# ANALYSIS OF CROSS BORDER M&A:
# EVIDENCE FROM ASEAN EXCHANGES

BY

MISS TIPWAN PROMPRAPAT

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE
PROGRAM IN FINANCE (INTERNATIONAL PROGRAM)
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THAMMASAT UNIVERSITY
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was approved as partial fulfillment of the requirements for

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# ABSTRACT

M&A in ASEAN is growing together with the upcoming event of ASEAN Economic Community (AEC) so this study wants to investigate the cross-border M&A deals in Malaysia, Singapore, and Thailand from 2009-2013. Firstly, we investigate whether these deals create significant cumulative abnormal return (CAR) since CAR reflects market expectation about the effect of the deals on the firms' future performance. The study finds positive and significant CAR which means investors expected that these deals would benefit the firms in the future. After that firms' long-term performances measure by ROA and ROE from before and after M&A are investigated. The study finds that firms' performance is significantly deteriorate after M&A. In addition, the effect of industry relatedness and methods of payments for M&A on CAR and firms' performance are also investigated. The study finds that acquiring firms in the related industry (horizontal and vertical M&A instead of unrelated) and paying for the acquisition by cash (instead of paying by other payment methods e.g. stock or mixed) positively and significantly affect firms' performance, while, they insignificantly affect CAR. This means that investors expect that these factors should not have an effect on firms' performance in the future, but in fact it does. Therefore, firms should include these factors into their consideration for their M&A.

**Keywords**: Cross border M&A, Abnormal return, Pre and post-performance

# ACKNOWLEDGEMENTS

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# CHAPTER 1
# INTRODUCTION

The emergence of ASEAN Economic Community (AEC) creates an attractive business playing ground for firms in ASEAN seeking inorganic growth via M&A. To take advantage of increased market openness, labor mobility, and enlarged markets, firms in AEC have been quite active in using M&A as a means to sustain or enhance growth. This paper explores M&A activities among three ASEAN economies, Malaysia, Singapore, and Thailand. However, not all M&A deals are successful. A recent research by AT Kearney (2013) reveals that only 24 percent of Southeast Asian mergers delivered expected benefits, especially for cross-border event as resulting from different in culture, language, business norm and lack of local market know-how. There is no guarantee that conducting M&A as growth strategy will always success, such factor as M&A strategies, tax scheme, or M&A incentive of each ASEAN country might be considered by management team to ensure company success. We define M&A here as a merger where the target firm merges into the acquiring firm and the combined post-merger entity becomes the acquirer standing.

To examine M&A strategies for corporate growth in ASEAN region, the paper uses M&A data from 68 acquiring firms in Malaysia (18 firms), Singapore (47 firms) and Thailand (3 firms) over the period 2009-2013 by studying abnormal stock price movement during M&A announcement date. Analysis of short-term abnormal return captures the signaling effect of M&A deal. In case the investors perceived that management decision to invest in these markets can help to generate shareholders' value, which imply it is a good decision, the positive abnormal return would be exist.

After that the paper will examine the long-run financial performance post-mergers from 1 to 3 years after the acquisition to see whether it is consistent with market expectations during the M&A announcement. The long-run analysis provides insights into the success of the merger in terms of financial accounting performance that should be more related to how the M&A will lead to long-term value creation. Moreover, determinants of CAR and performance will also be explored in this study.

The paper finds the significant result at window period (-2, +2) which can imply that the shareholders of acquirer firms can earn abnormal return with the mean value of CAR at nearly 2%. The result suggest that investors have positive perception on announcement of the deal as the market perceive M&A will translate into future earnings, while long-run financial performance post-mergers from 1 to 3 years after the acquisition decrease year by year. The finding for the effect of the main explanatory variables, which are industry relatedness and types of payments, on CAR show positively but insignificantly affect. Whereas, post-merger performance show industry relatedness and method of payment have significant positive relationship with company performance for ROE and ROA.

The paper is divided in 6 sections. Section 2 reviews related literature. Section 3 explains empirical design methods. Section 4 describes merger and acquisition trends in AEC followed and data description. Empirical results are analyzed in Section 5. Section 6 concludes.

# CHAPTER 2
# REVIEW OF LITERATURE

The literature review part will be divided into 4 main sections including abnormal return, pre and post-performance, abnormal return determinants, and post-performance determinants.

## 2.1 Abnormal return

Abnormal return can indicate investors' expectation about firms' future earnings and growth prospects. There are many researchers using event study, i.e. finding whether a statistically significant abnormal return exists or not, in order to study about firm value creation or destruction from M&A event (Thawornwong, 2005; Ma, Pagan & Chu, 2009; Uzunski, 2011, Soongswang, 2011; Rani, Yadav & Jain, 2012; Yadav and Jain, 2012; Nicholson and Salaber, 2013; Borges and Gairifo, 2013). The 120 to 210 days estimation window was suggested by Campbell et al. (1997) since it could avoid loss of transactions from lack of sufficient observations.

The results were mixed. Both positive CAR (Ma, Pagan and Chu, 2009; Rani, Yadav and Jain, 2012; Borges and Gairifo, 2013; Uzunski, 2011; Bhagat, Malhotra, and Zhu, 2011; Soongswang, 2011; Nicholson and Salaber, 2013) and negative CAR (Thawornwong, 2005) find by previous studies.

Positive CAR can be found because merger and acquisition can help create synergistic gains and positive future earnings from the events (Ma, Pagan and Chu, 2009; Soongswang, 2011; Rani, Yadav & Jain, 2012), however, there is possibility for acquirer's shareholders to get zero or negative wealth from the process. This occurs when managers take action for their own interest instead of shareholders' interest (Agency problem) (Seth et al., 2000) and they are lack of appropriate knowledge to handle the deal (Seth et al., 2000; Thawornwong, 2005; Deshmukh, 2012). Managers can also be too confident and pay too high for the M&A deal (hubris). In this case, price of acquirer firms' stock will drop after the deal announcement as investors perceive

that the deal does not allocate their wealth efficiently, while price of target firms' stocks will rise due to the high premium paid for the transaction (Thawornwong, 2005).

Some researcher (Lyon, Barber, and Tsai, 1999, Soongswang, 2011) advice that buy and hold abnormal return method (BHAR) would help to investigate/capture investor perception in long-term period. However, study from Francoeur (2006) who conduct BHAR to find abnormal return over five-year period do not obtain any significant result.

Table 2.1 Summarized of empirical studies on abnormal return

| Author(s) | Positive and significant | Negative and significant | Study |
|---|---|---|---|
| Ma, Pagan, and Chu (2009) | x | | Study of acquirer firms in emerging market |
| Rani, Yadav, and Jain (2012) | x | | Study of acquirer firms in India |
| Thawornwong (2005) | | x | Study of acquirer firms in Thailand |
| Bhagat, Malhotra, and Zhu (2011) | x | | Study of acquirer firms in emerging market |
| Nicholson, and Salaber (2013) | x | | Study of acquirer firms in China & India |
| Soongswang (2011) | x | | Study of acquirer and target firms in Thailand |
| Uzunski (2011) | x | | Study of target firms in Central and Eastern Europe |
| Borges and Gairifo (2013) | x | | Study of target firms in European |

**2.2 Pre and post-performance**

To investigate the pre and post-merger performance, many studies compared accounting ratios such as return on equity (ROE), return on asset (ROA), return on sales, and debt to equity from pre and post M&A event using t-test and Wilcoxon signed-rank test. These information from financial ratios can be calculated from firms' financial statement quite easily and they are useful indicators of firms' performance and financial situations (Berger and Ofek, 1995; Savor and Lu , 2009; Stiebale and Trax, 2011; Rani, Yadav & Jain, 2012; Ashfaq, 2014). The paper from Meeks (1981) and Deloitte University press (2013) indicate that ROA is the most appropriate ratio for measuring the firm's performance. Return on asset (ROA) provides an idea of how effective a company is using its assets to generate earnings before obligations must be paid. Moreover, some researcher mention firms with higher return on assets should be better able to raise money in security markets as they offer prospects for better returns on the firm's investments (Boubakri and Cosset, 1998). The increase in ROE means that the capital generates higher profit than earlier period which lead to higher performance, in that case we can conclude that M&A help increase acquirers' performance. While, cash flow was suggested by Martynova et al. (2006) and Rahman et al. (2004) since it was free from accounting method manipulation.

There were studies which find improved (Rahman and Limmack, 2004; Stiebale and Trax, 2011; Savor and Lu, 2009; Rani, Yadav & Jain, 2012), deteriorated performance (Berger and Ofek, 1995; Yeh and Hoshino, 2001; Kruse et al., 2002; Yeh and Hoshino, 2002; Cabanda and Pajara, 2007; and Ashfaq, 2014), and no significant change in performance (Pawaskar, 2001 and Martynova et al., 2006) of before and after M&A.

The change in performance depends on ability of management in handling the deal and takes advantage from the expansion such as cost reduction, fulfill production, economies of scale, and risk diversification. These are called synergy. If firms can gain the synergy from M&A, their performance will improve (Rahman and Limmack, 2004; Stiebale and Trax, 2011; Savor and Lu, 2009; Rani, Yadav & Jain, 2012). However, the complexity in managing the deal might lead to failure in achieving the expected merger synergies, which causes post-merger performance of the firms to

deteriorate (Berger and Ofek, 1995; Yeh and Hoshino, 2002; Cabanda and Pajara, 2007; and Ashfaq, 2014). Also, some literature find the relationship between the premiums paid and the firm performance. The benefit gains from M&A depends on the premium paid in the transaction as the transaction price should not greater than the expected cash flows from the project, otherwise, the synergy gain will be offset by the overpaid deal value (Moeller, Schlingemann, & Stulz, 2004; Diaz, Azofra, & Gutierrez, 2013). Moreover, other events beside firms' M&A may also affect firms' performance such as the global financial crisis in 2008 and cause firms' performance to deteriorate (Kruse et al., 2002; Yeh and Hoshino, 2001).
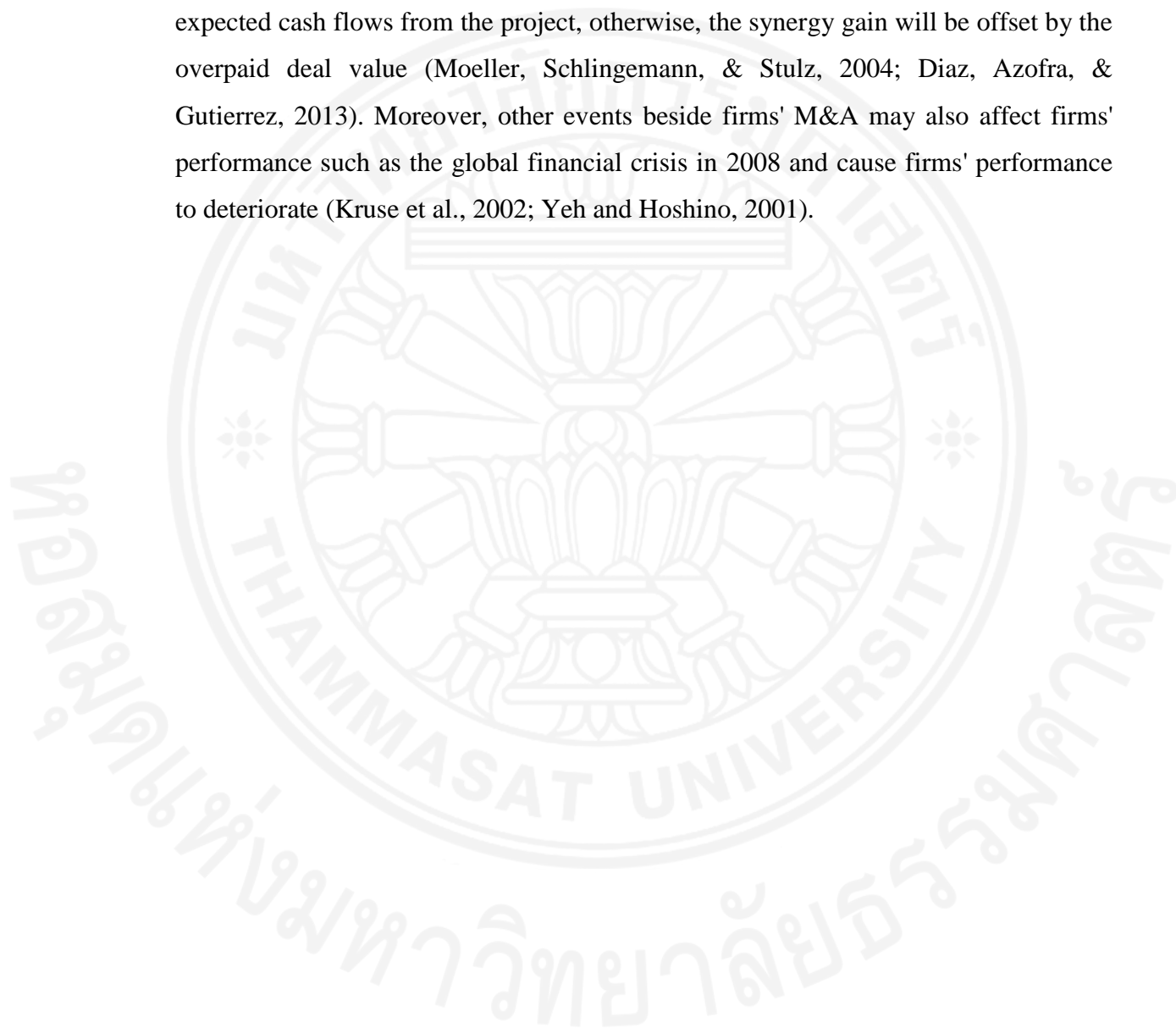
Table 2.2 Summarized of empirical studies on pre and post-performance from M&A event

| Proxy | Author (s) | Result positive and significant | negative and significant | insignificant | Study |
|---|---|---|---|---|---|
| Sale turnover | Stiebale and Trax (2011) | x | | | Study of acquirer in UK and France |
| Employee growth | | x | | | |
| Capital growth | | x | | | |
| Abnormal return | Savor and Lu (2009) | x | | | Study of acquirer in US on payment method: result based on the effect on stock finance |
| ROE | Rani, Yadav & Jain (2012) | x | | | Study of acquirer in India on payment method: result based on the effect on cash finance |
| Cash flow | Rahman R. A. and Limmack R.J. (2004) | x | | | Study of acquirers and targets in Malaysia: result based on acquirer firm's performance |
| Asset multiplier | Berger and Ofek (1995) | | x | | Study of acquirers and targets on US diversification strategy: result based on the effect on combined firm's performance |
| Sales multiplier | | | x | | |
| EBIT multiplier | | | x | | |
| EBIT/Total Asset ROA) | | | x | | |

Table 2.2 Summarized of empirical studies on pre and post-performance from M&A event (Cont'd)

| Proxy | Author (s) | Result positive and significant | negative and significant | insignificant | Study |
|---|---|---|---|---|---|
| Cash flow | Martynova, Oosting, and Renneboog (2006) | | | x | Study of acquirers and targets in United Kingdom: result based on the effect on combined firm's performance |
| Operating return | Pawaskar (2001) | | | x | Study of acquirers and targets in India: result based on the effect on combined firm's performance |
| Return on Sales (ROS) | Cabanda and Pajara-Pascual (2007) | | x | | Study of combined firm performance in Philippines: result based on the effect on combined firm's performance |
| Return on Asset (ROA) | | | x | | |
| Return on Equity (ROE) | | | x | | |
| Net income | | | x | | |
| Debt to equity | | | x | | |
| ROE | Yeh and Hoshino (2002) | | x | | Study of combined firm performance in Japan: result based on the effect on combined firm's performance |
| ROA | | | x | | |
| Growth in sales | | | x | | |
| Growth in employment | | | x | | |
| ROE | Ashfaq (2014) | | x | | Study of combined firm performance in Pakistan: result based on the effect on combined firm's performance |
| ROA | | | x | | |
| EPS | | | x | | |

**2.3 Determinants of abnormal return**

In this section, the deal characteristics, namely industry relatedness and methods of payment, were investigated in order to examine their effects on abnormal return. This is because, as summarized in the table 3 below, the method of payment and industry relatedness are the two main variables which have a significant effect on CAR from M&A.

Firstly, the mean of payment can affect investors' perception since acquirer firm which pays for an acquisition by cash is perceived to be more confident in their decision and can assess the target firm's value more accurately. Consequently, investors perceive cash offer as a good news. Therefore, stock price will be more positively affected by cash payment than by stock payment as find by Rani, Yadav, and Jain (2012) and KPMG report (2011). However, Thawornwong (2005) find negative and significant effect of cash payment in Thai market. This is because in terms of ownership structure of Thailand, cash offer may negatively affect stock price since it shows liquidity problem of the target firm and this will provide negative signal to investors (Thawornwong, 2005). This is because the investors believe that business owners of the target firms will liquidate their firm and sell their shares only when the firms encounter with financial problem of shortage in cash and don't have enough money to pay for short term debt. While, some researchers could not find any significant effects of different types of deal's payment term and stock return (Uzunski, 2011; Bhagat, Malhotra, & Zhu, 2011).

For industry relatedness, different strategies of M&A, namely horizontal, vertical and conglomerate, can affect firms' performance differently. This is because related strategy (horizontal and vertical) helps increase company market share and may have a significant impact on company market power (Thawornwong, 2005). Whereas, diversification helps company to diversify risk when facing unstable environment of current market (Walker, 2000; Nicholson and Salaber, 2013). The effects of industry relatedness on CAR find by many studies were mixed. Uzunski (2011) reveal positive relationship between industry relatedness and CAR with significant result while Thawornwong (2005) and Nicholson and Salaber (2013) show negative and significant effect. However, Bhagat, Malhotra, and Zhu (2011) mention industry relatedness didn't have any significant effect on CAR.

Other variables that are included in previous studies, which will be used as control variables in this study, were acquirer market capitalization (Bhagat, Malhotra, and Zhu, 2011; KPMG report, 2011; Moeller, Schlingemann, and Stulz, 2003), and transaction value (Uzunski, 2011; KPMG report, 2011; Bhagat, Malhotra, and Zhu, 2011). Firms' market capitalization is used as proxy for firm size by KPMG report (2010 & 2011) and Bhagat, Malhotra, and Zhu (2011). The studies find that the smaller the acquirers, the more successful the deal will be, as they tend to be more careful and focus, and make fewer deals. Moreover, management team of small firm usually have more sense of belonging or have more firm ownership than managers in large firm, hence, the shareholder feel their management's incentive are more align with theirs (Moeller, Schlingemann, and Stulz, 2003). For transaction value, it can have negative effect on stock price as larger deal (higher deal value) can lead to negative market response as investors afraid of empire building behavior (Bhagat, Malhotra, and Zhu, 2011), and smaller deals has higher chance of success as it is more easy to integrate especially in a challenging economic environment (KPMG report, 2011). However, it can also positively affect stock return since it is perceived as helping firms to reallocate capital to more efficiency use (Ray, 2007). Uzunski (2011) also find insignificant effect of deal value on CAR.

Table 2.3 Summarized of empirical studies on determinants of abnormal return

| Authors | Variable | Result | | | Study |
|---|---|---|---|---|---|
| | | positive and significant | negative and significant | insignificant | |
| Rani, Yadav & Jain (2012) | Payment method | x | | | Study of acquirer in India on payment method: result based on the effect on cash finance |
| Thawornwong (2005) | Payment method | | x | | Study of acquirer firms in Thailand |
| | Industry relatedness | | x | | |
| | no. of bidder | x | | | |
| Bhagat, Malhotra, and Zhu (2011) | Deal value | | x | | Study of acquirer firms in 8 emerging countries |
| | Relative size of target to acquirer | x | | | |
| | Industry relatedness | | | x | |
| | Payment method | | | x | |
| | Market Cap. Of acquirer | | | x | |
| | Target GDP growth | | | x | |
| | Geographic distance | | | x | |
| Nicholson, and Salaber (2013) | Payment method | | | x | Study of acquirer firms in China & India |
| | Relative size of target to acquirer | | | x | |
| | Industry relatedness | | x | | |
| | Percentage of stated-own | x | | | |

Table 2.3 Summarized of empirical studies on determinants of abnormal return (Cont'd)

| Authors | Variable | Result | | | Study |
|---------|----------|--------|--------|--------|-------|
| | | positive and significant | negative and significant | insignificant | |
| KPMG report (2010 & 2011) | Deal size (value) | | x | | Study of acquirer and target from worldwide: result based on combined firm |
| | Market Cap. Of acquirer | | | x | |
| | P/E ratio | x | | | |
| | Payment method | x | | | |
| Uzunski (2011) | Industry relatedness | x | | | Study of target firms in Central and Eastern Europe |
| | Payment method | | | x | |
| | domestic & cross-border | x | | | |
| | Deal value | | | x | |
| | acquirer's pre-merger operating revenue | | | x | |
| | acquirer's total assets | | x | | |
| | acquirer tax rate | x | | | |
| | target country risk | x | | | |
| Borges and Gairifo (2013) | Rumor | x | | | Study of target firms in European |
| | Market to book ratio | | | x | |
| | Hostile | | | x | |
| | Country | x | | | |

**2.4 Determinants of post-performance**

This section also investigated the deal characteristics, namely industry relatedness and methods of payment, to examine their effects on acquirer performance as method of payment and industry relatedness are the two main variables which have a significant effect on company long term performance from M&A.

The payment paid by cash can lead to higher performance improvement than other kinds of payment as cash payment is frequently financed with debt which limits the free cash flow available for firm lead to more managerial discipline (Martynova et al., 2006). However, cash payment from cash-rich firms show negatively related to performance and excessive cash holdings companies might suffer from free cash flow problems lead to poor acquisitions decision (Moeller and Schlingemann, 2004). On the other hand, stock payment from overvalued company will lead to better long-term performance because they use the overvalued stock to purchase asset at effective discount (Savor and Lu, 2009). Rani, Yadav & Jain (2012) find significant and positive effect of cash payment on firm's post-performance, while Savor and Lu (2009) find significant and positive effect of stock payment on company's post-performance, however, Martynova, Oosting and Renneboog (2006) and Francoeur (2006) show non-significant result from their finding.

Industry relatedness (related VS diversified) also plays an important role to determine the company performance from M&A. This is because the skills and resources can be better utilized when company expand into similar industry and such benefits as cost reduction and economies of scale will be achieved, while greater debt capacity, risk diversification and lower taxes will get from diversification (Francoeur, 2006; Berger and Ofek, 1995; and Maquieira et al., 1998). The effect of how industry relatedness would have on company performance from M&A still ambiguous. Positive and significant effect of industry related on company performance finds by Maquieira et al. (1998), Francoeur (2006) while; negative and significant effect of diversification on company performance find by Berger and Ofek (1995).

Other variables that are included in previous studies, which will be used as control variables in this study, were book-to-market ratio or BM ratio (Rau and Vermaelen, 1998; Francoeur, 2006), and debt-to-equity ratio or D/E ratio (Martynova,

Oosting, and Renneboog, 2006; Tan, 2012). As the deal success come from the prudent or careful step in M&A process. The study shows high book to market ratio (value firm) will have better post-merger performance as management will get scrutiny in every step of their decision due to poorer track record than low BM ratio firm (Rau and Vermaelen, 1998). For D/E ratio which is proxy of company leverage can imply the firm financial health, thus, company with high financial leverage will have lower performance than firms with low financial leverage as high leverage will lead to financial distress problem (Tan, 2012). Rau and Vermaelen (1998) find positive and significant effect of BM ratio on firm performance, whereas; Francoeur (2006) find significant and negative result on this variable. Negative and significant effect of D/E ratio on firm performance find by Tan (2012), while; Martynova, Oosting, and Renneboog (2006) find insignificant result on this variable.

Table 2.4 Summarized of empirical studies on determinants of post-M&A performance

| Authors | Variable | Result | | | Study |
|---------|----------|--------|--------|--------------|-------|
| | | positive and significant | negative and significant | insignificant | |
| Savor and Lu (2009) | Payment method | x | | | Study of acquirer in US on payment method: result based on the effect on stock finance |
| Rani, Yadav & Jain (2012) | Payment method | x | | | Study of acquirer in India on payment method: result based on the effect on cash finance |
| Rau and Vermaelen (1998) | Book to market ratio | | x | | Study of acquirer in US: result based on the effect on glamour firm |
| Francoeur (2006) | Book to market ratio | | | x | Study of Canadian acquirers |
| | Payment method | | | x | |
| | Industry relatedness | x | | | |
| | Size of acquirer | | x | | |
| | R&D Expense | x | | | |
| Chen and Lin (2009) | P/E ratio | | x | | Study of Chinese acquirers |
| | Size of acquirer | | x | | |
| | Pre-acquisition profitability | | | x | |
| | Previous M&A experience | | x | | |
| | Share-dilution | x | | | |

Table 2.4 Summarized of empirical studies on determinants of post-M&A performance (Cont'd)

| Authors | Variable | Result | | | Study |
|---------|----------|--------|---|---|-------|
| | | positive and significant | negative and significant | insignificant | |
| Andre, Kooli & L'her (2004) | Payment method (stock) | | x | | Study of Canadian acquirers |
| | Book to market ratio | | x | | |
| | Cross border deal | | x | | |
| Martynova, Oosting, and Renneboog (2006) | Payment method | | | x | Study of acquirers and targets in United Kingdom: result based on the effect on combined firm's performance |
| | Industry relatedness | | | x | |
| | Pre-acquisition leverage | | | x | |
| | Hostile takeover | | x | | |
| | Pre-acquisition cash reserve | | x | | |
| Maquieira et al. (1998) | Industry relatedness | x | | | Study of acquirers and targets on US in industry relatedness: result based on the effect on combined firm's performance |
| Berger and Ofer (1995) | Industry relatedness | | x | | Study of acquirers and targets on US diversification strategy: result based on the effect on combined firm's performance |
| Soongswang (2011) | Stock price | x | | | Study of acquirer and target firms in Thailand: result based on the effect on combined firm's performance |

# CHAPTER 3
# EMPIRICAL METHODS AND HYPOTHESES

Research Question 1: Did firms' stock generate significant abnormal return during the cross-country mergers and acquisitions announcement?

## 3.1 Measuring abnormal return

The Abnormal Return (AR) or stock price reaction to the mergers and acquisitions announcement in this paper will be examined by event study methodology. The estimation window will be 120 days (AD-125 to AD-6). Day 0 (AD) represents for mergers and acquisitions announcement date to the public by the Stock Exchange Market and the event window will divide into 3 event windows to find CAR as 11 days (-5, +5); 5 days (-2 to +2); and 3 days (-1, +1) from the event day to observe any unusual return from the event.

The event window for the abnormal return test will therefore be like this.
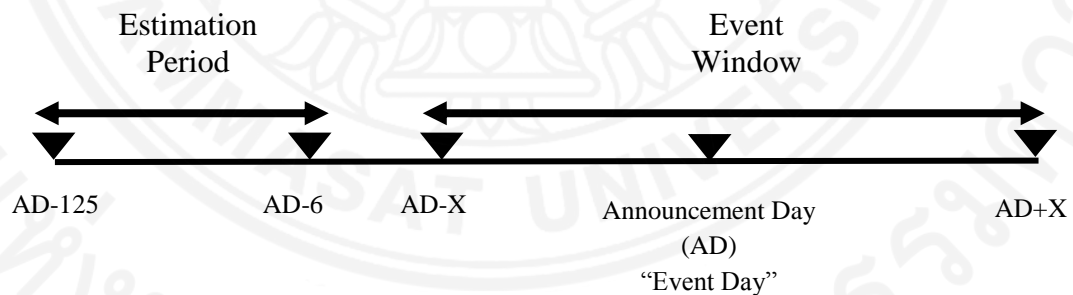


The diagram above will be divided into 3 time frames;

- Estimation period– runs from AD-125 to AD-6, to use as the prediction of normal return.
- Pre event period– runs from AD-5, -2 and -1 to AD, this will be used to test the abnormal return right before the announcement date.
- Post effective – runs from AD to AD+5, +2 and +1, this will be used to test the abnormal return after the announcement date.

Calculate for Normal and Abnormal Return:

The paper used market model with lead and lag terms to solve the problem of stock illiquidity as suggested by Dimson (1979). However, there is no rule of thumb on how many lead and lag terms should be included, therefore, we followed a paper by Hasnaoui (2014) which used 2 lead and lag terms. The model is as follow:

$$R_{it} = \alpha_i + \beta_{1i}R_{mt(t-2)} + \beta_{2i}R_{mt(t-1)} + \beta_{3i}R_{mt} + \beta_{4i}R_{mt(t+1)} + \beta_{5i}R_{mt(t+2)} + \varepsilon_{it}$$

Where:

$R_{it}$ = return on stock i during period t

$R_{mt}$ = return on market portfolio/market index during period t

$E_{it}$ = error term for stock i

$\alpha$ = constant term for stock

$\beta$ = beta/risk of stock

The daily excess return i.e. **abnormal return** of firm i for day t ($AR_{it}$) as show in equation below is estimated during the event period. It is the actual returns minus the expected returns obtained from the modified market model.

$$AR_{it} = R_{it} - \widehat{\alpha_i} - \widehat{\beta_{1i}}R_{mt(t-2)} - \widehat{\beta_{2i}}R_{mt(t-1)} - \widehat{\beta_{3i}}R_{mt} - \widehat{\beta_{4i}}R_{mt(t+1)} - \widehat{\beta_{5i}}R_{mt(t+2)}$$

Where:

$AR_{it}$ = abnormal return on stock i during period t

The daily abnormal returns are summed over the event window to derive the cumulative abnormal returns (CARs):

$$CAR_{i(T_1-T_2)} = \sum_{t=T_1}^{T_2} AR_{it}$$

Then, the CAR is tested using t-test to find whether it is statistically significantly different from zero or not. Thus, the null hypothesis is as follow:

H1: There is no abnormal return exists from M&A announcement for acquirer firms

The CAR could be either positive and significant, negative and significant or insignificant because the abnormal return is depended upon the market expectation for the event. The positive abnormal return will exist if shareholders perceive synergistic gains and positive future earnings from the events. However, there is possibility for acquirer's shareholders to get zero or negative wealth from the process if the managers are so confidence (hubris), take action on their own interest rather than shareholder wealth (Agency problem theory) and lack of appropriate knowledge to handle the deal.

Research Question 2: Do acquirer firms have the better performance after conducting Merger and Acquisitions process?

**3.2 Post-Merger Performance**

The paper will apply paired Sample-T test in comparing the mean different of company performance ratio (ROE & ROA) before and after the event. The outlier value and omitted data was deleted to ensure the correctness of result then the number of companies in each period will vary according to data available. It determines whether the difference between the means of the two periods (t-3, t-2, t-1) and (t+3, t+2, t+1) is significantly different from zero or not. The reason for using the mentioned period is that, in literature, it is generally accepted that mergers and acquisitions performance cannot be shown immediately until the second year after; costs typically increase in the year of mergers and acquisitions and the first year after the event is an integration period when a lot of investments are still needed. The null hypothesis is as follow:

H2: There is no significant difference between the financial performance of the companies before and after the merger

If the null hypothesis is rejected and the mean of performance from the latter period is significantly higher than the previous one, it indicates performance improvement for acquirer firms from mergers and acquisitions event. If it is rejected

and the mean difference is negative, then M&A deteriorate the firms' performance. Hence the result of financial performance different between pre and post-merger is ambiguous. This depends upon the ability of management in handling the deal to take advantages from the expansion through synergy creation which will result in firm performance improvement. However, the complexity in managing the deal might lead to failure to achieve the expected merger synergies. As a result, engaging in cross-border M&A, the post-merger performance of the firm may deteriorate.

<u>Research Question 3</u>: Do industry relatedness and method of payment significantly affect abnormal return and post M&A performance?

### 3.3 Determination factors

To understand which factors determine the CAR and company performance that calculate from event study methodology under market perception, the paper constructs data to perform the regression. The Dependent variables is the cumulative abnormal return (CAR) and the independent variables are industry relatedness, mean of payment, deal value, P/E ratio, and market capitalization (proxy of firm size). Even the P/E ratio is not the main variable use by many papers, however, report from KPMG on determinant for M&A success (2011) reveals the company with high P/E ratio led to better performance which in turn lead to higher stock price later after the merge as investors are expecting higher earnings growth in the future. The industry relatedness will be represented by dummy variable where related = 1, unrelated = 0, as well as the choices of deal payment where paid by all cash = 1, others = 0.

Model for **determination of cumulative abnormal return (CAR)** can be shown as:

$$CAR(t_1, t_2)_i = a_0 + \alpha_1(RELATED_i) + \alpha_2(PAYMENT_i) + \alpha_3(\ln DEAL\ VALUE_i) + \alpha_4(\ln FIRM\ SIZE_i) + \alpha_5(PE\ RATIO_i) + \varepsilon_i$$

where i denotes firm i

The variables chosen in this model follows Thawornwong (2005); Bhagat, Malhotra, and Zhu (2011); Uzunski (2011); Rani, Yadav & Jain (2012); Borges and Gairifo (2013); and Nicholson, and Salaber (2013).

This equation is estimated using Ordinary Least Squares (OLS)

Where:

| | | |
|---|---|---|
| CAR(t$_1$,t$_2$) | = | Cumulative abnormal return from event window (t-2,+2) |
| RELATED | = | M&A strategy i.e. industry relatedness or un-relatedness |
| FINANCING | = | all cash financing or other kinds of financing eg. all stock or mixed |
| DEAL VALUE | = | natural logarithm of the deal value as shown in Bloomberg database |
| FIRM SIZE | = | natural logarithm of acquirer's market capitalization, the year before engaging in M&A |
| P/E RATIO | = | acquirer's P/E ratio, the year before engaging in M&A event |
| E$_i$ | = | Error term for stock i |

To understand which factors determine the performance of the acquirer firms, the paper constructs panel data to perform the regression. The Dependent variables which is the proxy for company performance is the ROE and ROA during 2009-2013 and the independent variables are M&A strategy, mean of payment, debt to equity ratio, and book to market ratio. The paper has 2 sets of dummy variables. First is industry relatedness: relatedness = 1, unrelatedness = 0. Second is the choice of deal payment: paid by all cash = 1, others = 0.

Model for **determination of post M&A performance** can be shown as: ROE & ROA

$$ROE_i = a_0 + \alpha_1(RELATED_i) + \alpha_2(PAYMENT_i) + \alpha_3(DE\ RATIO_i) + \alpha_4(BM\ RATIO_i) + \varepsilon_{ij}$$

The variables chosen in this model follows Berger and Ofek (1995); Maquieira et al. (1998); Rau and Vermaelen (1998); Andre, Kooli & L'her (2004); Francoeur (2006); Martynova, Oosting, & Renneboog, (2006); Savor and Lu (2009); Rani, Yadav & Jain (2012).

This equation is estimated using Ordinary Least Squares (OLS) for panel data.

Where:

| | | |
|---|---|---|
| $ROE_i$ | = | Acquirer's return on equity in year 2009-2013 |
| $ROA_i$ | = | Acquirer's return on asset in year 2009-2013 |
| RELATED | = | M&A strategy i.e; industry relatedness or unrelatedness |
| FINANCING | = | All cash financing or other kinds of financing eg. all stock or mixed |
| D/E RATIO | = | Acquirer's debt to equity ratio |
| B/M RATIO | = | Acquirer's book to market ratio |
| $E_i$ | = | Error term for stock i |

Table 3.1 Hypothesis and expected signs of coefficient:

| Independent variable | Dependent variable | |
|---|---|---|
| | **CAR** | **Performance** |
| Deal value | *H7: There is no different in cumulative abnormal return for different amount of deal value*<br><br>The effect of deal value on CAR is ambiguous as large transaction value might lead to negative market response as investors afraid of empire building and hubris behavior of management team, however, the expected returns from the deal usually increase with the deal value as market perceive that high deal value can imply the management confident to achieve synergies from the deal. | |

Table 3.1 Hypothesis and expected signs of coefficient: (Cont'd)

| Independent variable | Dependent variable | |
| --- | --- | --- |
| | **CAR** | **Performance** |
| P/E ratio | *H8: There is no different in cumulative abnormal return for different amount of P/E ratio*<br><br>The P/E Ratio indicated the amount of money the investor willing to invest in the company in order to receive one dollar of company earnings as they expect the earning will growth significantly in the future. If the market perceive the company expansion by M&A is the good long term strategy, they are willing to pay more. Thus, the effect of price per earnings ratio on CAR is expected to be positive. | |

Table 3.1 Hypothesis and expected signs of coefficient: (Cont'd)

| Independent variable | Dependent variable | |
|---|---|---|
| | **CAR** | **Performance** |
| Market capitalization (Firm size) | *H9: There is no different in cumulative abnormal return for different size of acquirers*<br><br>The effect of market capitalization on CAR is expected to be negative because the smaller the acquirers size, the more successful the deal are. | |

Table 3.1 Hypothesis and expected signs of coefficient: (Cont'd)

| Independent variable | Dependent variable | |
|---|---|---|
| | **CAR** | **Performance** |
| D/E ratio | | *H10: There is no different in acquirers' performance for different acquirer leverage level*<br><br>Debt to equity ratio expect to be negative with company performance and profitability because the financial structure of the firm can imply the firm financial health as too much debt will lead to financial distress and bankruptcy problem. |
| BM ratio | | *H11: There is no different in acquirers' performance for different acquirer size*<br><br>The effect of book to market ratio on firm performance is expected to be positive because the deal success come from the prudent or careful step in M&A process. The high book to market ratio (value firm) will have better post-merger performance as management will get scrutiny in every step of their decision due to poorer track record when compare to the performance of low book to market ratio (growth firm). |

Table 3.1 Hypothesis and expected signs of coefficient: (Cont'd)

| M&A strategy | *H3: There is no different in cumulative abnormal return for different type of M&A* <br> *H4: There is no different in acquirers' performance for different type of M&A* <br><br> Types of M&A strategy show industry relatedness of the acquiring and target firms. The effect of industry relatedness on CAR and firm performance are expected to be ambiguous. This is because unrelated mergers help to diversify the specific risk of company and the market perceive holding company stock is liked their hold diversified portfolio. However, the skills and resources can be better utilized in related mergers as the company might gain advantage from expansion into similar operation and get such benefits as cost reduction, fulfill production, and achieve economic of scale. |
|---|---|
| Method of payment | *H5: There is no different in cumulative abnormal return for different Method of payment* <br> *H6: There is no different in acquirers' performance for different Method of payment* <br><br> The effect of method of payment on CAR and firm performance are expected to be ambiguous because cash payment shows to the market the confidence of acquirer firms on their decision. However, some cash finance deals were more highly leveraged which lead to financial distress problem then the market reacted negatively to those deal especially during the recent economic slowdown. |

Table 3.2 The expected signs of coefficients.

| | Dependent variable | |
|---|---|---|
| **Independent Variable** | Expected sign (CAR) | Expected sign (Performance) |
| **STRATEGY** | Ambiguous | Ambiguous |
| **PAYMENT** | Ambiguous | Ambiguous |
| **DEAL VALUE** | Ambiguous | |
| **FIRM SIZE** | - | |
| **P/E RATIO** | + | |
| **D/E RATIO** | | - |
| **B/M RATIO** | | + |

# CHAPTER 4
# M&A TREND IN AEC AND DATA DESCRIPTION

## 4.1 M&A trend in AEC

Ma, Pagan and Chu (2009) advise that Mergers and Acquisitions in emerging market is growing over a decade as it is a corporate tool to pursue inorganic growth. During the first half of 2013, the M&A volume and value increase by 10% and 6% respectively, from the same period last year (AT Kearney report (2013)). Other researchers claim that M&A is the best way to access to intangible asset such as technological capabilities, good well and brand name, knowledge and expertise (Shimizu *et al*. 2004 and Kim 2009 and Fan 2009). Also, it is the best way to enter into new market while market in home country is saturated, seeks for lower production cost, maintain/sustain competitive advantage through immobility asset, or gain more power by obtaining the current or potential competitors. In other word, M&A create economic enhancement lead to increase in shareholders' wealth and better performance of the firms.

### 4.1.1 Why focusing on ASEAN

Since China become more expensive in every aspect for foreign investment, multinational company try to seek for new opportunity in emerging market especially in ASEAN countries which have remarkable rate of economic growth, powerful consumer spending and greater integration as most of them are in the process of transforming from agriculture-based economy to an industrial-based economy. As evidence from Rahim et al. (2013), there will be more CBMA involving the companies from Asian countries in the future. Moreover, the survey from American Chamber of Commerce survey reveal that 90 percent of respondents (U.S. multinational firms) plan to expand their business in ASEAN by 2015 and 73 percent view that this market will contribute more profit to them.

ASEAN's nation attractiveness is as follow:

#### 4.1.1.1 Robust Market

Asian nation, the $8^{th}$ largest economy in the world, contain 9% of world population (more than 600 million people) with growing number of middle class income family (Economist Report defined household income of US$5,000 as middle class status) which have high demand for wide variety of products with lessen poverty rate. Also, the population will become the working age in the next decade.

The GDP of $2.356 trillion is larger than India, Russia and Brazil. Report from World Bank shows the interesting forecast of GDP growth between 2013 to 2017 in emerging market, Thailand take the $3^{rd}$ place, follow by Malaysia rank no. $6^{th}$, Indonesia is in no. $10^{th}$ and Philippines at no. $20^{th}$.

#### 4.1.1.2 Preferred Workforce

ASEAN have labor force participant rate of 70% of total population with high skilled workers plus English communication skilled. The literacy rate is range from 73% to 96% while BEI (Business English Index) of this region shows score as 5.02 which higher than other emerging countries.

Figure 4.1 Distribution of Business English Index in developing economy
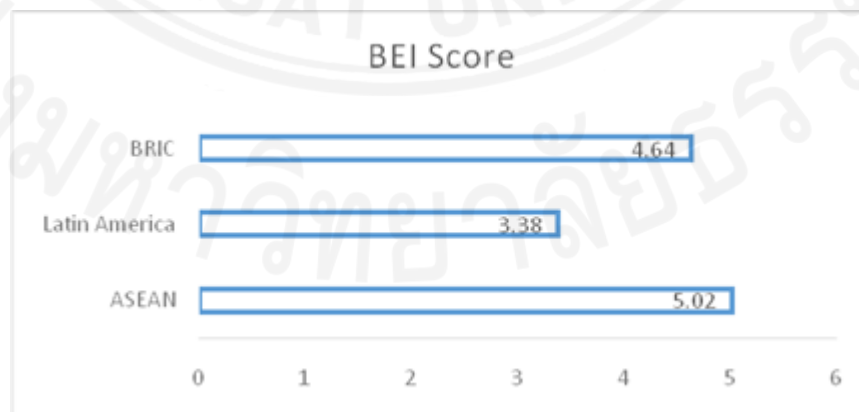
Moreover, cheaper labor cost in Vietnam, Indonesia and the Philippines (only 30% of China labor cost). This imply ASEAN is more prefer than others emerging market in term of workforce ability.

### 4.1.1.3 Sustain Economic Growth

ASEAN GDP growth is sustaining at 5.3% since 2006 with the inflation of 4.3%. Also, recent report from UNCTAD's investment rank Indonesia, Thailand, Vietnam and Malaysia as top 20 of most desirable destination for investment. Moreover, Global Competitiveness Index 2014-2015 which measure the competiveness of each country in term of productivity of economic by looking at innovation, market size, financial market development, education & training, market efficiency and labor market efficiency reveal that all ASEAN countries have economic improvement.

Table 4.1 Distribution of World GCI Rank

| Country | Previous score (2013-2014) | Current score (2014-2015) | Country | Previous score (2013-2014) | Current score (2014-2015) |
|---|---|---|---|---|---|
| Singapore | 2 | 2 | China | 30 | 29 |
| Malaysia | 24 | 20 | Japan | 9 | 6 |
| Thailand | 37 | 31 | Hong Kong | 7 | 7 |
| Indonesia | 38 | 34 | Puerto Rico | 30 | 32 |
| Philippines | 59 | 52 | Chile | 34 | 33 |
| Vietnam | 70 | 68 | Brazil | 56 | 57 |
| Cambodia | 88 | 95 | Mexico | 55 | 61 |
| Myanmar | 139 | 134 | India | 60 | 71 |
| Laos | 81 | 93 | Argentina | 104 | 104 |
| Brunei | 28 | 28 | Russia | 64 | 53 |

Source: http://reports.weforum.org/global-competitiveness-report-2014-2015/wp-content/blogs.dir/54/mp/files/pages/files/wef-gcr14-15-gatefold.pdf

Apart from the above advantages, ASEAN countries also have excellent investment climate for investors to enjoy connection with countries within and outside the region as to follow free trade regulation, ASEAN try to eliminate all roadblock to foreign investment. For example, Singapore and Thailand will become a new hub in this region instead of Hong Kong. Moreover, private sectors in this community be able to exploit these opportunities to pursue growth and value enhancement. In turn, domestic players in each country should expect greater competition and all firms have to make themselves ready and leapfrog competitors by preparing strategic plan such as improving marketing and branding strategy, and/or building scale through M&A (including move up value chain, horizontal expansion or business diversification).

### 4.1.2 Cross-border M&A among ASEAN countries

Mergers and Acquisitions occur when one firm decides to acquire another existing firm. According to Nocke & Yeaple (2006) cross-border M&A are driven by resource-based view of the firm as they believed some country specific and firm capabilities such as experience, knowledge, distribution, or natural resource are imperfectly mobile across country. From the survey of EY (2015) in the issue of Merger Integration ASEAN hub, management teams in ASEAN countries who engaged in M&A strategy are driven by cost reductions or margin improvement opportunities for 56%, expansion into new markets for 44%, and talent acquisition for 38%. Moreover, around 44% of the respondents focus on conglomerate integration.

Types of Mergers and Acquisitions:

There are three major types of M&A strategy: horizontal, vertical and conglomerate integration. Different type of M&A provides different support to achieve different growth objectives.

Table 4.2 Three types of M&A strategy and their benefits

| | Horizontal | Vertical | Conglomerate |
|---|---|---|---|
| **Description** | Merger between firms operate in same industry. This type of merger including market expansion and product expansion strategy | Merger between firms operate at different stage of value chain including forward and backward integration | Merger between firms in unrelated business |
| **Advantage** | Increase market share | Increase barrier to entry of new comer | Diversify company's risk |
| | Increase revenue | Increase economic efficiency | Escape/abandon from current business |
| | Increase economic of scale | Secure access to important resource | Expand into new product and market |
| | Reduce competitors | | |
| | Widen product range | | |
| **Disadvantage** | Might encounter with anti-trust issue and legalities | Lack of flexibility | Easily to fail from lack of knowledge/experience |
| | Reduce company flexibility | Might unable to achieve economic of scale | Deviate from core business |
| | | Low quality product or service from lack of experience | |

**4.2 Data description and analysis**

The paper observes the stock price and performance ratio (ROE, ROA & EPS) of acquirer firms in Malaysia, Singapore and Thailand for cross-border M&A during 2009-2013 by using the information from Bloomberg database.

The article will select the firms which match with the following criteria to study only:

1. The completed M&A deal for cross-border between Malaysia, Singapore and Thailand
2. Both acquirer and target firms have to be listed during the M&A process and target firms have to be delisted after the event to avoid complexity of performance measurement
3. Mean of payment have to be disclosed
4. All firms must have daily stock price data in Bloomberg during the observation period (2009-2013)
5. Acquirer firms whose financial statement/financial data disclosed both before and after M&A process
6. The acquirer companies did not perform other activities that affect the stock price, for example another acquisition or a stock split during the observation period. The last acquisition record will be used if a listed firm has made more than one acquisition activities during observation period.

Malaysia, Singapore & Thailand:

The data reveal that Malaysia, Indonesia and Singapore are the top three most attractive market for this event which account for 31 percent, 29 percent and 20.50 percent of total deal respectively as these countries have policy to highlighted M&A incentive. However, rapid change and complicated tax environment in Indonesia might create potential risk to investors. In this case, Thailand which is rank no. 4 is more interesting to invest due to more environmental investment friendliness.

Data collect from Bloomberg shows there are 68 cases of cross-border M&A (CBMA) within these three countries during 2009-2013 which conform to the data section criteria.

Table 4.3 Distribution of Cross-Border M&A during period 2009-2013 conducted by each country



| Number of CBMA (separate by acquirer country) | | | | | | |
|---|---|---|---|---|---|---|
| | **2009** | **2010** | **2011** | **2012** | **2013** | **Total** |
| **Malaysia** | 4 | 7 | 1 | 4 | 2 | 18 |
| **Singapore** | 10 | 7 | 8 | 10 | 12 | 47 |
| **Thailand** | 1 | | 1 | 1 | | 3 |
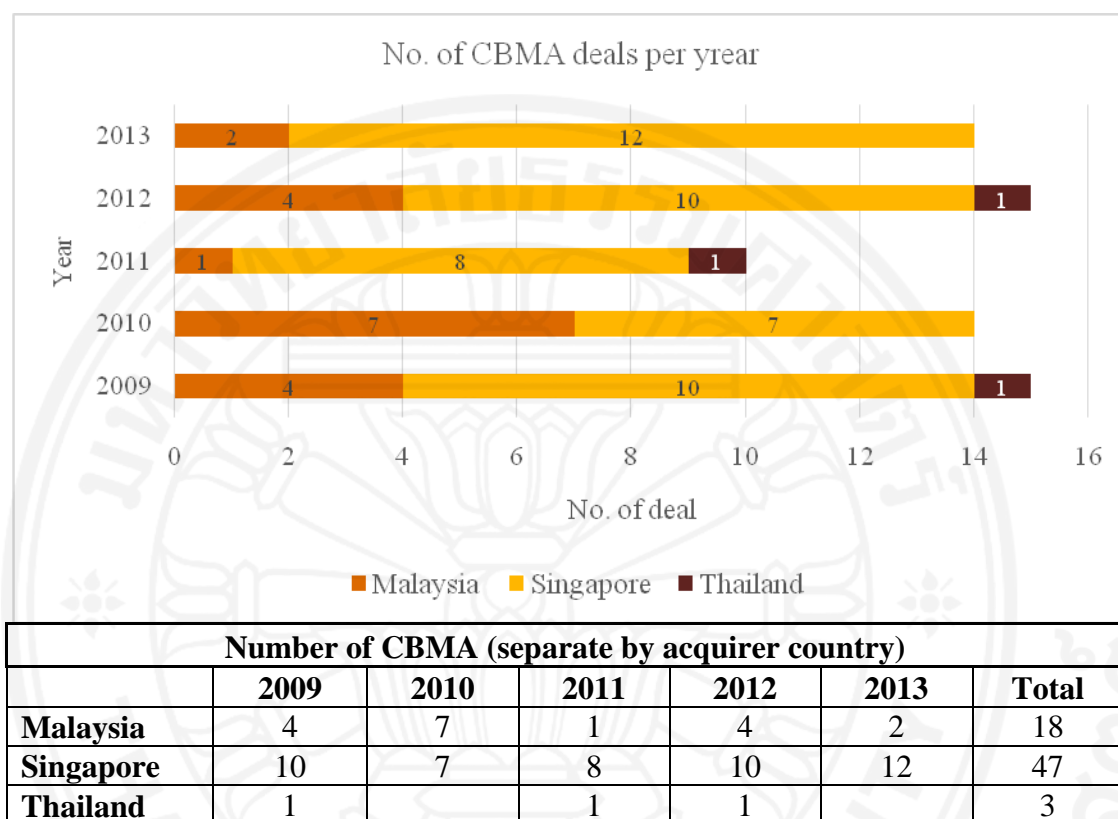
Table 4.3 provides detail regarding the distribution of CBMA make by the acquirer firms in each country. We notice that Singapore conduct 47 deals followed by Malaysia (18 deals) and Thailand (3 deals) from total of 68 deals during the observation period.

Table 4.4 Number of M&A deals separate by acquirer and target country

| Acquirer / Target | Malaysia | Singapore | Thailand |
|---|---|---|---|
| Malaysia | | 37 | |
| Singapore | 15 | | 3 |
| Thailand | 3 | 10 | |
| Total | **18** | **47** | **3** |

Note: The table shows the distribution of CBMA deal between Malaysia, Singapore and Thailand during 2009-2013. Acquirer firms in Malaysia conduct the CBMA for 18 deals: 15 deals in Singapore and 3 deals in Thailand. Singaporean acquirers conduct 47 deal in total divided into 37 deals in Malaysia and 10 deals in Thailand while Thai acquirers conduct only 3 deals in Malaysia during the study period

      Distribution of deals conduct by acquirer firms of each country shows in Table 4.4. From the data we notice that Singapore is the major player for CBMA among these three countries which account for 68% of total deals and the main target destination is Malaysia (79% of deal done by Singapore). Malaysia is the second player (28% of total deals) and target destination is Singapore (84% of total deal conduct by Malaysia). Thailand conducted only 3 deals from the total of 68 deals in this study or equal to 4% of total deals only. We believe that the investment environmental friendly of target country, M&A incentive of both target and acquirer countries, and culture/ language/ business norm are the major drivers for the event. For example, the data show that Singapore and Malaysia conduct 52 deals in total (76.47% of total deals) as they share many things in common for example their climate, mix of population & culture including business practice and major language (English).

Table 4.5 Industry classification of acquirer firms
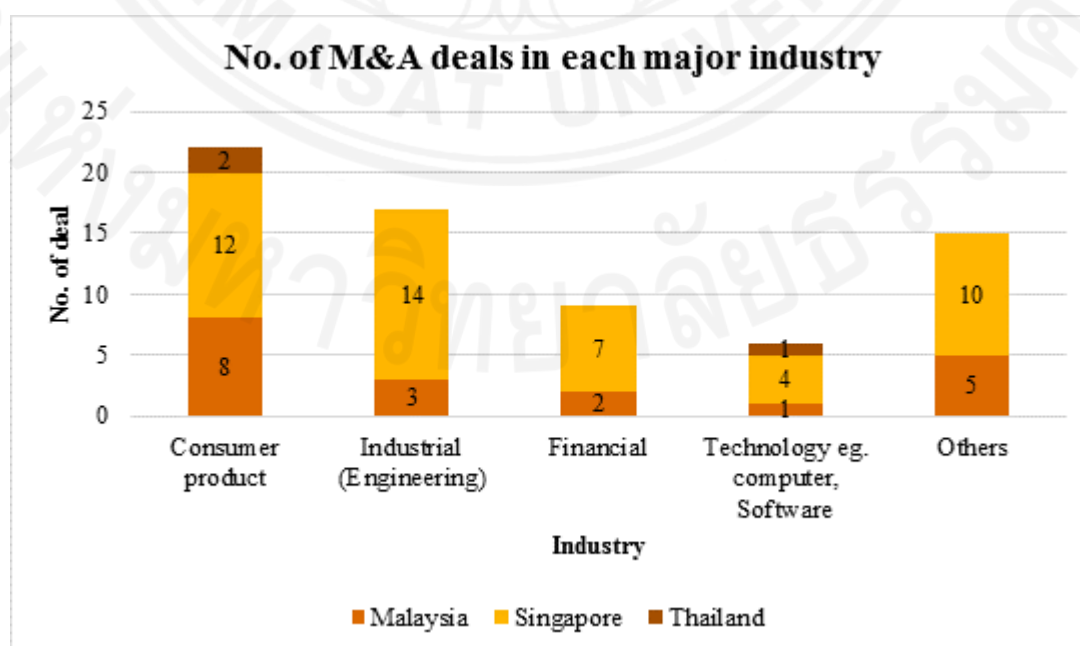
Table 4.5 Industry classification of acquirer firms (Cont'd)

|  | Consumer product | Industrial | Financial | Technology | Others | Total |
|---|---|---|---|---|---|---|
| Malaysia | 8 | 3 | 2 | 1 | 5 | 18 |
| Singapore | 12 | 14 | 7 | 4 | 10 | 47 |
| Thailand | 2 |  |  | 1 |  | 3 |
| Total | 22 | 17 | 9 | 6 | 15 | 68 |

Table 4.5 presents the industry characteristics of 68 acquirers during 2009-
2013. We notice that consumer product (32% of the total deals) is the main industry
conduct CBMA in this study follow by industrial engineering (25%), financial (13%)
and technology (9%), respectively. The reason behind this might come from the
growing number of middle class income family which have high demand for wide
variety of products and service of these emerging countries. Moreover, they must
prepare for opportunity and growth in the AEC upcoming event then infrastructure
industry such as industrial and technology might foresee the opportunity to come and
play.

Table 4.6 Distribution of M&A in each major industry classify by types of M&A



No. of M&A deal classify by strategy for each industry

| Types of M&A strategy | Consumer product | Industrial (Engineering) | Financial | Technology eg. computer, Software | Others eg. energy, communication |
|---|---|---|---|---|---|
| Related | 12 | 11 | 6 | 4 | 6 |
| Unrelated | 10 | 6 | 3 | 2 | 9 |

Table 4.6 Distribution of M&A in each major industry classify by types of M&A (Cont'd)

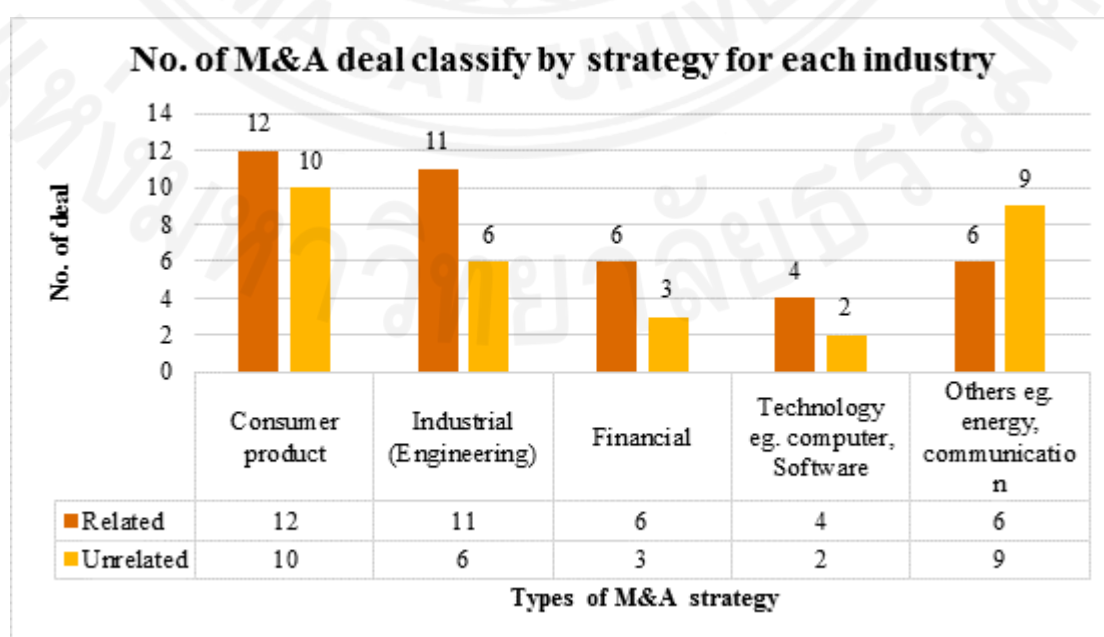| Type of M&A Strategy | Industry | | | | |
|---|---|---|---|---|---|
| | Consumer product | Industrial (Engineering) | Financial | Technology eg. Computer, Software | Others eg. energy, communication |
| **Related** | **12** | **11** | **6** | **4** | **6** |
| Malaysia | 4 | 2 | 1 | 1 | 3 |
| Singapore | 8 | 9 | 5 | 2 | 3 |
| Thailand | | | | 1 | |
| **Unrelated** | **10** | **6** | **3** | **2** | **9** |
| Malaysia | 4 | 1 | 1 | | 2 |
| Singapore | 4 | 5 | 2 | 2 | 7 |
| Thailand | 2 | | | | |

We notice that all major industries in this study employed related strategy (horizontal and vertical) as method to pursue inorganic growth. Related strategy account for 57%, while unrelated strategy account for 43% of the total deals. Once we look into more detail, we notice that consumer products pursue related strategy (55%) by Malaysian firms4 deals and Singaporean 8 deals while unrelated strategy (45%) employed by Malaysian and Singaporean 4 deals in each country and 2 deals by Thai acquirers. Industrial industry shows related strategy for 65% and unrelated strategy for 35%. For this industry, Malaysian firms employed related strategy for 2 deals and unrelated strategy for 1 deal while Singaporean employed related strategy for 9 deals and unrelated strategy for 5 deals. Financial industry employed related strategy for 66.67% and unrelated strategy for 33.33% and Technology industry conducted related strategy for 66.67% and unrelated strategy for 33.33%

Table 4.7 Number of M&A classify by types of payment

| Method of payment | Malaysia | Singapore | Thailand | Total | Total (%) |
|---|---|---|---|---|---|
| Cash | 17 | 41 | 3 | **61** | **89.71** |
| Stock/Cash and Stock | 1 | 6 | | **7** | **10.29** |
| **Total** | **18** | **47** | **3** | **68** | **100.00** |

Data collected from Bloomberg show most of the acquirers in this study choose cash as method of payment which accounted for 90% and only 10% of deals use stock or combination between cash and stock as method of payment. The deal finance with cash will generate higher return than finance with stock on the announcement date as it shows confidence of bidding company on their decision. Thawornwong (2005) show that ownership structure in Thailand, the owner will sell the company only when they need cash or shortage in cash, hence, cash offer is the most interesting method here. Savor and Lu (2009) suggest that for stock merger the acquirer firms have to make sure that stock of their company is overvalue at the acquisition period or have higher value than the target firm for the acquirers to convert the overvalue stock into hard assets.

# CHAPTER 5
# EMPIRICAL RESULT

## 5.1 Market Expectation: Event study on abnormal return

The results are as follow:

Table 5.1 Summary of t-statistic and mean value of CAR of acquirer firms

| CAR in each event window | Sample size | Mean of CAR | t-stat |
|---|---|---|---|
| CAR at event window (-5,+5) | 68 | 0.014035 | 1.357176 |
| CAR at event window (-2,+2) | 68 | 0.016684 | **2.315129**\*\* |
| CAR at event window (-1,+1) | 68 | 0.001622 | 0.253753 |

\*\* Significant level at 5%

From table 5.1, we cannot find the significant result in window period (-1, +1) and (-5, +5) at any 1, 5 or 10% significant level. Hence, there is no statistically significant abnormal return during the testing period (-1, +1) and (-5, +5). However, we can find the significant result at window period (-2, +2) which can imply that the shareholders of acquirer firms can earn abnormal return with the mean value of CAR at nearly 1.7%. The result suggests that investors has positive response on announcement of the deal as the market perceives M&A will translate into future earnings, hence, this paper supports the view that investors expect the external growth through M&A in emerging country. This result complies with many literatures which studied the abnormal returns in many emerging countries and find a positive significant market response for AR including Ma, Pagan and Chu (2009), Bhagat, Malhotra, and Zhu (2011), Soongswang (2011), and Nicholson and Salaber (2013).

Moreover, holding period return of 1 to 3 year after M&A announcement date was conduct to help capture investors perception in long-term period which benchmark by market index of each country at the same time frame.

Table 5.2 Holding period return 1 to 3 year after M&A announcement separate by country

| | Malaysia | | Singapore | | Thailand | |
|---|---|---|---|---|---|---|
| | Stock return | Market return | Stock return | Market return | Stock return | Market return |
| Mean of HPR (Y1) | 0.1701 | 0.1177 | 0.0640 | 0.0976 | 0.2090 | 0.3512 |
| Mean of HPR (Y2) | 0.3985 | 0.1622 | 0.5241 | 0.1113 | -0.0744 | 0.3610 |
| Mean of HPR (Y3) | 0.3750 | 0.2336 | 0.2918 | 0.1589 | -0.0353 | 0.5973 |

The mean value of holding period return (HPR) of Malaysia and Singapore after the M&A event during the time (t+1, t+2, and t+3) show positive and the return are higher than their benchmark at the same period. This provides the evidence that the investors have positive reaction for the M&A announcement even for long-term period. For Thailand, the mean value of HPR is negative and lower than the benchmark at the same period. The possible explanation might be the M&A announcement provide negative signal to investors (Thawornwong, 2005). Because investors expect the growth from the event so we try to find whether the performance of the firms are really improving after M&A event by conducting the paired sample t-test of pre and post-merger performance.

**5.2 Long Run Performance: Paired sample t-test**

The results are as follow:

Table 5.3 Summary of statistic and P-value of financial ratios before and after the CBMA event.

Panel A:

| Observation | ROE | Mean | Median | Max | Min | ROE | Mean | Median | Max | Min |
|---|---|---|---|---|---|---|---|---|---|---|
| 29 | **ROE (t-3)** | 9.1196 | 11.2324 | 35.7654 | -13.6859 | **ROE (t+3)** | -1.6687 | 9.4823 | 15.6839 | -101.8329 |
| 47 | **ROE (t-2)** | 9.5229 | 11.7281 | 48.0716 | -87.9391 | **ROE (t+2)** | 3.0873 | 7.0278 | 27.0882 | -71.5537 |
| 50 | **ROE (t-1)** | 8.6227 | 10.6573 | 29.9882 | 76.4144 | **ROE (t+1)** | 9.5651 | 10.1162 | 36.7470 | -41.0423 |
| Observation | ROA | Mean | Median | Max | Min | ROA | Mean | Median | Max | Min |
| 29 | **ROA (t-3)** | 4.5000 | 4.4543 | 27.3778 | -7.6375 | **ROA (t+3)** | 0.7494 | 2.7655 | 9.1779 | -30.3577 |
| 47 | **ROA (t-2)** | 4.7668 | 4.4924 | 26.0270 | -42.5632 | **ROA (t+2)** | 1.2749 | 2.4530 | 16.5588 | -39.1362 |
| 50 | **ROA (t-1)** | 4.9234 | 4.2298 | 18.7485 | -21.3558 | **ROA (t+1)** | 5.0884 | 4.1863 | 29.9195 | -15.6053 |

Panel B:

| Observations | ROE | Mean diff. | P-value |
|:---:|:---:|:---:|:---:|
| 29 | ROE (t-3, +3) | -10.7883 | 0.0408** |
| 47 | ROE (t-2, +2) | -6.4357 | 0.0505* |
| 51 | ROE (t-1, +1) | 0.9424 | 0.6669 |
| Observations | ROA | Mean diff. | P-value |
| 29 | ROA (t-3, +3) | -3.7506 | 0.0758* |
| 47 | ROA (t-2, +2) | -3.4919 | 0.0370** |
| 51 | ROA (t-1, +1) | 0.1650 | 0.8832 |

\*\* Significant level at 5% \*Significant level 10%

Note: The data for ROE and ROA show in percentage. Pre and post-performance have been compared across three different time frames and due to data availability issues, the companies varied for every year.

From table 5.3, we see that the mean difference of ROE and ROA in periods (t-3, t+3) and (t-2, t+2) are significantly different from zero at 95% and 90% confident level with negative result and insignificant positive result for period (t-1, t+1). The results of this study comply with the result of studies by Berger and Ofek (1995); Yeh and Hoshino (2002); Cabanda and Pajara (2007); and Ashfaq (2014) which show post-merger performance decrease after M&A period. This can be caused by the complications in managing the post-merger process, especially in case that management teams are lack of experience in handling the deal might explain this failure to achieve the anticipated merger synergies. Also, managerial hubris might play the important role on this since the synergy gain from the deal might trade off by the overpaid deal as price offered above the market value of the target (Moeller, Schlingemann, & Stulz, 2004; Diaz, Azofra, & Gutierrez, 2013).

Furthermore, we conduct the non-parametric test by using two-sample tests of proportions as robustness check for the result of pre and post-M&A performance.

Table 5.4 Summary of statistic and P-value of financial ratios before and after the CBMA event by non-parametric test

| ROE | Observation | Proportion of Positive performance | Proportion of negative performance | Different in proportion | P-value |
|---|---|---|---|---|---|
| ROE (t-3, +3) | 29 | 0.38 | 0.62 | **-0.24** | **0.0676[*]** |
| ROE (t-2, +2) | 47 | 0.32 | 0.68 | **-0.36** | **0.0005[**]** |
| ROE (t-1, +1) | 50 | 0.50 | 0.50 | 0.00 | 1.0000 |
| ROA | Observation | Proportion of Positive performance | Proportion of negative performance | Different in proportion | P-value |
| ROA (t-3, +3) | 29 | 0.38 | 0.62 | **-0.24** | **0.0676[*]** |
| ROA (t-2, +2) | 47 | 0.30 | 0.70 | **-0.40** | **0.0001[***]** |
| ROA (t-1, +1) | 50 | 0.46 | 0.54 | -0.80 | 0.4237 |

*** Significant Level at 1% ** Significant level at 5% *Significant level 10%

We find that the result from non-parametric test is comply with the paired-sample t-test which show the firms' performance decrease after the merge.

**5.3 Determinant factors for CAR**

The results are as follow:

Table 5.5 Summary of P-value of independent variables on CAR

| CAR (-2, +2) | Coef. | P>|t| |
|---|---|---|
| Dummy where related strategy =1 and otherwise = 0 | 0.0105 | 0.424 |
| Dummy where all cash =1 and otherwise = 0 | 0.2537 | 0.264 |
| ln (Deal value) | 0.0112 | 0.000*** |
| PE ratio | 0.0001 | 0.473 |
| ln (Firm size) | -0.0058 | 0.006** |
| Intercept | 0.0067 | 0.766 |
| **Overall R-square** | | 0.2726 |
| **Prob > F** | | 0.0001 |
| **No. of sample** | | 68 |

\*\*\* Significant Level at 1% \*\* Significant level at 5%
Note: Industry related is dummy whereas related strategy =1 and otherwise = 0, payment is Dummy whereas all cash =1 and otherwise = 0, deal value is the natural logarithm of the deal value, and natural logarithm of acquirer's market capitalization

The main explanatory variables, which are industry relatedness and types of payments, all positively but insignificantly affect CAR as shown in the regression result in table 5.5. This insignificant effect of industry related also find by Bhagat, Malhotra & Zhu (2011), while insignificant effect of types of payment find by Bhagat, Malhotra & Zhu (2011), Uzunski (2011), Nicholson and Salaber (2013).

For the other variables, there is positive and significant result effect of deal value, negative and significant effect of firm size (as proxy by acquirer's market capitalization), and insignificant effect of P/E ratio on CAR. Positive and significant effect of deal value on CAR is different from many literature (KPMG M&A report, 2010; Bhagat, Malhotra, and Zhu, 2011), however, it complies with Ray (2007). The possible explanation would be that the expected return from the deal increases with the deal value. This is because it helps to reallocate capital to more efficient use. Also, high deal value can imply the management confidence to achieve synergies from the deal. For firm market capitalization, the negative effect on CAR also find in the

KPMG (2010 & 2011) and, Bhagat, Malhotra, and Zhu (2011). That means the smaller the acquirers, the more successful the deal is.

## 5.4 Determinant factors for firms' performance

The results are as follow:

Table 5.6 Summary of P-value and coefficient of independent variables for financial ratio: ROE & ROA

|  | ROE | | ROA | |
|---|---|---|---|---|
|  | Coef. | P>\|t\| | Coef. | P>\|t\| |
| **Dummy where related strategy = 1 and otherwise = 0** | 0.1164 | 0.102 | 0.1033 | **0.071*** |
| **Dummy where all cash =1 and otherwise = 0** | 0.5719 | **0.000*** | 0.4967 | **0.000*** |
| **D/E ratio** | -0.0009 | **0.000*** | -0.0008 | 0.443 |
| **BM ratio** | 0.0019 | 0.423 | 0.0021 | 0.273 |
| **Intercept** | -0.4799 | 0 | -0.4877 | 0 |
| **Overall R-square** | 0.3413 | | 0.2815 | |
| **Prob > F** | 0.000 | | 0.000 | |
| **No. of sample** | 284 | | 279 | |

* Significant Level at 10% ** Significant level at 5% *** Significant level at 1%
Note: Industry related is dummy whereas related strategy =1 and otherwise = 0, payment is Dummy whereas all cash =1 and otherwise = 0.

Overall results from table 15 show Industry relatedness and method of payment have significant positive relationship with company performance for both ROE and ROA. The BM ratio shows insignificant positive performance, while D/E ratio shows negative and significant relationship with only ROE and insignificant on ROA.

The result of industry relatedness is similar to the finding of Berger and Ofek (1995) and Rahman et al. (2004) that the degree of relatedness between two firms is positively related to company's return and performance because skills and resources can be better utilized in related markets as the company might gain advantage from expansion into similar operation and get such benefits as cost reduction, fulfill production, and achieve economic of scale. This helps to confirm that ability to exploit the advantages of each type of integration is a crucial thing for company's success. While, the result of positive effect of cash payment over stock payment matches with previous studies by Rani, Yadav & Jain (2012). The cash payment will lead to higher performance improvement rather than other kinds of payment as it shows management confidence about the deal which imply the management team have ability and experience to make the deal success and can assess the target firm's value more accurately.

For D/E ratio, as the financial structure of the firm can imply the firm financial health then management should be more careful when make the decision on firm financial structure as too much debt will lead to financial distress problem. This also support the negative results of D/E ratio to firm performance which comply with Tan (2012) that the firm with high financial leverage will have lower performance than firms with low financial leverage.

# CHAPTER 6
# CONCLUSIONS

There are a growing number of firms in ASEAN countries that engage in cross-border M&A strategy to take the advantage of cost reductions, margin improvement opportunities, and access to imperfectly mobile resources. Data from UNCTAD's investment reveals that Malaysia, Singapore and Thailand are the top three most attractive nations in this region. Therefore, this paper studies the effect of cross-border M&A on acquiring firms across Malaysia, Singapore and Thailand from 2009 -2013.

Using event study method, we find a positive and significant CAR of around 2% at (-2, +2) window period. The positive reaction of investors on the deal announcement means that they expected the M&A would translate into future earnings growth. However, when we compared the long-term (1-3 years) pre and post-performance of the firms measured by ROA and ROE, we get a statistically significant drop in firms' post M&A performance. This can be caused by the complications in managing the post-merger process, especially in case that management teams are lack of experience in handling the deal might explain this failure to achieve the expected synergies. Also, managerial hubris which lead to over payment on deal value might offset the synergy gain from the deal.

The Industry relatedness, i.e. horizontal and vertical VS conglomerate, and the methods of payment, i.e. cash only or noncash only, are investigated whether they have any effects on CAR and firms' performance or not. The results are that these factors do not significantly affect CAR, however, they significantly affect firms' performance. Performance of firms that merged with firms that are horizontally or vertically related is better than that of firms merging with non-related firms. This is because skills and resources can be better utilized in related markets as the company might gain advantages from expanding into similar operations and get benefits from cost reduction, fulfill production, and economies of scale. Moreover, this study finds that firms, which pay for the acquisitions by cash, have better performance compared

to the ones that pay by other means. This is because cash payment shows that management is confident about the deal. It can imply that the management team is more capable and experienced to make the deal succeed.

In conclusion, investors can gain positive abnormal return from cross-border M&A during the event announcement. However, the management of the acquiring firms should be cautious when making M&A deals since it can lead to a drop in firm's performance. They should also take the industry relatedness and mean of payment methods into consideration since they can significantly affect firms' long-term performance.

Due to time constraint, this study has some limitations. Firstly, there are limited number of observations when doing regression analysis in this study. Also, when comparing firms' performance from before and after an M&A, effects of other factors that are not M&A are not excluded. Therefore, for further study, expanding the sample to cover more countries and years would give the higher number of observations. In addition, when comparing firms' performance from before and after an M&A, a benchmark that can absorb effects of other factors that is not M&A would give more insight into the analysis.

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