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Mergers and Acquisitions and Success Factors in Thailand

Jiraporn Popairoj

Assumption University, Thailand. pjirapon1@yahoo.com

Abstract

This paper studies the impact of completed M&A deals in Thailand from January 1, 2000 to December 31, 2014 on target's financial performance proxied by cumulative abnormal returns (CAR). Specifically, as part of the research questions, it first tests whether there is a statistical CAR difference before and after the announcement of the completion of the deals. Secondly, it examines the six main factors that explain the target's financial performance (proxied by CAR), one year, two years, and three years after the announcement. These factors include cultural differences, corporate governance, payment method, contagion and capacity effect, institutional ownership, and inside ownership. The results show that there is a statistical difference between the standardized CAR 120 days before and after the announcement date. Furthermore, the contagion effect on efficiency (proxied by the ROE and ROA), inside ownership in targets, and target's size are significant factors for the higher CAR after completion of the M&A for all years. The other factors are statistically insignificant as all listed companies in Thailand are required to have good governance and most M&A deals use cash payments. Moreover, since cross-border M&As in Thailand during that period were a rare occurrence and still at an initial stage, cultural differences are also not a factor. Future research studies should be conducted when more recent M&A data becomes available.

Keywords: Mergers, Acquisitions, Contagion Efficiency, Inside Ownership

1. Introduction

There is a large body of literature on domestic and international M&As, which first started approximately 120 years. Yet, in spite of all the research studies and their steady increase and the fact that M&As go back a long way, their success rate is below 50% (Calipha, Tarba, & Brock, 2010) and has failed been to improve significantly (Marks & Mirvis, 2011). But even though many of them will end up failing, the rate of acquisitions remains high. This is the case in Southeast Asian, where the progressive establishment of the ASEAN Economic Community (AEC), which aims to integrate the ten economies that are part of the Association of Southeast Asian Nations (ASEAN), raises the needs for companies to grow through inorganic growth so as to become more competitive and be better equipped to face rivals. According to ASEAN Investment Report 2018, in 2017 alone, net cross-border M&As in ASEAN increased by 124 percent. But while acquisitions are a quick way for companies to expand, they are also a response to the rapid change in business platforms that require technology acquisitions for more innovation.

This empirical research study focuses on M&As in Thailand. It raises two main issues. The first research question tests the extent to which Thai M&As impact the targets' financial performance. In particular, it seeks to test whether there is a statistical difference in the cumulative abnormal returns (CAR) before and after the announcement that a M&A deal is completed. 'CAR' in this case can be defined as the summation of abnormal returns for one year, two years and three years after the announcement date. As to abnormal returns, they refer to the difference between actual and expected returns. The second research question examines six main success factors that explain financial performance improvement (proxied by CAR),

one year, two years, and three years after the announcement. Two of them, corporate governance and institutional and inside ownership, are success factors related to the empire-building theory and a third one, method of payment for M&A deals, relates to the valuation theory. The efficiency theory explains the contagion and capacity effect success factors. A sixth success factor, cultural differences, is linked to cross-border risk. To test the differences in firms' performance before and after the announcement (proxied by the CAR of the targets) and examine M&As' success factors, the study looks at M&As in Thailand completed during the period between January 1, 2001 and December 31, 2014. A total of 541 M&A deals were completed during that period with Thai firms as targets, with a deal value equal to or greater than USD 10 million (54% were in the same industries and 46% cross-industries). This study has academic and practical applications. The empirical results could help acquirers when making M&A decisions, i.e., target screening, in order to have more efficient and effective M&A deals.

2. Literature Review

This section provides background to this research study and discusses the key operating concepts at its core.

-M&A Waves

As noted earlier, M&As have a very long history. Their evolution has been broken down into seven waves based on the main reasons for their use over time. The first wave (1890-1905) concentrated on horizontal mergers, the second one (1910-1920) on vertical mergers, the third one (1950-1970) on diversified conglomerate mergers, and the fourth one (1980-1989) on concentric mergers, hostile takeovers and corporate raiding s to the fifth wave (1992-2000), it focused on cross-border mergers. The sixth wave (2003-2007) had shareholder activism and private equity as its main focus (Gugler, Mueller, Weichselbaumer, & Yurtoglu, 2012) The seventh wave, which started in 2007, initially saw a sharp decline in M&A activities in the wake of the financial crisis but has since regained the 2005 volume of deals while in the meantime the M&A value has grown. From 35.2 billion USD in 2005 it reached 41.6 billion USD in 2016; a 18.2% increase (E.S. Frankel & Forman, 2017). During the first two waves, most of the M&As aimed to consolidate industrial production and reduce competition among firms, thereby creating monopolies. This changed, however, after the stock market crashed in 1905 and the enacting of antitrust regulations in 1910. The third wave began with conglomerate M&As and focused on economies of scale and diversification. During the fourth wave, change in antitrust policy and financial service deregulation together with new financial instruments created high value M&A deals, which refocused on core business to improve efficiency and maximize shareholders' value. The fifth M&A wave occurred against a background of crossborder expansion and globalization for cost cutting purposes as a means of growth. During the sixth wave, cross-border M&As, which sought more markets and greater access supply, accelerated (Gregoriou & Renneboog, 2007)

-M&A Theories

A number of theories have added to the body of literature on M&As. Some are relevant to this study. They include: (i) the empire-building theory, (ii) the process theory, (iii) the disturbance theory, (iv) the efficiency theory, (v) the monopoly theory, (vi) the raider theory, and (vii) the valuation theory.

(i) The Empire-Building Theory

The focal point of this theory introduced by Berle and Means (1933) is managers' benefits – not shareholders' value as one might expect. A manager maximizes his/her own utility instead of shareholders' value. The concept is based on the separation of ownership and control in a

company (Jensen & Meckling, 1976). Overpayment for the target could happen because a manager does not consider shareholders' value (Stigler & Friedland, 1983; Trautwein, 1990). Deals initiated by target firms rather than outside bidders have higher CEO ownership. CEOs are motivated to offer their firms for sale by higher golden parachutes, stock, and stock option granted to them before the M&A process (Fidrmuc & Xia, 2017).

(ii) The Process Theory

This theory proposed by Simon (1957) centers on the acquisition process. Mergers are performed without good planning. Some mergers involve political influences, no prior consensus on acquisition criteria, and non-rationale decision making (Trautwein, 1990). Also part of this theory is the hubris hypothesis according to which acquirers paid too much for the targets (Roll, 1986). Another is the strong-form efficient market hypothesis. Managers do not act against shareholders' interests. They are overconfident and incorrectly value the target. Management ignores negative acquirers' returns. Acquirers in unsuccessful acquisitions have higher levels of estimated free cash flow than acquirers in successful acquisitions (Kaplan & Weibach, 1992).

(iii) The Disturbance Theory

This theory expounded by Gort (1969) is based on the assumption that mergers are caused by economic disturbances, which cause changes in individual expectations and increase uncertainty. The theory focuses on macro-economics and individual expectations instead of institutional or sector level. Moreover, it cannot explain premium on target price. Managers of acquirers would like to manage larger firms and control over the target. Differences in expected income and associated risks create valuation discrepancy. Mergers occur when non-owners estimate higher value of assets than owners and buyers can give; this higher amount is investors' surplus (the difference between market price and asset value). Economic shocks that alter the structure of expectations, such as rapid changes in technology and security prices, can impact merger activity (Gort, 1969).

(iv) The Efficiency Theory

The focus of this theory from Porter (1985) is synergy (financial, operational, and managerial) which should be the objective of mergers. Financial synergy arises from mergers and reduces the costs of capital. Firstly, company can reduce systematic risk from unrelated business investment. Secondly, mergers increase company's size providing opportunity to obtain cheaper capital. Thirdly, mergers allow better and efficient allocation of capital (Trautwein, 1990). Operational synergy arising from business combination creates cost reduction and gain from knowledge transferred (Porter, 1985). Managerial synergy incurs when management from acquiring companies plan and monitor the better target performance. However, payperformance and incentives for CEOs and top management have been found to have a small impact on increasing value that would create wealth to shareholders (Jensen & Murphy, 1990). There is no evidence from research to prove there is a lower systematic risk (Montgomery & Singh, 1984). Operational and managerial synergies are usually found in mergers but seldom realized. Sometimes managers decide to have mergers without thinking of shareholders' value, which does not square with the efficiency theory. As suggested by Alchian (1950), profit maximization should not be the sole guide to specific action. Cross-border merger waves facilitate the efficient reallocation of assets (Xu, 2017).

(v) The Monopoly Theory

This theory advanced by Mueller (1969) focuses on the market power to be derived from mergers. In conglomerate acquisitions, profits from one product can subsidize losses from others. Firms can sustain a fight to obtain market share through cross-subsidized products. They can acquire competitors for more market share and anti-competitive strategy (Trautwein,

1990). According to Mueller (1969), mergers occur when firms maximize profit and they need to increase market power and technological economy of scale.

(vi) The Raider Theory

Central to this theory from Holderness and Sheehan (1985) is the person who causes wealth transfers from target's shareholders to acquirer after mergers. The acquirer pays higher price to other shareholders for the control of company (Trautwein, 1990). However, as Holderness and Sheehan (1985) argued, corporate raiders reduce the wealth transfer of other shareholders.

(vii) The Valuation Theory

According to this theory proposed by Steiner (1975), mergers are planned by acquirers who have more information about the target's value and the advantages of having the firms combined. This creates private information and therefore uncertainty for the merger decision. The problem of the valuation theory is validity since merger results cannot be evaluated with confidence. The owner of private information usually proposes higher value of assets compared to the current owner due to the expectations and evaluation on market reaction (Trautwein, 1990; Wensley, 1982).

-M&As and Success Factors

Previous literature on the relationship between M&As and success factors has identified a number of forces at the origin of the success of M&As. For example, cultural differences can be an obstacle to M&A success (Bjorkman, Stahl, & Vaara, 2007), whereby some research studies find that cultural differences can facilitate M&A success (Morosini, Shane, & Singh, 1998); Sarala & Vaara, 2010). The critical factor for M&A achievement is the quality of due diligence (Sarda & Rimner, 2013). They include (i) cultural differences, (ii) corporate governance, (iii) synergy effects (contagion and capacity), (iv) M&A payment method, (v) institutional ownership, and (vi) inside ownership. The relationship between M&As and success factors, however, is not conclusive.

(i) Cultural Differences

Cross-border acquisitions have significantly increased. They grew from 23% in 1998 to 45% in 2007 (Erel, Liao, & Weisbach, 2012). As an entry into foreign market, cross-border M&As are a dynamic learning process and a value-creating practice (Shimizu, Hitt, Vaiyanath, & Pisano, 2004). They are, however, inherently risky and lead to essentially negative post-M&A results for the acquirer. A poor culture-fit or a lack of cultural compatibility can be reasons for M&A failure (Cartwright, 2006). Cultural differences can also be an obstacle to the success of M&A (Bjorkman, Stahl, & Vaara, 2007) even though some studies indicate that they can facilitate M&A success (Morosini, Shane, & Singh, 1998; Sarala & Vaara, 2010). Cultural differences affect post-acquisition capability transfer through their impact on social integration, potential absorptive capacity, and capability complementary (Bjorkman, 2007). Cultural differences in international M&As impact knowledge transfer (Sarala & Vaara, 2010). Studies on cultural distance suggest that difficulties, costs, and risks associated with cross-cultural contact increase with growing cultural differences between two individuals, groups, or organizations. Human factors contribute to the success or failure of M&As (Mirvis, 2011; Sayan & Yaakov, 1992).

(ii) Corporate Governance

Good corporate governance can help mitigate agency problems. The acquisition of firms with poor governance by firms with good governance generates higher total gains (Wang & Fei, 2009). Synergy effects of good governance could be shared among firms making better returns for both acquirers and targets. M&As that are related to executive's personal portfolio will not reduce firm risk but will create agency problems (Lewellen, Loderer, & Rosenfeld, 1989; Huiller, 2014). Investment in firm by executives is an agency conflict and the decision to

acquire business by executives increases cost and reduces value to shareholder's wealth. M&As with poor corporate governance destroy firm value (Mueller & Yurtoglu, 2007; Masulis, Wang, & Xie, 2007). CEOs with low equity ownership and CEOs serving as board members have significantly negative impacts on operating performance (Fung, Jo, & Tsai, 2009).

(iii) Contagion and Capacity Effect

The combination between two businesses results in higher value when compared to the sum of their standalone values (Tanriverdi & Venkatraman, 2005). Synergies arise from sharing common factors of production which leads to economies of scale. Two aspects of synergy are contagion effect and capacity effect. Contagion effect arises from changes in the environment or actions by competitors when firms are combined. As to capacity effect, it arises from an increase in capacity utilization of underlying resources when firms are combined (Shaver, 2006). There is an expected increase in profit from average cost reductions or enhancement of revenues after mergers and acquisitions. Increasing asset utilization and sharing of managerial systems and expertise help to enhance efficiency. M&As help to reduce excess capacity. However, limited excess capacity may not be enough to meet increase demand from the merged firm. Managers or management system may not be able to serve the growth from the merged firm. Capacity constraint may not respond to business growth from the merged firm. Evidence from prior research shows the benefits of change in control from M&As. The stronger the acquirer's shareholder rights relative to the target, the higher the synergy created from acquisition (Wang & Fei, 2009). Synergies obtained from combining innovation capabilities are important drivers of acquisitions (Bena & Li, 2014). Mergers from synergy create gain (Chari, Chen, & M.E.Dominquez, 2012; Devos, Kadapakkam, & Krishnamurthy, 2009).

(iv) Method of Payment

Payments for M&A deals can be made by cash or by shares. Cash payments do not change controlling level in acquirer as shareholders of target firms do not take possession in a proportion of acquiring firm's voting rights (Ghosh & Ruland, 1995). Payment by share is good since it involves no cash outflow from company. However, acquirers should consider the change in their capital structure. There is a merger arbitrage that makes premium in abnormal returns and method of payment in M&A deal could impact differences in arbitrage returns. Cash payments tend to generate more gains than payment by shares. Arbitrage returns derive from the difference between the offered price and the market price of target. The risk arbitrageur simply buys target stocks and sells then when the deal is completed with increased market price and enjoys profit. Risk arbitrage involves taking long position in a target following M&A announcement (Baker & Savasoglu, 2002). Signaling hypotheses provide the reason why financing a takeover through common stock conveys negative information that the bidding firm is overvalued. Overvalued acquirers are more likely to take less overvalued targets and pay with equity (Ismail, 2011). Stock payment is a less preferred choice in cross-border deals than in domestic ones. Target country risk is a significant factor when considering whether the acquirer uses greater equity in financing the cross-border deals (Huang, Officer, & Powell, 2016).

(v) Institutional Ownership

A study by Brooks, Chen, and Zeng (2007) on the role of externality of institutional cross-holdings for corporate strategies through M&As concludes that acquirers with higher institutional cross-ownership pay lower premium for targets and use stock as payment method which results in higher value for acquirers. Cross-ownership helps to diminish bad deal completion, enhance deal synergies and generate positive long-run performance for the merged entities. Cross-ownership improves mergers quality due to monitoring role and strong negotiating power compared to those who operate only one side of the deal. Ferreira, Massa,

and Matos (2010) determined that institutional ownership on cross-border M&A increases the probability of success since bidder can take full control of the target firm. This is consistent with a study by Goranova, Dharwadkar, and Brandes (2010) which concludes that monitoring role of institutional ownership mitigates agency problem and creates mergers value.

(vi) Inside Ownership

Robinson (2009) explains how concentration ownership in target firm affects the returns from M&As. Outside ownership creates more monitoring costs that reduce target returns. Whereas outside ownership accepts share returns with suitable bidders for good and synergy motivated M&A deals, inside ownership raises target returns from self-dealing. Ghosh and Ruland (1998) concluded that acquisitions with stocks are associated with high managerial ownership of targets and job retentions. Conflict of interest is involved in decision making when managerial ownership in target is high.

- Empirical Studies on M&As in Thailand

Most empirical research studies on M&As in Thailand focus on the cumulative abnormal returns surrounding M&A announcements. Some studies, however, have investigated the characteristics of Thai outward foreign direct investment (OFDI). Significantly under-valued listed companies or unlisted companies with weak management are both potentially cheap targets for M&A (The Stock Exchange of Thailand, 2005). Post-acquisition income is derived from: revenue synergies (including effective cross-selling, increased productivity); cost synergies that often came from increased economies of scale, (e.g., lower production cost); and financial synergies from improved capital, financial structure such as tax benefits or losses, larger debt capacity, or higher excess cash that can be invested in new projects. Five qualitative domestic case studies conducted in Thailand are used in this research. They include interviews of fifty senior executives, middle managers, and staff.

Termariyabuit (2006) studied the gains from acquiring shareholders in cash acquisitions in Thailand during the period 1992-2001 and found that low-valuation acquirers perform better than high-valuation ones due mainly to the overpayment in acquisition premium. The findings also indicate that stock market valuation at the time of acquisition has a significant impact on acquiring shareholders both in the short-run and in the long-run. The impact is positive in the short-run but negative in the long-run. This is the opposite of low-valuation acquirers. The research concludes that carrying out the acquisition during the high valuation period destroys shareholders' value in the long-run whereby low-valuation acquisition is a profitable strategy. The researcher also mentioned the financial crisis in Southeast Asia in 1997. Thailand's merger wave is positively correlated to economic prosperity before 1997. After 1997, Thailand faced difficulties because of the financial crisis and the need for more M&As during economic downturn. Some firms had to be restructured and were forced to sell their non-core and non-performing assets in order to survive.

Soongswang's (2012) exploratory research with cumulative abnormal return (CAR) and buy-and-hold abnormal return (BHAR) determined that target firm's shareholders have positive abnormal returns whereby bidding firm's shareholders have more positive than negative abnormal returns. Samples were selected from listed targets and bidding firms during 1992-2002. The research uses event study to test on (-12, +12) months surrounding the M&A announcement period.

Ayawongs (2014) studied the cause of M&A failures and concluded that the rate of M&A failures remains high and that the main causes are inadequate strategic deal, excessive high purchase prices, poor pre- and post- integration management, and human and cultural factors. Pananond (2007) focused on the dynamics of Thai multinationals by analyzing foreign direct investment (FDI) statistics and determined that there was a change in the strategy for

international expansion. It shifted from networking capabilities before the 1997 financial crisis to industry-specific technological capabilities.

Finally, Subhanij and Annonjarn (2016) investigated the distribution of Thai OFDI and found that there is mainly horizontal investment for market share increase whereby OFDI for conglomerate investment strategy is driven by financial motives. The research also determined that most OFDI are in developed and developing countries.

3. Research Framework

The mean difference between M&As and target's stock returns is tested by way of an Event study and a multiple regression model is used to test the relationship between the six success factors identified for this study (cultural differences corporate governance, methods of payment, contagion and capacity effect, institutional ownership, and inside ownership). The model also includes natural logarithms of total assets proxied for firm size as control variable. The dependent variable is cumulative abnormal returns of stock price of the targets upon completion of the M&A deals one year, two years, and three years after the announcement date. Table 1 summarizes all the variables used in this multiple regression model. For the first research question, the following hypotheses are tested at a 5% level of significance:

H01: There is no statistical difference between CARs before and after the announcement of the completed M&A deal.

Ha1: There is statistical difference between CARs before and after the announcement of the completed M&A deal.

- Cultural Differences (CD): As recommended by House et al.'s (2004), GLOBE practice scores are used to measure cultural differences. GLOBE practices scores are defined by Kogut and Singh (1988) as follows:

$$CD_j = ((I_{ij} - I_{if})^2 / V_i)/9$$

where CD_i = Cultural difference for j^{th} country

 I_{ij} = GLOBE score for i^{th} cultural dimension and j^{th} country

 $I_{if} = f^h \text{Country's GLOBE score on } i^{th} \text{ cultural dimension}$

 V_i = Variance of GLOBE score for i^{th} cultural dimension

- Corporate Governance (CG): The corporate governance score is calculated based on assessment criteria developed by the Thai Institute of Directors Association (IOD). They include rights of shareholders, equitable treatment of shareholders, role of stakeholders, disclosure and transparency, and board responsibilities (Thai Institute of Directors Association, 2016).
- M&A Payment Method (PMT): A dummy variable is used, where PMT=1 for M&A with cash payment and 0 for M&A with stock payment.
- Contagion and Capacity Effect: Three variables are defined for contagion and capacity effect (1) total revenue divided by total assets (TR/TA), (2) return on assets (ROA), and (3) return on equity (ROE). Each of these variables is calculated based on financial data each year over three years following the year of announcement.
- *Institutional Ownership (INST*): INST is the percentage of institutional shareholding in the target firm in the first, second, and third year following the year of announcement.
- *Inside Ownership (INSIDE)*: INSIDE is the percentage of inside shareholding by CEO in the target firm in the first, second, and third *year following the year of announcement*.

-Data Collections / Sample Selection

Information on M&A deals and financial data were collected from Thomson Financial Database. During the period January 1, 2001-December 31, 2014, a total of 541 M&A deals were completed with Thai firms as targets (both listed and non-listed) and with a deal value equal to or greater than USD 10 million. Due to data availability of listed companies on Stock Exchange of Thailand (SET), the samples were reduced from 541 to:

- o 212 deals, used to test the first research question regarding the mean difference between the CARs of target firms before and after the M&A announcement.
- o 187 deals, used for the test in the multiple regression model for the second research question regarding the relationship between abnormal returns and success factors.
- Multiple Regression Model

The multiple regression model is as follows (Equation 1):

 $CAR_{i} = \beta_{0} + \beta_{1}CD_{i} + \beta_{2}CG_{i} + \beta_{3}PMT_{i} + \beta_{4}TR/TA_{i} + \beta_{5}ROE_{i} + \beta_{6}ROA_{i} + \beta_{7}INST_{i} + \beta_{8}INSIDE_{i} + \beta_{9}LnTA_{i} + \varepsilon_{i}$

The variables and their postulated signs are explained in Table 1. Recall from above that the first research question aims to test the extent to which Thai M&As impact the targets' financial performance and whether there is a statistical difference in the cumulative abnormal returns (CAR) before and after the announcement that a M&A deal is completed. The second research question examines the six main success factors discussed above that explain financial performance improvement (proxied by CAR), one year, two years, and three years after the announcement.

Table 1: Variables Used in the Multiple Regression Model for Research Question Two

Variables	Theory	Definition	Type of variable	Hypo- thesis	Sign
CAR	-	Cumulative abnormal return (CAR) is the summation of abnormal returns (AR) for one year, two years and three years after the announcement date where abnormal return (AR) is the difference between actual return and expected return using Capital Asset Pricing Model.	Dependent Variable	-	-
Cultural Differences (CD)	-	The study uses GLOBE practices scores which comprise nine-culture dimensions including Assertiveness, Institutional collectivism, In-group collectivism, Future orientation, Gender egalitarianism, Human orientation, Performance orientation, Power distance and Uncertainty avoidance.	Independent Variable	H2	-
Corporate Governance (CG)	Empire Building theory	The author collected firm-level corporate governance scores based on assessment criteria set up by the Thai Institute of Directors Association (IOD) including Rights of shareholders, Equitable treatment of shareholders, Role of stakeholders, Disclosure and transparency, and Board responsibilities.	Independent Variable	НЗ	+
M&A Payment Method (PMT)	Valuation theory	Payment methods for M&A can be cash or share. Cash payment does not change the controlling level in the acquirer whereas payment by share is good for firm since there is no cash out flow from the business. However, acquirers need to consider the change in their capital structure when using share as a payment method.	Independent Variable	H4	+

Variables	Theory	Definition	Type of variable	Hypo- thesis	Sign
Contagion and Capacity Effect (TR/TA, ROE, ROA)	Efficiency theory	Two aspects from synergy are contagion effect and capacity effect. Contagion-capacity effect 1 refers to an increase in market share measured by total revenue to total assets (<i>TR/TA</i>). Contagion-capacity effect 2 refers to efficiency obtained from M&A measured by <i>ROA</i> and <i>ROE</i> .	Independent Variable	H5 H6	+
Institutional Ownership (INST)	Empire Building theory	Percentage of institutional ownership in the target firm.	Independent Variable	H7	+
Inside Ownership (INSIDE)	Empire Building theory	Percentage of inside ownership by CEO in the target firm.	Independent Variable	Н8	-
Firm Size (<i>LnTA</i>)	-	Natural logarithm of total assets in the target firm as a proxy for target firm size.	Control variable	Н9	+

Table 2 displays information on the number of completed M&A deals used in the study and the total value of these deals. A total of 212 M&A deals were completed during the period running from January 1, 2001 to December 31, 2014 for a total value of USD 39,876. This includes Thai firms as targets with a deal value equal to or greater than USD 10 million. The reason the most recent samples selected are from December 2014 is because the study needs as much financial and stock return data as possible for measuring three years of performance after M&A announcements. The highest volume and amount of M&A data cover the period 2001-2014. As indicated by the Central Bank and various financial Institutions, out of the 212. M&A deals completed, 115 (54%) are in the same industries and 97 (46%) are cross-industries. The event window used in prior studies varies from one research paper to another. Some use three days, others two weeks, fifty days or two hundred days before and after the announcement of the M&A completion (Chatterjee, Lubatkin, & Weber, 1992; Devos, Kadapakkam, & Krishnamurthy, 2009; Fraser & Zhang, 2009; Trautwein, 1990). According to MacKinlay (1997), 120 trading days is the most event window frequently used in event studies. Therefore, in this study, a 120-day event window is used.

Table 2: Descriptive Data on Sample M&A Deals

	Number of	M&A	Paymen	nt type	Year of N	M&A						Total
Industry	Acquirers	Targets	Cash	Share	2001 2002	2003 2004	2005 2006	2007 2008	2009 2010	2011 2012	2013 2014	M&A Deal Amount
Bank and Financial Institution	108	59	53	6	38	936	944	2,512	3,546	928	7,259	16,163
Food & Beverage	9	19	19	-	-	-	183	221	1,393	413	5,957	8,167
Power & Energy	16	17	16	1	-	256	383	281	53	5,817	51	6,841
Real Estate	15	27	27	-	40	109	196	21	431	155	1,308	2,260
Telecommunications Services	5	7	6	1	388	-	-	-	330	-	882	1,600
Metals, Machinery & Mining	11	21	18	3	156	24	312	376	183	62	173	1,286
Chemicals & Pharmaceuticals	5	12	12	-	-	107	250	15	157	431	-	960
Construction & Materials	11	7	7	-	-	-	-	75	25	484	-	584
Others	6	4	4	-	-	40	101	-	-	297	-	438
Hotel and Travel Services	3	11	11	-	57	55	15	32	112	-	99	370
Computer, IT and Electronics	6	6	6	-	-	25	34	-	108	-	119	286
Hospital	3	4	2	2	-	-	55	-	-	172	-	227
Household & Personal Products	-	1	1	-	-	-	-	-	-	179	-	179
Automobiles & Components	3	6	6	-	-	50	49	-	24	-	47	170
Transportation & Infrastructure	4	2	2	-	-	-	-	-	-	21	135	156
Media & Broadcasting	6	6	6	-	19	-	15	-	-	11	54	99
Textiles & Apparel	1	2	2	-	-	-	-	-	-	-	72	72
Retail and Department Store	-	1	1	-	-	-	-	-	18	-	-	18
Grand Total	212	212	199	13	698	1,602	2,537	3,533	6,380	8,970	16,156	39,876

As Table 3 shows, the standardized CAR (SCAR) 120 days before and after the announcement date is significantly different. Thus, there is a difference in the financial performance of target firms in Thailand.

Table 3: Test of Mean Difference between SCARs 120 days Before and After Announcement Date

Paired Samples Statistics										
		Mean	Mean		N Std. De		Std. Error Mean			
Pair 1 SCA	R_Before	1.6837		212	12 8.0831		0.5551			
& After (1.2532)				212	8.7118		0.5983	3		
Paired Samples Correlations										
	N			Correlatio	Correlations			Sig.		
Pair 1 SCAR_After	212	212		0.131		0.056				
Paired Samples	Test	•								
	Std.	Std.	5% level of t	5% level of the Difference			Sig.			
	Mean	Deviation Deviation	Error Mean	Lower	Upper	t	df	(2 tailed)		
Pair 1										
<u>SCAR Before</u> & After	2.9368	11.0787	0.7609	1.4369	4.4368	3.860	211	0.000		

As indicated in Table 4, the mean CAR appears with a minus sign for all three years. In terms of cultural differences (CD), scores on the GLOBE dimension range from 1 (very low) to 7 (very high). A zero score means that there is no cultural difference as both the target and the acquirer are located in the same country. The CG mean (corporate governance) is 6.11-6.55; which is quite high when compared to the minimum of 2.75-3.25 and maximum of 9-9.25. This is in line with our samples that are selected from listed companies, which as such are required to have good governance (they have fiduciary duties). The PMT mean (payment methods) is 0.95. This is due to the fact that most M&As in Thailand are made with cash payments. The TR/TA mean (Contagion and Capacity Effect) is 0.70-0.71 and is positive for all three years. The ROE Mean is 1.35-9.49% while the ROA Mean is 3.84%-4.31%. On average, the ROE and ROA are diminishing year by year. The INST Mean (institutional ownership) is 26.4%-33.7% and the Max INST 98.6%-99.8%. The percentage is increasing year by year. The INSIDE mean is 3.6%-14.8%. The second year is the highest.

Table 4: Descriptive Statistics of Variables in Multiple Regression Model

		Minimum			Maximun	Maximum			Mean			Std. Deviation		
Variable	N	One- year	Two- year	Three- year	One- year	Two- year	Three- year	One- year	Two- year	Three- year	One- year	Two- year	Three- year	
CAR	187	(35.2953)	(81.0913)	(94.8619)	27.2082	42.7378	54.5108	(0.7416)	(2.5630)	(3.4048)	11.9139	19.4776	23.6242	
CD	187	-	-	-	5.8808	5.8808	5.8808	0.6062	0.6062	0.6062	1.4100	1.4100	1.4100	
CG	187	2.7500	2.7500	3.2500	9.0000	9.2500	9.2500	6.1136	6.3329	6.5455	1.5839	1.5011	1.4847	
PMT	187	-	-	-	1.0000	1.0000	1.0000	0.9519	0.9519	0.9519	0.2146	0.2146	0.2146	
TR/TA	187	0.0116	0.0111	(0.0040)	2.9771	3.2370	4.9469	0.7017	0.7036	0.7083	0.6554	0.6549	0.6972	
ROE	187	-106.44%	-103.26%	-974.48%	47.30%	37.72%	49.52%	9.49%	9.06%	1.35%	17.73%	17.50%	75.20%	
ROA	187	-27.16%	-32.24%	-25.67%	40.99%	28.88%	35.82%	4.31%	4.29%	3.83%	7.50%	6.66%	6.58%	
INST	187	0.00%	0.00%	0.00%	99.75%	98.59%	98.85%	26.40%	27.49%	33.71%	26.18%	26.01%	87.21%	
INSIDE	187	0.00%	0.00%	0.00%	59.17%	50.13%	50.13%	3.58%	14.85%	3.64%	9.02%	157.02%	8.96%	
LnTA	187	18.1175	18.1444	18.1197	28.6661	28.6204	28.6798	24.3318	24.4029	24.4899	2.1911	2.1990	2.1951	

Table 5 shows the results of the multiple regression model of Equation (1) to test the impact of success factors on cumulative abnormal returns. Panel A in Table 5 shows the results for the first year after the announcement. The coefficient of ROE (+0.1623) proxied for efficiency is significant at 5% level while the coefficients of INSIDE (-0.1804) and LnTA (+0.9792) are significant at 10% level. In panel B (the second year after the announcement), only the coefficient of LnTA (+2.1231) is significant at 5% level. In panel C (the third year after the announcement), the coefficient of ROA (+67.0316) is significant at the 5% level while the coefficient of LnTA (+1.8786) is significant at 10% level. The coefficient of ROA in the third year after the announcement is the highest among other significant factors. Synergy incurring in the third year of the M&A results in a positive ROA in the long run.

Table 5: Multiple Regression Results

Independent	Panel A One-year after announcement		Panel B Two-year announcemen	after nt	Panel C Three-year after announcement		
variable	Coefficient (Std. Error)	Sig	Coefficient (Std. Error)	Sig	Coefficient (Std. Error)	Sig	
Constant	(25.9638) (11.7678)	0.0286**	(59.0841) (19.8143)	0.0033***	(58.7648) (23.4842)	0.0132**	
CD	(0.0415) (0.0685)	0.5451	(0.0072) (0.1145)	0.9498	0.0839 (0.1383)	0.5448	
CG	0.0986 (0.6180)	0.8734	0.2355 (1.1403)	0.8367	1.3681 (1.3772)	0.3219	
PMT	1.1981 (3.9726)	0.7633	1.6288 (6.6480)	0.8067	(3.4775) (7.9590)	0.6627	
TR/TA	0.9293 (1.5722)	0.5552	1.9508 (2.4789)	0.4323	1.3261 (2.7281)	0.6275	
ROE	0.1623 (0.0782)	0.0393**	0.0873 (0.1360)	0.5216	0.3059 (2.3611)	0.8971	
ROA	(0.1309) (0.1980)	0.5094	0.0427 (0.3720)	0.9088	67.0316 (28.1408)	0.0183**	
INST	(0.0469) (0.0371)	0.2075	(0.0263) (0.0623)	0.6733	0.0042 (0.0197)	0.8322	
INSIDE	(0.1804) (0.0996)	0.0719*	0.0041 (0.0091)	0.6513	(0.0334) (0.2002)	0.8677	
LnTA	0.9792 (0.5030)	0.0532*	2.1231 (0.8631)	0.0149**	1.8786 (1.0044)	0.0631*	
Total population	541		541		541		
Total samples	187	-	187		187		
\mathbb{R}^2	0.1062		0.0650		0.0787		
Adjusted R ²	0.0607		0.0174		0.0319		

^{*} Coefficient significant at the 0.10 level

4. Conclusions and Research Applications

With regard to the first research question, there is enough evidence to suggest that the financial performance of the target firm before and after the M&A is different. The standardized CAR (SCAR) 120 days before and after the announcement was used for testing the hypotheses. As

^{**} Coefficient significant at the 0.05 level

^{***} Coefficient significant at the 0.01 level

Table 3 shows, the mean SCAR 120 days before the announcement date is 1.6837 while the mean SCAR 120 days after the announcement date is -1.2532. The difference of means is 2.9368, which means that M&A results in worse performance in the short run. However, 120 days are not long enough to conclude that the M&A is not successful. M&A achievements should be measured over the long run. This is consistent with the efficiency theory under which it is argued that while negative results can be found in the short run, they can be positive in the long run (Savor & Lu, 2009).

As to the second research question, Table 5 shows that the most significant success factors of Thai M&As are inside ownership, and synergy or contagion effect, proxied by efficiency ratios (ROA and ROE). The target's size is significant over three years after the announcement. In prior studies, firm size had a positive significance for every year (Shubita & Alsawalhah, 2012). It was also determined that large size firms benefit more from M&As. A plausible reason for the positive significance of contagion effect on efficiency, proxied by ROA, in the third year could derive from the timing needed in assets utilization for more efficiency after the M&A is completed. The result in this study is consistent with the efficiency theory, which claims that synergy is the main motive for M&As (Berkovitch & Narayanan, 1993; Becher, 2000; Maksimovic & Phillips, 2001; Kiymaz & Baker, 2008).

The negative significance of inside ownership in the first year can be explained by the existence of conflicts of interest. Incumbent CEOs and the management teams may partially agree or may be reluctant to change some polices after the M&A deal is completed. Such conflicts could be mitigated as time passes. This explanation is consistent with the empire building theory according to which, agency is the primary motive in M&As with negative results (Berkovitch & Narayanan, 1993; Fidrmuc & Xia, 2017).

As to cultural differences, another success factor analyzed in this study, the data from firms included in the study do not vary much since most of the acquirers and targets are Thai companies (no foreign involvement and therefore no cultural gap). Corporate governance is not shown as a significant success factor since the samples included in the study are listed companies which already have good governance practices due to regulatory requirements from the Thai SEC. Methods of payment are not a significant factor either since most M&A deals in Thailand are performed with cash payment.

In conclusion, this study provides empirical support that there is a mean difference between Thai M&As and target's post M&As' financial performances as measured by cumulative abnormal returns. Further, contagion effect on efficiency, inside ownership, and firm size are the most significant factors leading to a better financial performance of targets after completion of the M&A. Clearly, M&As must be achieved with care so that a positive financial performance can be generated in the coming years. Moreover, once the M&A is completed, target firms with higher synergy benefit more even though inside ownership could have a negative impact on the improvement of their financial performance due to conflicts of interest from CEO ownership. On the other hand, unsuccessful M&A deal could turn out to generate losses for the company.

- Research Limitations and Recommendations for Future Studies

Although in theory M&As require long-term studies, data accessibility is limited. This study uses three years after M&A announcement. Should more information become available, future studies should focus on the long term. Moreover, the factors included in the research may not be the whole determinants. Therefore, the results may not be generalized. Even though M&A deals in Thailand essentially focus on the target side, which is why this study concentrates on the target's perspective, there are some deals where the Thai company is an acquirer. Future studies could therefore adopt an acquirer perspective. In addition, information for this study

comes from targets listed on the Stock Exchange of Thailand (SET), which may influence some variables such as regulatory requirements in terms of good governance. Finally, while there is not at the time being a high volume of cross-border M&As in Thailand, the cultural differences variable could become significant if their number grew. There is much evidence in previous research studies that it is a significant factor for M&A success. In short, future research could focus on longer terms after M&A announcement, an acquirer perspective, cross-border M&As, and independent variables not considered in this study.

References

- Alchian, A. A. (1950). Evolution, and economic theory. *Journal of Political Economy*, 58(3), 211-221.
- Association of Southeast Asian Nations. (2018). ASEAN Investment Report 2018 Foreign Direct Investment and the Digital Economy in ASEAN. Association of Southeast Asian Nations.
- Ayawongs, A. (2014). A model for moderating the effects of corporate cultural differences in mergers and acquisitions Exploratory research of M&A cases in Thailand. *National Research Libraries*, 1-261.
- Baker, M., & Savasoglu, S. (2002). Limited arbitrage in mergers and acquisitions. *Journal of Financial Economics*, 91-115.
- Becher, D. A. (2000). The valuation effects of bank mergers. *Journal of Corporate Finance*, 6, 189-214.
- Bena, J., & Li, K. (2014). Corporate innovations and mergers and acquisitions. (C. Harvey, Ed.) *The Journal of Finance*, 1923-1960.
- Berkovitch, E., & Narayanan, M. (1993). Motives for takeovers: An empirical investigation. *The Journal of Financial and Quantitative Analysis*, 28(3), 347-362.
- Bjorkman I. (2007). Cultural Differences and Capability Transfer in Cross-Border Acquisitions. *Journal of International Business Studies*, 38(4), 658-672.
- Bjorkman, I., Stahl, G. K., & Vaara, E. (2007). Cultural differences and capability transfer in cross-border acquisitions: The mediating roles of capability complementarity, absorptive capacity, and social integration. *Journal of International Business Studies*, 658-672.
- Brooks, C., Chen, Z., & Zeng, Y. (2017). Institutional cross-ownership and corporate strategy: The case of mergers and acquisitions. *Journal of Corporate Finance*, 1-61.
- Calipha, R., Tarba, S., & Brock, D. (2010). Mergers and acquisitions: A review of phrases, motives, and success factors. *Advance in Mergers and Acquisitions*, 1-24.
- Cartwright, S. (2006). 30 Years of mergers and acquisitions research: Recent Advances and Future Opportunities. *British Journal of Management*, 17(S1), S1-S5.
- Chari, A., Chen, W., & M.E.Dominquez, K. (2012). Foreign Ownership and Firm Performance Emerging Market Acquisitions in the United States. *IMF Economic Review*, 1-42.
- Chatterjee, S., Lubatkin, M. H., & Weber, D. M. (1992). Cultural Differences and Shareholder Value in Related Mergers: Linking Equity and Human Capital. *Strategic Management Journal*, 319-334.
- Devos, E., Kadapakkam, P. R., & Krishnamurthy, S. (2009). How do Mergers Create Value? A Comparison of Taxes, Market Power, and Efficiency Improvements as Explanations for Synergies. *The Review of Financial Studies*, 22(3), 1179-1211.
- E.S.Frankel, M., & Forman, L. H. (2017). *Mergers and acquisitions basics*. New Jersey: Wiley.
- Erel, I., Liao, R. C., & Weisbach, M. S. (2012). Determinants of Cross-Border Mergers and Acquisitions. *The Journal of Finance*, 67(3), 1045-1082.

- Ferreira, M. A., Massa, M., & Matos, P. (2010). Shareholders at the Gate? Institutional Investors and Cross-Border Mergers and Acquisitions. *The Review of Financial Studies*, 23(2), 601-644.
- Fidrmuc, J. P., & Xia, C. (2017). M&A Deal Initiation and Management Motivation. *Journal of Corporate Finance*, 1-23.
- Fraser, D. R., & Zhang, H. (2009). Mergers and Long-Term Corporate Performance: Evidence from Cross-Border Bank Acquisitions. *Journal of Money, Credit and Banking*, 41(7), 1503-1513.
- Fung, S., Jo, H., & Tsai, S.-C. (2009). Agency Problems in Stock Market-Driven Acquisitions. *Review of Accounting and Finance*, 8(4), 388-430.
- Ghosh, A., & Ruland, W. (1995). Managerial ownership, the method of payment for acquisitions, and executive job retention. *The Journal of Finance*, 53(2), 785-798.
- Goranova, M., Dharwadkar, R., & Brandes, P. (2010). Owners on Both Sides of the Deal: Mergers and Acquisitions and Overlapping Institutional Ownership. *Strategic Management Journal*, 1114-1135.
- Gort, M. (1969). An Economic Disturbance Theory of Mergers. *The Quarterly Journal of Economics*, 83(4), 624-642.
- Gregoriou, G. N., & Renneboog, L. (2007). *International Merger Acquisitions Activity Since* 1990. Cambridge: Academic Press
- Gugler, K., Mueller, D. C., Weichselbaumer, M., & Yurtoglu, B. (2012). Market Optimism and Merger Waves. *Managerial and Design Economics*, 33(3), 159-175.
- Holderness, C. G., & Sheehan, D. P. (1985). Why Corporate Raiders Are Good News for Stockholders? *Midland Corporate Finance Journal*, 3, 6-19.
- House R.J. et al. (Eds.2004). *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks, CA: Sage.
- Huang, P., Officer, M. S., & Powell, R. (2016). Method of Payment and Risk Mitigation in Cross-Border Mergers and Acquisitions. *Journal of Corporate Finance*, 40, 216-234.
- Huiller, B. M. (2014). What Does "Corporate Governance" Actually Mean? *The International Journal of Business in Society*, 300-319.
- Ismail, A. (2011). Does the Management's Forecast of Merger Synergies Explain the Premium Paid, the Method of Payment. *Financial Management*, 40(4), 879-910.
- Jensen, M. C., & Murphy, K. J. (1990). Performance Pay and Top-Management Incentives. *Journal of Political Economy*, 98(2), 225-264.
- Kaplan, S. N., & Weibach, M. S. (1992). The Success of Acquisitions: Evidence from Divestitures. *The Journal of Finance*, 47(1), 107-138.
- Kiymaz, H., & Baker, H. K. (2008). Short-Term Performance, Industry Effects, and Motives: Evidence from Large M&As. *Quarterly Joyrnal of Finance and Accounting*, 47(2), 17-44.
- Kogut, B., Singh, H. 1988. The Effect of National Culture on the Choice of Entry Mode. *Journal of International Business Studies*, 19(3), 411-432.
- Lewellen, W., Loderer, C., & Rosenfeld, A. (1989). Mergers, Executive Risk Reduction, and Stockholder Wealth. *The Journal of Financial and Quantitative Analysis*, 24(4), 459-472.
- MacKinlay, A. C. (1997). Event Studies in Economics and Finance. *Journal of Economic Literature*, 35, 13-39.
- Maksimovic, V., & Phillips, G. (2001). The Market for Corporate Assets: Who Engages in Mergers and Asset Sales and Are There Efficiency Gains? *The Journal of Finance*, 56(6), 2019-2065.
- Marks, M. L., & Mirvis, P. H. (2011). A research Agenda to increase merger and acquisition success. *Journal of Business and Psychology*, 26, 161-168.
- Martin (1996). The method of payment in corporate acquisitions, investment opportunities, and management ownership. *The Journal of Finance*, 51(4), 1227-1246.

- Masulis, R. W., Wang, C., & Xie, F. (2007). Corporate Governance and Acquirer Returns. *The Journal of Finance*, 1851-1889.
- Michael C. Jensen Jensen, & William H. Meckling. (1976). Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305-360a
- Mirvis, M. L. (2011). A research Agenda to Increase Merger and Acquisition Success. *Journal of Business and Psychology in Organizations*, 26(2), 161-168.
- Montgomery, C. A., & Singh, H. (1984). Diversification Strategy and Systematic Risk. *Strategic Management Journal*, 5, 181-191.
- Morosini, P., Shane, S., & Singh, H. (1998). National Cultural Distance and Cross-Border Acquisition Performance. *Journal of International Business Studies*, 29(1), 137-158.
- Mueller, D. C. (1969). A Theory of Conglomerste Mergers. *The Quarterly Journal of Economics*, 643-659.
- Mueller, D. C., & Yurtoglu, B. B. (2007). Corporate Governance and the Returns to Acquiring Firms' Shareholders. *Managerial and Decision Economics*, 879-896.
- Pananond, P. (2007). The Changing dynamics of Thai Multinationals after the Asian economic crisis. *Journal of International Management*, 13, 356-375.
- Porter, M. E. (1985). *Competitive Advantage Creating and Sustaining Superior Performance*. New York: The Free Press.
- Robinson, D. T. (2009). Size, Ownership and the Market for Corporate Control. *Journal of Corporate Finance*, 15, 80-84.
- Roll, R. (1986). The Hubris Hypothesis of Corporate Takeovers. *The Journal of Businss*, 59(2), 197-216.
- Sarala, R. M., & Vaara, E. (2010). Cultural Differences, Covergence, and Crossvergence as explanations of Knowledge. *Journal of International Business Studies*, 41(8), 1365-1390.
- Sarda, D., & Rimner, M. (2013). M&A Due Diligence What Corporate Can Learn from Private Equity. Retrieved November 8, 2017, from https://kipdf.com/ma-due-diligence-what-corporates-can-learn-from-private-equity_5ada5c797f8b9a547a8b45a4.html
- Savor, P. G., & Lu, Q. (2009). Do Stock Mergers Create Value for Acquirers? *The Journal of Finance*, 64(3), 1061-1097.
- Sayan, C., H., L. M., & Yaakov, D. M. (1992). Cultural Differences and SharehoderValue in Related Mergers: Linking Equity and Human Capital. *Strategic Management Journal*, 319-334.
- Shimizu, K., Hitt, M. A., Vaiyanath, D., & Pisano, V. (2004). Theoretical foundations of cross-border mergers and acquisitions: A review of current research and recommendations for the future. *Journal of International Management*, 10, 307-353.
- Shubita, M. F., & Alsawalhah, J. M. (2012). The relationship between capital structure and profitability. *International Journal of Business and Social Science*. 3(16). pp. 104–112.
- Soongswang, A. (2012). Do M&A Enhance Values? Mixed Methods and Evidence. *Journal of Applied Economic Sciences*, 7(3(21)), 312-325.
- Stigler, G. J., & Friedland, C. (1983). The Literature of Economics: The Case of Berle and Means. *The Journal of Law & Economics*, 26(2), 237-268.
- Stock Exchange of Thailand. (2005). M&A Strategies and Process. Retrieved May 10, 2017, from https://www.set.or.th/th/news/download/files/2550/MA_MLChayotid.pdf
- Subhanij, T., & Annonjarn, C. (2016). Horizontal, Vertical and Conglomerate OFDI: Evidence from Thailand. *The Journal of Applied Business Research*, 32(3), 747-764.
- Tanriverdi, H., & N. Venkatraman. (2005). Knowledege Relatedness and the Performance of Multibusiness Firms. *Stratigic Management Journal*, 97-119.
- Termariyabuit, N. (2006, May). Stock Market-Driven Acquisitions and Toehold Acquisitions in Thailand. *London School of Economics and Political Science*, 1-222.

- Thai Institute of Directors Association. (2016). Corporate Governance Report of Thai Listed Companies 2016. Bangkok: Thai Institute of Directors Association.
- Trautwein, F. (1990). Merger Motives and Merger Prescriptions. *Strategic Management Journal*, 283-295.
- Wang, C., & Fei, X. (2009). Corporate Governance Transfer and Synergistic Gains from Mergers and Acquisitions. *Oxford Journals*, 22(2), 829-858.
- Wensley, R. (1982). PIMS and BCG: New Horizons or False Dawn? *Strategic Management Journal*, 3(2), 147-158.
- Xu, E. Q. (2017). Cross-border Merger Waves. Journal of Corporate Finance, 46, 207-231