DEAL CHARACTERISTICS AFFECT TO ACQUISITION PREMIUM: EVIDENCE IN ASIA

BY

MISS KHANITA JURATSAKCHAROEN

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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was approved as partial fulfillment of the requirements for
the degree of Master of Science (Finance)

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Academic Years	2014

ABSTRACT

Inspired by the acquisition wave in Asia and Thailand, which is entering the ASEAN Economic Community (AEC), which led to increased acquisition activity, this paper aimed to study the deal characteristics that affect acquisition premiums. The study results show that larger target market values lead to lower bidding premiums because of complexity of big businesses destroys synergy gain and it possible that valuation errors occur during good market potential, which is an important root cause of overpayment. All cash offers tend to pay higher premiums, but this payment method is most popular. Moreover, the bidding premium means of innovative industry is significantly greater than non-innovative industry because business knowhow has a price.

Keywords: Bidding Premium, Takeover Premium, Overpayment, Deal Premium

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to my thesis advisor, Associate Professor Seksak Jumreornvong, PhD, for his invaluable help and constant encouragement throughout the course of this research. I am most grateful for his teaching and advice. I would not achieved this much, and this independent study would not have been completed without all of his support.

Moreover, I would like to thank my committee, Chaiyuth Padungsaksawasdi, Ph.D. for his comments for improvement.

In addition, I am grateful for the Thomson Reuter's Customer Service Team for data supporting and all their help.

Finally, I most gratefully acknowledge my parents and my friends for all their support throughout the period of this research.

Miss Khanita Juratsakcharoen

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1
INTRODUCTION

The global economy is changing rapidly and Thailand is entering the ASEAN Economic Community: AEC. This is an opportunity and business challenge. Thus, creating a strong business is essential and one business strategy for sustainable growth is Mergers and Acquisitions (M&A). Furthermore, organic growth is not enough for highly competitive businesses; therefore, inorganic growth is an optional strategy for business expansion because firms can dramatically grow vertically, horizontally, or across industries. With M&As both types of business partners, targets and acquirers, receive satisfying benefits, including economy of scale, reductions in competitors, increased market share, technology transfer, reduced production costs, value added products, expanded new business, and diversification. However, acquisitions take place under uncertain conditions, even if the acquirer had to put in effort to achieve successful in acquisitions knowing that only a few cases will be successful. Consequently, several studies have attempted to find the reasons to explain why acquisitions are successful or not by measuring acquisition premiums and shareholder gains.

Despite the global market decline in M&A, the Asian market is heating up, and both local and international firms are looking to get in on M&As that are poised to play a pivotal role in the restructuring of all manner of industries. The prospects for M&A activity over the next few years are extremely good for the following reasons:

- Globalization and the expansion of international trade will continue, especially in Asia.
- The speed of technological change and outsourcing will accelerate, which will reduce the costs of communication, production, transportation, and other costs associated with conducting international business.
- Deregulation and privatization of state-owned enterprises will continue in China, Taiwan, Malaysia, the Philippines, and many other Asian countries.
- The general economic environment in Asia will continue to support economic growth and expand in trade and investment. Favorable factors include booming stock markets, low inflation, low interest rates, and growing economies.

- More bilateral and regional FTAs will be concluded and implemented in the future. These FTAs will improve the investment climates of many Asian countries.
- Most countries in Asia have learned some painful lessons from the financial crisis in 1997 and 1998. They are improving their accounting rules and practices for corporate governance and government oversight.

Empirical evidences suggests that deal characteristics have affected acquisition premiums directly. Many researchers have also shown that larger acquisitions destroy more value for shareholders of an acquiring company. Business Week (2002) reported that 61% of acquisition deals worth at least $500 million ended up costing shareholders. Mega mergers destroy more value because managers are too confident and pay too much. On the other hand, evidence shows and explains why acquirers in large targets tend to offer lower premiums. Alexandidis (2011) argued that valuations for large firms can also be more accurate because of greater information availability. Therefore, it is not surprising that acquirers hire more reputable underwriters to advise and negotiate better deals. Furthermore, business scales come together with complexity. For example, managers often pay premium that are too high when the target is a small firm because of acquirers are overconfident in their management teams. For large target firms, acquirers often pay lower premium because the complexity of the business can make synergies from the combination harder to achieve.

Many factors and characteristics affect bidding premiums such as firm size, deal value, and deal characteristics (e.g., method of payment: cash vs. stock, hostile vs. friendly, multiple bidders vs. single bidder, private vs. public, etc.). This paper investigated the relationship between deal characteristics and bidding premiums. Specifically, this paper sought to address the following questions.

1) What deal characteristics determine the bidding premium?
2) How does each deal characteristics affect the bidding premium?
3) Which deal characteristic is the most influence on higher bidding premiums?

This study contributes to the literature in several ways. This is the first study that presents empirical evidence on the effect of deal characteristics on bidding premiums for acquisitions in the Asia market. The results may be a useful in estimating

the tendency of bidding premiums of future acquisition activities that may be occur during an acquisition wave when we enter the AEC.

CHAPTER 2
REVIEW OF LITERATURE

There are many studies about bidding premium in M&As that aimed to determine factors that affect bidding premiums. Alexandidis et al. (2013) examined the relationship between target size and premium paid in acquisitions. He found that target size and premium paid had a robust negative relation. He used OLS regression estimates of acquisition premiums on the natural logarithm of market relative target size and other deal, firm, and market characteristics. The evidence suggested that large deals are more complex and destroy more value for acquiring shareholders, which lead to lower bidding premiums.

Antoniou et al. (2008) examined whether high premium paid in M&As was a cause of acquirer's post-merger underperformance. The research was motivated by the concern that high premiums destroy more acquirer shareholder value and acquirer underperformance in the long run because they are unable to achieve synergy. However, they found no evidence that high premiums paid were in fact responsible for this long-run underperformance. Their short-run analysis suggested that merger premium could well be a proxy for synergy between the target and acquirer in the eyes of market.

B. Espen Eckbo (2009) examined how acquirer, target, and deal characteristics effect biding premiums. The evidence suggested that multiple bidders and horizontal takeovers are unaffected by offer premiums. Additionally, offer premiums (both initial and final) were greater for public than private acquirers. Payment method also effected bidding premiums; premiums are greater in all cash offers than in all stock offers.

Gary Gorton et al. (2009) argued that firm size was import to M&As activity for two major reasons. First, managers try to be acquirers when unprofitable because they want to increase firm size and reduce the possibility that they become targets; M&As are strategies to preserve private benefit of control. Alternatively, firms may want to engage in acquisitions to increase firm value even if they will be target firms. After the deal, target firms always yield positive returns; therefore, managers position themselves as more attractive takeover targets. Moreover, firm size is an important

variable of acquisition profitability. Gorton et al. found that large acquirers overpay while small acquirers tend to engage in profitable acquisitions. The results of intermediate sized firms are uncertainty.

H. Nejat Seyhun (1990) examined the trading patterns of top managers in bidder firms following the announcement of M&A attempts to gain insight into managerial information and intentions. The results do not appear to support the hypothesis that top managers knowingly pay too much for target firms. Overall, the data show small increases in insider stock purchases and decreases in insider stock sales for personal accounts prior to the takeover announcement. Therefore, extreme hubris is not the overriding motivation for corporate takeovers. Moreover, deal transactions show managers as optimistic in deal achievement. Paying with stock is a good signal that managers are confident that their shares are overvalued, but they are not completely confident about the success of these deals.

Leonce L. Bargeron (2008) found that target shareholders earned higher premiums if a public firm was acquired rather than a private firm. The high managerial ownership of private equity firms and public firms yielded no significant difference in premiums. The difference in abnormal returns was highest between acquisitions made by private equity firms and those by public acquirers with low managerial ownership. They also found that high target managerial and ownership had a positive relationship with higher premiums for acquisitions by public firms, but not for private firms. This finding suggests that private firm acquisitions are more likely to involve cooperation by managers to facilitate these acquisitions.

Nikhil P. Varaiya and Kenneth R. Ferris (1987) found that the average winning takeover premium significantly over-stated the expected takeover gain. Equivalently, the average cumulative excess return to the winning bidder was significantly negative. Furthermore, the takeover premium increased with an increase in both the degree of competition and the dispersion of opinions about the size of the takeover gains amongst prospective bidders seeking control of the target company.

This literature review is summarized in Table A.1 for the purpose of comparing the methodology and results.

CHAPTER 3
THEORETICAL FRAMEWORK

Mergers and acquisitions are one type of corporate restructuring that makes larger firms by consolidating two companies. The reasoning for M&A is to create shareholder value over the sum of two companies. Two companies together are more valuable than are two separate companies, similar to the phrase, "one plus one makes three."

There are various types of business combinations. The terms chosen to make a deal depend on economic function, purpose of the business transaction and the relationship between two companies. These combinations can be classified into the following five types:

1) Conglomerate Integration: A combination of two companies does not have totally unrelated business activities. Two types of conglomerate mergers are pure and mixed. Pure conglomerate mergers involve firms with nothing in common, while mixed conglomerate mergers involve firms looking for product or market extensions (e.g., the merger between the Walt Disney Company and the American Broadcasting Company).

2) Horizontal Integration: A merger between companies in the same industry, often as competitors offering the same goods or services. The goal of a horizontal merger is to create a new, larger organization with more market share and more opportunities to join the common operation and manufacturing that result in cost reductions (e.g., the merger between Coca Cola and Pepsi).

3) Market Extension Integration: A merger between two companies that provide same products or services in different markets to allow the merged companies to get access to a larger market that ensures a greater client base.

4) Product Extension Integration: A product extension merger takes place between two business organizations that deal in products related to each other and that operate in the same market. This merger allows the merging companies to group their products and get access to a larger set of consumers, which ensures higher profits.

5) Vertical Integration: A vertical merger occurs between two firms with different goods or services within the same industry. Two firms operate at different levels within an industry's supply chain; one firm often is the supplier of another firm. This type of merger increases synergy and leads to more efficient operations.

Research often mention M&As at the same time. However, there is actually a subtle difference between the two concepts. In the case of a merger, two firm form a new company; separately owned companies become jointly owned companies. When two firms merge, stocks of both are surrendered and new stocks of the new combination firm are issued. However, in the case of acquisition, one firm takes over another firm and establishes a new single company. Generally, the firm that takes over is the larger and stronger one. Unlike the merger, stocks of the acquired firm are not surrendered, rather are bought by the public prior to the acquisition and continue to be traded on the stock market.

Another difference is in whether the deal made is friendly or hostile. It is typically proclaim that a deal made by hostility is an acquisition. In unfriendly deals, the acquirer swallows the target firm even if the target firm is willing to be purchased. Therefore, M&As are synonymous because many larger firms that buy out the relatively less powerful ones always announce the deal as merger in order to avoid negative impressions.

Over the past decade, M&As have dramatically become one of the most attractive and populous strategies for business expansion which show the number of worldwide M&As in Figure B.1

The key driver behind M&A transaction is “synergy”. Synergy is the cooperation between two companies that enhances the cost efficiencies of the new business. Synergies take the form of revenue increasing and costs reducing. The following benefits magnify the meaning of synergy:

- Cost saving: Costs saved by reducing the number of staff from accounting, marketing, and other departments, even executive members, who typically leave with compensation packages.

- Economy of scale: The larger company is able to order larger amounts of raw material for production to save in cost per unit. Larger companies have greater negotiating power with their suppliers.
- Acquiring new technology: Companies need to be leaders of technology developments to increase competitiveness. Sometimes unique techniques come from the smaller company.
- Improved market penetration and industry visibility: A merger may expand two companies' marketing and distribution, giving them new sales opportunities. The rising capital is easier for larger firms.
- Diversification: Conglomerate integration helps business diversification and reduces investment risk, as one expanding business can help balance a business in a downturn.

Although there are many benefits from M&A, many investors feel that business combinations destroy value because of negative cumulative return of pre-biding. Furthermore, acquirers tend to pay bidding premium that are too high in M&As. Bidding premiums in M&As are defined as the difference between the offer price and the market price of target firm before the announcement of the transaction. Empirical evidences shows that managers of acquirers often overpay, which leads to destroying the firm value. Reasons for this value destruction include the following:

- Overestimate in target's value: The root cause comes from an overestimate of growth rate and market potential, which is a forecasting error problem.
- Overestimation of expected synergies: Acquirer firm cannot achieve synergy gain, which is a management and cooperation problem.
- Overbidding and overpayment: This problem comes from two main causes. First, the hubris of the acquirer manager. These managers are overconfidence in their performance. Second, the intensity of bidding when several bidders are competing. This intense competition gives the target more bargaining power to negotiate a higher premium.
- Failure to undertake thorough due diligence of the target.

- Failure to successfully integrate the target after the merger or the acquisition: This failure always occurs when the target is a large complex company that is more difficult to integrate completely.

The purpose of this paper was to examine how deal characteristics affect bidding premiums. The variables and method of study are discussed in methodology section.

CHAPTER 4
RESEARCH METHODOLOGY

The previous section discussed bidding premiums and deal characteristics. The researcher collects related variables and examined the relationship between these variables and bidding premiums using estimates from OLS regression.

1. Definition of variables

The following table provides the definitions of variables used in all regressions.

Variable	Abbreviation	Definition
Merger of Equals Indicator	-	Flagged "Y" when the target and acquirer are considering their merger. Merger of Equals indicates that the target and acquirer in a stock swap transaction have approximately the same market capitalization and the ownership of the new entity will be owned roughly 50/50 by the target and acquirer shareholders. Both companies should also have close to equal representation on the board of the new company. In almost a Merger of Equal's deals the articles will specifically state that it is a Merger of Equals.
Mean Premium of each industry	-	Annual average value weight return of each industry by year from CRSP database.
Acquirer Market Value	AMV	Calculated by multiplying the total number of acquirer shares outstanding times the acquirer's stock price 4 weeks prior to announcement date ($mil).

Variable	Abbreviation	Definition
Target Market Value	TMV	Calculated by multiplying the total number of target shares outstanding by the target stock price 4 weeks prior to announcement date ($mil).
Deal Value	DV	Total value of consideration paid by the acquirer, excluding fees and expenses. The dollar value includes the amount paid for all common stock, common stock equivalents, preferred stock, debt, options, assets, warrants, and stake purchases made within six months of the announcement date of the transaction. Liabilities assumed are included in the value if they are publicly disclosed. Preferred stock is only included if it is being acquired as part of a 100% acquisition. If a portion of the consideration paid by the acquirer is common stock, the stock is valued using the closing price on the last full trading day prior to the announcement of the terms of the stock swap. If the exchange ratio of shares offered changes, the stock is valued based on its closing price on the last full trading date prior to the date of the exchange ratio change.
Deal Attitude	DA	The attitude or recommendation of the target company's management or board of directors toward the transaction: 1 = Friendly (the board recommends the offer); 0 = Hostile (the board officially rejects the offer but the acquirer persists with the takeover).

Variable	Abbreviation	Definition
Acquirer Public Status	APS	Public status of acquiring company: public, private, subsidiary, joint venture, government owned: 1 = Public firm and 0 = Private firm.
Competing	COMP	The number of entities (including the acquirer) bidding for a target. Also, the number of challenging deals for one target. For deals with only one bidder (ie. no challenger), Number of Bidders will be 1. Deals for the other bidders can be seen by reporting on the Related M&A Deal set of data items.
Cash	CASH	Value paid in cash divided by total value and the rest proportion is paid in stock.
Diversification	DIV	The diversification of business determines from SIC codes of acquirer's and targets' primary line of business. If SIC code difference more than 2 digits means diversification and other means Non diversification: 1 = Diversification and 0 = Non – Diversification.
Market Index	MI	The stock exchange market index of each country during acquisition announcement.

Source: www.datastream.com by Thomson Financial Securities Data.

2. Bidding Premium

It has become a normal situation that acquirers pay the target the premium to compensate for the loss of control of the business. The bidding premium is the additional premium an acquirer offers the target above the mean premium in each industry to achieve the acquisition. The bidding premium more or less depends on the target industry. For example, technology industries have higher bidding premiums than do agricultural industries. Therefore, the actual bidding premium is determined from

the additional amount from mean premium of the target industry in the year of the announcement. The bidding premium can be stated in the following equation.

$$BP_i = \left[\frac{\text{Offer Price} - \text{Target Share Price}}{\text{Target Share Price}}\right] * 100 \text{ - mean premium of each industry by year}$$

The first term is the deal premium, which is the ratio of the offer price to the target share price one month prior to the acquisition announcement. The mean premium of each industry by year is based on the updated Fama and French 49 industries data.

This bidding premium equation applies to the bidding premium hypothesis:

$$BP_i = \alpha_i + \beta_{i,1}(AMV)_{i,1} + \beta_{i,2}(TMV)_{t,2} + \beta_{i,3}(DV)_{i,3} + \beta_{i,4}(DA)_{t,4} + \beta_{i,5}(APS)_{t,5} + \beta_{i,6}(COMP)_{t,6} + \beta_{i,7}(CASH)_{t,7} + \beta_{i,8}(DIV)_{t,8} + \beta_{i,9}(MI)_{t,9} + \varepsilon_i$$

For dummy variables, where:

APS	= 1 for public firm and 0 for private firm
DA	= 1 for friendly deal and 0 for hostile deal
DIV	= 1 for diversification and 0 for non-diversification

Each variable in the hypothesis may has positive or negative relationship with the bidding premium. Those relationships are the main objectives of this study to determine how each deals characteristic effects bidding premiums in M&As. Because a significant amount of research on bidding premium have yielded similar findings, with difference reasons, the summary of result and reasons from the literature review is important for predicting the expected results in this study. The expected results show in Table A.2

CHAPTER 5
DATA

The samples of domestic acquisitions were from Datastream, which is the financial transactions database and CRSP database for mean premiums of each industry. The sample included Asia completed deals announced between 1990 and 2013, where the target was a public firm and the acquirer was either a public or private firm. Other types of acquisition, such as spin-offs, recapitalizations, self-tenders, repurchases, minority stake purchases, acquisitions of remaining interest, exchange offers, privatizations, and joint venture were excluded from the study scope.

The data collection period was determined from the merger wave in Asia. Martynova et al. (2008) noted the merger wave because in the 1890s to has continued to the present. They separated sub-periods for each merger wave by M&A outcome and noted that all waves has some common factors (e.g., preceded by technological or industrial shocks) and occurred in a positive economic and political environment, rapid credit expansion, and stock market booms. The period of study of this paper covered the two latest merger waves in the Asian market, which were wave 5 and the new wave. Details of each merger wave are listed in the Table A.3.

The merger waves after the 1980s resulted from economic recovery after recession and then entry into an economic and financial market boom in 1993–2001. Changes in technology, economic, and financial market after the 1980s lead to highly competitive businesses. The major changes in the business world include the anti-trust policy, the deregulation of the financial services sector, new financial instruments and markets such as junk bonds, and the technology progression and privatization. Figure B.2 presents the trend of worldwide merger volume that continuously increased especially in the Asia M&A market.

CHAPTER 6
RESULTS AND DISCUSSION

Data were Cross Sectional Data which will be tested based on Gauss-Markov assumption that the Ordinary Least Squares (OLS) estimator is best, linear, unbiased estimator (BLUE). The OLS estimator is consistent when the regressers are exogenous and no perfect multicollinearity exists, and they are optimal in the class of linear unbiased estimators when errors are homoscedastic and serially uncorrelated. To ensure that the model is BLUE, data were tested using four problems: multicollinearity problem, autocorrelation problem, heteroscedasticity problem, and endogeneity problem.

Multicollinearity problem was tested by detection-tolerance or the variance inflation factor (VIF). A VIF of 5 or 10 and above indicates a multicollinearity problem. The VIF of the model was 1.23, less than 5, thus extreme multicollinearity did not exist, which does not violate OLS assumptions. The data were considered in the Durbin-Watson test to detect an autocorrelation problem. As with Durbin Watson Significance Tables with intercept terms, testing by cross referencing the sample (N = 200), which is the maximum in the tables and the number of regressors, excluding the intercept, k = 9. The tabulate 5% lower bound d_L was 1.675 and upper bound d_U was 1.863. The Durbin Watson result of the hypothesis was 1.458741, which is lower than the lower bond statistics level; therefore, no autocorrelation existed in the hypothesis.

The researcher tested the heteroscedasticity problem using Breusch-Pagan/Cook-Weisberg Test and White's General Test, *p*-values were 0.1019 and 0.9817, which are not significant at a 95% level of confidence. Thus, heteroscedasticity biased was not significant. The endogeneity problem was detected using Hausman test, which yielded a *p*-value of 0.3138 at a 95% level of confidence. The researchers failed to reject the null hypothesis that the difference in coefficients is not systematic. Thus, endogeneity biased was not significant. OLS estimates were unbiased and BLUE (Best Linear Unbiased Estimators).

Table A.4 show the sample of domestic acquisitions in Asia from 1990 to 2013 had 863 deals. After data cleaning, which included parallel data only, the summary

statistic showed Japan was the Asian country with the most acquisition activities of 554 deals. The main reason of the acquisition wave in Japan is an increase in global competition, but local Japanese companies did not rapidly growing because of too much diversification. Therefore, Japanese companies changed their strategies to focus on growing their core businesses and divesting underperforming or non-core businesses. A common domestic trend has been for competitors to acquire another company to increase manufacturing capacity, economy of scale, efficiency, and profitability.

Table A.5 shows the number of acquisition and total deal values by year. Before the Global Financial Crisis at the end of 2008, the acquisition wave from 2005 to 2008 has total deal values of more than 140,000 Million USD for 345 deals.

In this section, I examine the relation between the bidding premium and deal characteristics by splitting data into three subgroups to compare the results of each subgroup. The three subgroups were as follows:

1) Sub-Period: Pre Crisis vs. Post Crisis
2) Sub-Region: Non-ASEAN vs. ASEAN
3) Sub-Industry: Innovative Industry vs. Non-Innovative Industry

Each subgroup had individual characteristics and environments, which may have affected acquisition behaviors and bidding premiums. Thus, the results from all subgroups are better understood as an overall result.

1. Bidding Premium Regression by Sub-Period

Because of the financial crisis, each economy took numerous steps to buffer their financial structures; therefore, many changes occurred after the financial crisis, including government policies, investment policies, market linkage and integration, regulation and deregulation, risk management, etc. Therefore, the financial crisis may have affected differences in M&A behaviors. The data were split into two groups for Pre- and Post- the Global Financial Crisis of 2008 within the following timeframe.

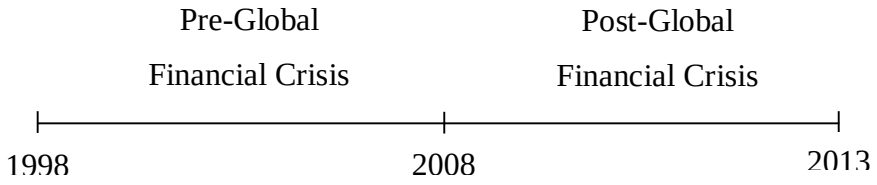

Table A.6 show the summary of deal number and deal value of each sub-period.

2. Bidding Premium Regression by Sub-Region

Each region had a financial structure and acquisition trend; therefore, data were split into two subgroups, Non-ASEAN and ASEAN, to study differences of each. The main objective of the sub-region study was to determine specific results of each region, especially ASEAN results to forecast acquisition behaviors after entering the ASEAN economic community (AEC) at the end of 2015.

Using the cleaned data, the country within each sub-regions were as follows:

Non-ASEAN: Japan, Australia, Taiwan, South Korea, Hong Kong, China, Sri Lanka, India, and New Zealand

ASEAN: Indonesia, Malaysia, Singapore, Thailand, the Philippines, and Vietnam

Table A.7 show the summary of deal number and deal value of each sub-region.

3. Bidding Premium Regression by Sub-Industry

The bidding premium rate of each industry was based on its margin and mean return. Moreover, the major factor that affects the premium was innovation, which was more intense in high-tech industries. High-tech companies always have develop their knowhow for survival and profit. Innovative Industry or Non-Innovative Industry was consider based on the R&D intensity rate of each industry. In the decade of globalization, industry environments and behaviors of each region should be in the same direction; therefore, R&D intensity rate should be also in the same direction. Thus, R&D intensity rate information referred to the reliable source of the 2014 EU Industrial R&D Scoreboard European Commission as seen in the Table A.9.

In this part, data were split into two sub-group, Innovative Industry and Non-Innovative, for an explicit comparison as follows:

Innovative Industry: High and Medium-High R&D intensity rate

Non-Innovative Industry: Medium-Low and Low R&D intensity rate

Table A.8 show the summary of deal number and deal value of each sub-region.

Table A.10 shows the summary statistic of each variable for the bidding premium regression. The mean bidding premium of all data was 12.95%. When comparing sub-groups, the result showed that they mean bidding premium of pre-crisis was higher than post-crisis, the mean bidding premium of ASEAN was higher than

Non-ASEAN, and the mean bidding premium of innovative industry was higher than non-innovative industry. These results were significant.

In this section, I examine the relation between bidding premiums and deal characteristics. Table A.11 reports estimates from the OLS regressions where the dependent variable was bidding premium and the independent variable was deal characteristic. Table 8 reports the coefficients of each independent variables, *p*-values are reported in brackets; a, b, and c denote statistical significance at the 1%, 5%, and 10% levels.

The independent variable "Target Market Value" had a negative coefficient and was statistically significant with bidding premium for all sub-groups except ASEAN. This result is in line with the expected result that target market value has a negative relationship with bidding premium because the complexity of large companies destroys synergy gain and leads to lower bidding premiums. The regression results also showed a non-significant relation between "Acquirer Market Value" and bidding premium and a negative coefficient that was not in line with the expected results. This finding does s not mean that no relationship exists, rather that the acquirer market value may have less influence on bidding premium. The possible reason for this negative relation is that most large acquirers are members of the stock exchange market. These members have to follow stock exchange market regulation when engaging in M&A, such as due diligence, independent financial advisor report, and shareholder approval. These disclosure processes reduce the acquiring manager's hubris and lowers the bidding premium.

The independent variable "Deal Value" was statistically significant with bidding premium and the positive relationship was not consistent with the expected results. Larger deals pay higher bidding premiums that are overestimates of growth rate and synergy gain. The dummy variables "Deal Attitude" (dummy variable was 1 for friendly deal and 0 for hostile deal) and "Acquirer Public Status" (dummy variable was 1 for public firm and 0 for private firm) were not significantly related to the bidding premium regression. This sample included few less hostile deals and acquirer private firm; four deals from a total 863 deals. Therefore, these results may biased and not able to yield reliable results.

The independent variable "Number of Bidders," which measured competing intensity of bidding, was not statistically significant with the bidding premium regression. This result contrasts the expected result as the higher intensity of bidding led to higher bidding premiums. The independent variable "Percentage of Cash" was statistically significant and yielded a positive relation with the bidding premium regression. The bidding premiums of cash-financed acquisitions were larger than those paid in share-for-share transactions, as target shareholders were compensated for the immediate tax implications of cash offers. The dummy variable "Diversification" took a value is 1 if the acquirer and target firms has different 2-digit SIC codes and 0 for otherwise. This variable controlled for the fact that higher bidding premiums are normally offered in intra-industry acquisitions; however, the coefficient of the variable was not significant in most specifications. Another independent variable was "Market Index," which yielded a statistically significant and positive relation with the bidding premium regression. This results may be because better potential market leads to forecasting error problems and overestimated business growth rate, which leads to overpayment.

CHAPTER 7
CONCLUSIONS AND RECOMMENDATIONS

Because the acquisition wave in Asia and Thailand is entering the ASEAN Economic Community (AEC), acquisition activity has increased. This paper aimed to study deal characteristics that affect acquisition premiums. The samples of domestic acquisitions were from Datastream, which is the financial transactions database and CRSP database for mean premiums of each industry. The sample included Asia completed deals announced between 1990 and 2013, where the target was a public firm and the acquirer was either a public or private firm. The result on deal characteristics effected acquisition premiums in Asia; four variables were significant, Target Market Value, Deal Value, Percentage of Cash, and Market Index. Target Market Value had a negative relation with bidding premium, which supports the reason that complexity of big businesses destroys synergy gain. On the other hand, complex big businesses are difficult to valuate, which leads to overestimates in growth rate and synergy gain; therefore, it is possible that big deals tend to pay higher bidding premiums.

Payment method is an important acquisition strategy. The data showed that all stock offers were the most frequently used payment method. Public acquirers tend to paid all cash offers, even though bidding premiums are greater in all cash offers than in stock offers. The main reason is that all stock offers lead to negative market reactions because of shareholders' concern about the dilution effect. Market Index had a positive relation with bidding premium; therefore, acquisitions that occur during good market environments tend to overpay. Good market potential leads to overestimating business growth rate and misevaluation. The summary statistics result showed a difference in mean bidding premium rates between two sub-groups, the bidding premium mean of post-crisis were lower than pre-crisis because acquirers were more conservative after the crisis. The bidding premium mean of innovative industry was significantly greater than non-innovative industry because business knowhow has price.

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APPENDICES

APPENDIX A

Table A.1 Summary of Literature Review

Paper	Topic	Model	Result
Alexandridis, G., Fuller, K. P., Terhaar, L., & Travlos, N. G. (2013)	Deal size, acquisition premia and shareholder gains	OLS	• Negative relationship between target size and acquisition premium • Acquirers of large targets pay significantly lower premiums • Large(small) targets continue to generate negative(positive) abnormal return in long run • Suggest that large deal are complexity can make it more unlikely that they offer any economic benefits despite the fact they are associated with lower premium
Antoniou, A., Arbour, P., & Zhao, H. (2008)	How Much Is Too Much: Are Merger Premiums Too High?	Calendar-Time Portfolio Regression (CTPR)	• High premium paid are not responsible for long run underperformance • In short run, high merger premium can make better synergies between targets and acquirers
Bargeron, L. L., Schlingemann, F. P., Stulz, R. M., & Zutter, C. J. (2008)	Why do private acquirers pay so little compared to public acquirers?	t-Test, Wilcoxon Test	• Bidders of operating companies pay more for acquisitions because they expect to benefit from synergies • High target managerial and institutional ownership are associated with higher premiums for acquisitions by public firms

Table A.1 Summary of Literature Review

Paper	Topic	Model	Result
Eckbo, B. E. (2009)	Bidding strategies and takeover premiums : A review	OLS	• The offer premium are higher when bidder is public company, when bidding is all cash offer and the higher the pre-bid target run up • The offer premium are lower when the target's book to market ratio exceed the industry median book to market ratio, when the initial bid is tender offer, when the initial bidder has a positive toehold • The offer premium are unaffected by the presence of a target poison pill(target hostility to the initial bid), when has multiple bidders
Gorton, G., Kahl, M.,& Rosen, R. J. (2009)	Eat or Be Eaten : A Theory of Mergers and Firm Size	OLS	• The profitability of acquisitions tend to decrease in the acquirer's size – larger acquirers overpay while small acquirers tend to engage in profitable acquisitions but firm intermediate size, the results are uncertain • The acquisitions are more profitable in industries in which the acquirer firm is larger relative to the other firms

Table A.1 Summary of Literature Review

Paper	Topic	Model	Result
Seyhun, H. N. (1990)	Do Bidder Managers Knowingly Pay Too Much for Target Firms?	Randomization Test, t-Test, Mann-Whitney Sum of the Ranks Test	• The top bidder managers knowingly pay too much for target firm • The data show small increases in insiders' stock purchases and decreases in insiders' stock sales for their personal accounts prior to the takeover announcement • Insiders are more optimistic in all cash offer subsample than in equity offer subsample • The extreme hubris is not the overriding motivation for corporate takeovers.
Varaiya, N. P., & Ferris, K. R. (1987)	Overpaying in Corporate Takeovers : The Winner's Curse	Regression Equation	• The winning takeover premium significantly over-states the expected takeover gain • The average cumulative excess return to the winning bidder is significantly negative

Table A.2 Summary of Expected Results

Variable	Expected relationship with bidding premium	Expected reason
Acquirer Market Value	Positive	Manager of big firms are more hubris
Target Market Value	Negative	The complexity of business destroy synergy gain
Deal Value	Negative	Big target company is hard to completely integration
Deal Attitude - Hostile	Positive	Managerial defensive of target rising bidding premium
Acquirer Private Status - Private	Negative	Limited capital for acquiring effect to more concern about transaction value
Competing	Positive	The intensity of competition leads to higher bidding premium
Payment Method - Stock	Positive	Overvalue of stock leads to over payment
Diversification	Negative	Diversify business destroy acquirer's manager hubris
Market Index	Positive	Better potential market leads to overestimate of business growth rate

Table A.3 Summary of Merger and Acquisition Waves

	Wave 1	**Wave 2**	**Wave 3**	**Wave 4**	**Wave 5**	**New Wave (6?)**
Period	1890s – 1903	1910s – 1929	1950s – 1973	1981 – 1989	1993 – 2001	2003 – present
Geographical scope	US	US	US, UK, Europe	US, UK, Europe, Asia	US, UK, Europe, Asia	US, UK, Europe, Asia
M&A Outcome	Formation of monopolies	Formation of oligopolies	Growth through diversifications	Elimination of inefficiencies	Adjustment to globalization processes	Global expansion
Industry	Hydraulic power, textiles industry, iron industry	Steam engines, steel, railways	Electricity, chemicals, combustion engines	Petrochemicals, aviation, electronics, communications technology	Communications/ information technology	N.A.

Table A.4 Summary of Number of Acquisitions by Country

Nation	**Number of Acquisitions**
Japan	554
Australia	101
Taiwan	30
Indonesia	29
Malaysia	28
South Korea	27
Singapore	24
Thailand	24
Hong Kong	16
China	12
The Philippines	6
Sri Lanka	5
India	3
New Zealand	2
Vietnam	2
Total	**863**

Table A.5 Summary of Number of Acquisitions and Deal Value by Year

Year	Number of Deals	Total Deal Value (Mil. USD)
1998	2	160.19
1999	3	1,671.52
2000	20	7,534.44
2001	48	19,538.13
2002	45	14,328.45
2003	47	9,260.10
2004	64	30,853.24
2005	93	45,754.30
2006	92	36,382.83
2007	87	20,682.70
2008	73	38,250.44
2009	68	26,211.43
2010	66	31,139.30
2011	72	19,059.28
2012	48	19,194.03
2013	35	6,020.46
Total	**863**	**326,040.83**

Table A.6 Summary of Deal Numbers and Deal Value of Sub-Period

Period	Deal Numbers	Total Deal Value ($ Mil.)
Pre Crisis: 1998 - 2008	574	224,416
Post Crisis: 2009 - 2013	289	101,624
Total	863	326,041

Table A.7 Summary of Deal Numbers and Deal Value of Sub-Region

Region	Country	Number of Deals	Total Deal Value ($ Mil.)
Non Asian	Japan, Australia, Taiwan, South Korea, Hong Kong, China, Sri Lanka, India, and New Zealand	776	301,112
Asian	Indonesia, Malaysia, Singapore, Thailand, the Philippines, and Vietnam	87	24,929
Total		863	326,041

Table A.8 Summary of Deal Numbers and Deal Value of Sub-Industry

Industry	Number of Deals	Total Deal Value ($ Mil.)
Innovative Industry	329	76,019
Non-Innovative Industry	534	250,022
Total	863	326,041

Table A.9 The R&D Intensity Rate

Type	R&D intensity rate	Industry
High	Above 5%	Pharmaceuticals&Biotechnology, Health care, Equipment&Services, Technology Hardware&Equipment, Software&computer services, Aerospace&defence
Medium-High	Between 2% - 5%	Electronics&electrical equipment, Automobiles&parts, Industrial Engineering&Machinery, Chemicals, Personal Goods, Household Goods, General Industrials, Support Services
Medium-Low	Between 1% - 2%	Food Producers, Berverages, Travel&Leisure, Media, Oil Equipment, Electricity, Fixed Line Telecommunications
Low	Less than 1%	Oil&Gas Producers, Industrial Metals, Construction&Materials, Food&Drug Retailers, Transportation, Mining, Tobacco, Multi-Utilities

Source: The 2014 EU Industrial R&D Scoreboard European Commission, JRC/DG RTD.

Table A.10 Summary Statistics by Sub-Group

The sample includes completed domestic acquisition deals in Asia announced between 1990 and 2013, where the target is public firm and the acquirer is either public or private firm on Datastream. The Bidding Premium is the additional premium which an acquirer offers to target above the mean of premium in each industry in order to achieve in acquisition. Target Market Value and Acquirer Market Value calculated by multiplying the total number of their shares outstanding by their stock price 4 weeks prior to announcement date ($mil). Deal Value is total value of consideration paid by the acquirer, excluding fees and expenses. Completing is the number of entities bidding for a target included acquirer. Cash is value paid in cash divided by total value and the rest proportion is paid in stock. Market Index is the stock exchange market index of each country during acquisition announcement.

	Stats	Bidding Premium	Target Market Value	Acquirer Market Value	Deal Value	Completing	Cash	Market Index
All Data	mean	12.95	566.15	5,493.91	377.80	1.02	35.79	2,134.91
	max	473.53	31,759.73	154,459.50	17,932.98	3.00	100.00	24,591.69
	min	-115.37	2.22	3.58	0.25	1.00	0.00	220.05
	sd	43.59	1,740.43	12,099.19	1,092.73	0.14	47.23	2,611.17
	variance	1,899.76	3,029,097.00	146,000,000.00	1,194,060.00	0.02	2,230.76	6,818,199.00
	skewness	2.07	9.83	5.28	7.87	10.34	0.60	4.66
	kurtosis	18.69	142.57	43.36	95.38	120.77	1.39	31.39

Table A.10 Summary Statistics by Sub-Group

	Stats	Bidding Premium	Target Market Value	Acquirer Market Value	Deal Value	Completing	Cash	Market Index
Pre-Crisis	mean	13.62	528.52	5,649.28	390.97	1.02	34.15	2,128.45
	max	473.53	18,703.17	154,459.50	17,932.98	3.00	100.00	24,591.69
	min	-115.37	2.22	3.58	0.25	1.00	0.00	220.05
	sd	43.86	1,327.70	12,876.10	1,145.52	0.16	46.71	2,308.24
	variance	1,923.39	1,762,789.00	166,000,000.00	1,312,214.00	0.03	2,181.54	5,327,987.00
	skewness	2.50	7.33	5.48	8.57	9.33	0.68	4.84
	kurtosis	24.18	79.55	45.48	108.42	97.81	1.49	35.81
Post-Crisis	mean	11.63	640.90	5,185.33	351.64	1.01	39.06	2,147.74
	max	249.72	31,759.73	83,046.86	9,148.93	2.00	100.00	22,083.36
	min	-107.53	6.03	4.74	0.94	1.00	0.00	417.21
	sd	43.09	2,355.97	10,399.50	980.87	0.08	48.17	3,131.54
	variance	1,856.70	5,550,610.00	108,000,000.00	962,097.30	0.01	2,320.35	9,806,524.00
	skewness	1.19	9.19	4.18	5.39	11.90	0.45	4.23
	kurtosis	6.81	110.37	24.59	37.87	142.51	1.23	24.41

Table A.10 Summary Statistics by Sub-Group

	Stats	Bidding Premium	Target Market Value	Acquirer Market Value	Deal Value	Number of Bidders	Percentage of Cash	Market Index
ASEAN	mean	17.97	561.01	2,515.03	286.54	1.01	49.29	1,425.03
	max	194.50	18,703.17	23,314.03	5,463.91	2.00	100.00	4,503.40
	min	-115.37	2.49	10.20	0.25	1.00	0.00	220.05
	sd	46.67	2,079.25	4,664.59	777.22	0.11	49.50	871.27
	variance	2,178.37	4,323,286.00	21,800,000.00	604,076.60	0.01	2,449.80	759,109.40
	skewness	0.19	7.85	2.77	4.81	9.17	0.04	1.34
	kurtosis	4.63	68.30	11.00	28.61	85.01	1.03	4.78
Non ASEAN	mean	12.39	566.73	5,827.88	388.03	1.02	34.28	2,214.50
	max	473.53	31,759.73	154,459.50	17,932.98	3.00	100.00	24,591.69
	min	-107.53	2.22	3.58	0.46	1.00	0.00	379.67
	sd	43.22	1,699.82	12,621.47	1,122.51	0.14	46.76	2,726.99
	variance	1,868.14	2,889,389.00	159,000,000.00	1,260,030.00	0.02	2,186.57	7,436,447.00
	skewness	2.33	10.15	5.09	7.89	10.30	0.67	4.47
	kurtosis	20.91	157.51	40.18	94.32	119.58	1.48	28.82

Table A.10 Summary Statistics by Sub-Group

	Stats	Bidding Premium	Target Market Value	Acquirer Market Value	Deal Value	Number of Bidders	Percentage of Cash	Market Index
Innovative Industry	mean	16.30	369.71	6,138.53	231.06	1.01	36.25	1,849.03
	max	249.72	7,413.80	81,277.94	7,940.09	3.00	100.00	15,602.36
	min	-81.50	2.22	8.44	0.46	1.00	0.00	379.67
	sd	39.79	844.01	11,786.90	698.98	0.13	47.88	1,944.97
	variance	1,583.53	712,346.20	139,000,000.00	488,569.60	0.02	2,292.53	3,782,919.00
	skewness	1.48	5.50	3.57	8.18	12.22	0.57	3.48
	kurtosis	8.02	38.59	18.00	83.89	162.73	1.34	18.47
Non Innovative Industry	mean	10.89	687.18	5,096.76	468.21	1.02	35.51	2,311.04
	max	473.53	31,759.73	154,459.50	17,932.98	3.00	100.00	24,591.69
	min	-115.37	2.49	3.58	0.25	1.00	0.00	220.05
	sd	45.68	2,102.85	12,281.73	1,268.45	0.14	46.87	2,935.53
	variance	2,086.76	4,421,979.00	151,000,000.00	1,608,969.00	0.02	2,196.72	8,617,330.00
	skewness	2.35	8.65	6.24	7.15	9.34	0.62	4.58
	kurtosis	22.46	105.72	57.10	78.56	99.86	1.42	28.72

Table A.11 The Coefficient and P-Value of Each Independent Variable by Sub-Group

The table reports OLS regression estimates of bidding premium and deal characteristics. The sample includes completed domestic acquisition deals in Asia announced between 1990 and 2013, where the target is public firm and the acquirer is either public or private firm on Datastream. The Bidding Premium (BP) is the additional premium which an acquirer offers to target above the mean of premium in each industry in order to achieve in acquisition. Target Market Value (TMV) and Acquirer Market Value (AMV) calculated by multiplying the total number of their shares outstanding by their stock price 4 weeks prior to announcement date ($mil). Deal Value (DV) is total value of consideration paid by the acquirer, excluding fees and expenses. Completing (COMP) is the number of entities bidding for a target included acquirer. Cash (CASH) is value paid in cash divided by total value and the rest proportion is paid in stock. Market Index (MI) is the stock exchange market index of each country during acquisition announcement. Deal Attitude (DA) is The attitude or recommendation of the target company's management or board of directors toward the transaction: 1 = Friendly, 0 = Hostile. Acquirer Public Status (APS) is public status of acquiring company: 1 = Public, 0 = Private. Diversification (DIV) is the diversification of business determines from SIC codes of acquirer's and targets' primary line of business. If SIC code difference more than 2 digits, the variable is 1 for diversification and 0 for Non diversification. a, b and c denote statistical significance at the 1%, 5% and 10% level, respectively.

Bidding Premium hypothesis is $BP_i = \alpha_i + \beta_{i,1}(AMV)_{i,1} + \beta_{i,2}(TMV)_{t,2} + \beta_{i,3}(DV)_{i,3} + \beta_{i,4}(DA)_{t,4} + \beta_{i,5}(APS)_{t,5} + \beta_{i,6}(COMP)_{t,6} + \beta_{i,7}(CASH)_{t,7} + \beta_{i,8}(DIV)_{t,8} + \beta_{i,9}(MI)_{t,9} + \varepsilon_i$

Table A.11 The Coefficient and P-Value of Each Independent Variable by Sub-Group

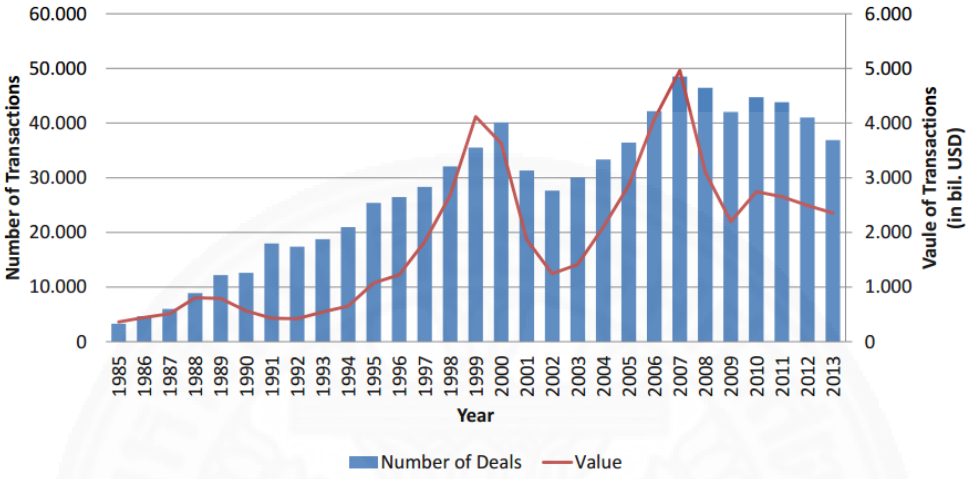
	Sample	R^2	Stats	TMV	AMV	DV	DA	APS	COMP	CASH	DIV	MI
All Data	863	0.0611	Coefficient	-0.0046[a]	-0.0001	0.0064[a]	16.3574	5.9022	3.1435	0.1625[a]	0.9063	0.0014[a]
			p-value	(0.0000)	(0.5030)	(0.0010)	(0.4490)	(0.8100)	(0.7650)	(0.0000)	(0.7650)	(0.0100)
Pre-Crisis	574	0.0489	Coefficient	-0.0035[c]	-0.0003[c]	0.0050[b]	15.7821	8.5160	5.7341	0.1082 [a]	-0.6017	0.0024 [a]
			p-value	(0.0980)	(0.0530)	(0.0350)	(0.4740)	(0.7330)	(0.6160)	(0.0060)	(0.8720)	(0.0020)
Post-Crisis	289	0.1421	Coefficient	-0.0050[a]	0.0004 [c]	0.0076 [b]	0.0000	0.0000	-10.4041	0.2584 [a]	0.4412	0.0005
			p-value	(0.0010)	(0.0620)	(0.0290)			(0.7180)	(0.0000)	(0.9330)	(0.5320)

Table A.11 The Coefficient and P-Value of Each Independent Variable by Sub-Group

	Sample	R^2	Stats	TMV	AMV	DV	DA	APS	COMP	CASH	DIV	MI
ASEAN	87	0.0821	Coefficient	-0.0016	-0.0009	0.0069	20.5501	-27.8974	9.2293	0.1364	-14.5365	-0.0075
			p-value	(0.6300)	(0.5470)	(0.5320)	(0.6890)	(0.5670)	(0.9000)	(0.2030)	(0.1780)	(0.2110)
Non ASEAN	776	0.0680	Coefficient	-0.0051[a]	-0.0001	0.0069[a]	19.8759	24.5554	1.7739	0.1665[a]	2.0459	0.0016[a]
			p-value	(0.0000)	(0.5740)	(0.0000)	(0.4200)	(0.4100)	(0.8690)	(0.0000)	(0.5210)	(0.0040)
Innovative Industry	329	0.0940	Coefficient	-0.0160[a]	-0.0001	0.0194[a]	0.0000	0.0000	-15.1723	0.2140[a]	-1.0606	-0.0014
			p-value	(0.0020)	(0.7780)	(0.0010)			(0.3390)	(0.0000)	(0.8100)	(0.1920)
Non Innovative Industry	534	0.0721	Coefficient	-0.0040[a]	-0.0001	0.0057[a]	14.7851	3.9979	15.0836	0.1294[a]	2.6245	0.0024[a]
			p-value	(0.0010)	(0.4850)	(0.0060)	(0.5160)	(0.8760)	(0.2740)	(0.0020)	(0.5200)	(0.0000)

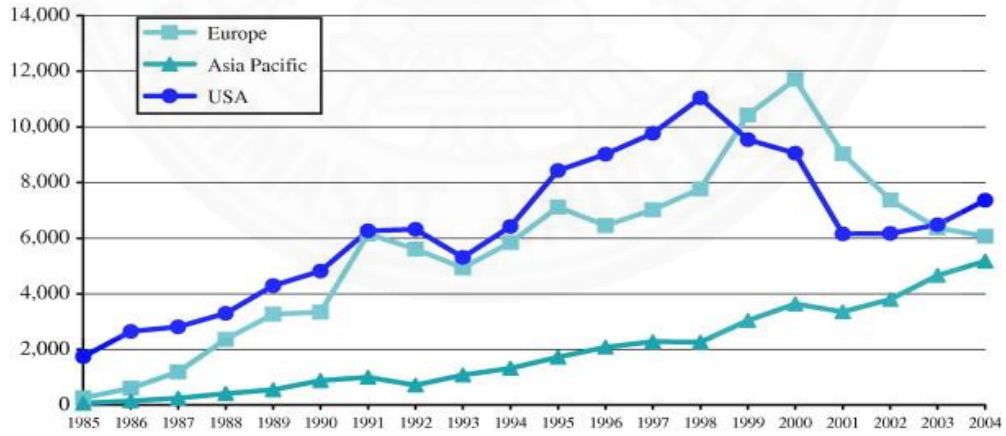
APPENDIX B

Figure B.1 Announced Mergers and Acquisitions: Worldwide, 1985 - 2013



Source: Thomsan Financial, Institute of Mergers, Acquisitions and Alliances (IMAA) analysis

Figure B.2 Total Deal Number of Worldwide Mergers and Acquisitions Waves Since 1985



Source: Thomson Financial Securities Data.

BIOGRAPHY

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	Nissan Motor Thailand Co.,Ltd.
	2014 - Present: Analyst
	Ploenchit Capital Limited Company