A future positive firm performance is an indication of maximizing the firm value that gives assurance to the shareholders wealth. Graham *et al*. (2005) report that corporate players sacrifice firm long-term objectives to meet the short-run objectives. This is due to unwarranted business pressures that lead to the practice of earnings management to evade share price penalization by investors (Graham *et al*., 2005). Hence, corporate players forego long-term benefits to meet short-term earnings targets in order to yield a stock price return (Graham *et al*., 2005). Earnings management has an unfavorable effect on the long-term performance of a firm due to managers' short-sighted behaviors to achieve earnings targets (Bhojraj *et al*., 2009). This type of earnings management is undertaken by firms that focus on short-term objectives that do not benefit them in the long run. Therefore, the managers of such firms are being opportunistic by sacrificing long-term objectives, which ultimately reduces the firm's value and shareholder wealth. The existence of opportunistic earnings management indicates the presence of a weak agency relationship between managers and shareholders who are not moving in the same direction.

However, Jiraporn *et al*. (2008) investigated the present year performance of firms involved in earnings management and reported that earnings management and firm value are positively related. The authors claim that this kind of earnings management increases the earnings information for the shareholders' benefit. Further, Rezai and Roshani (2012) report that earnings management is efficient rather opportunistic if the corporate players of firms deliver superior information about firm performance to shareholders. The authors state that earnings management action is efficient for firms with positive future performance. This earnings management is known as efficient earnings management and is beneficial to shareholders and firms as it has a lower agency cost (Jiraporn *et al*., 2008)

The results of the current study support Hypotheses 1 and 2, namely that there is a relationship between long-term firm performance and earnings management through accretive share buyback. Notably, the current study shows that earnings management through accretive

share buyback the real earnings management has a positive significant relationship with long-term firm performance. The outcome of the current study supports Jiraporn *et al*. (2008), who state that this kind of earnings management is not harmful to firms. Earnings management through accretive share buyback signals a positive earnings result (MBEF) and positive long-term performance, which is good news for shareholders. Moreover, the results of the additional analysis conducted to observe the mean changes between accretive and non-accretive firms over a period of 3 years further supports the finding that accretive firms show a positive performance and those accretive firms perform better than non-accretive firms.

Overall, the current study provides evidence that the accretive share buyback to meet or beat the EPS forecast is an efficient form of earnings management. The positive long-term performance of accretive firms indicates that the corporate players' interest is aligned with the shareholders' interest, which is to increase the firm's value and the shareholders' wealth. The result also implies that managers or corporate players do not act myopically and work in a positive direction to benefit the firm and shareholders, which validated on their strong managerial governance. Although accretive share buyback is a cost to a firm, the benefits gained from the subsequent positive long-term performance compensates for the accretive share buyback cost. Thus, the findings on long-term firm performance presented in this paper show that not all earnings management is harmful to firms. Basically, earnings management is recognized as concealing the true financial position of firms. However, the results of the current study reveal that earnings management can be seen in a more positive light when it takes the form of real earnings management namely accretive share buyback. Indeed, it is notable that certain earnings management actions can benefit firms in current year to long-term direction. Thus, this type of earnings management is efficient rather than opportunistic. To develop this work further, the current study recommends that future research on this topic use accruals manipulation to determine the long-term performance of firms.

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