

**Measuring the Impact of Merger and Acquisition on
China's Information Technology Industry**

By

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A Research Project Submitted to
Saint Mary's University, Halifax, Nova Scotia
in Partial Fulfillment of the Requirements for
the Degree of Master of Finance

August, 2013, Halifax, Nova Scotia

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Date: August 27th, 2013

Acknowledgements

I would like to show my deepest gratitude to my supervisor, Dr. J. Colin Dodds, for his guidance, patience and encouragement in the whole process of writing this thesis.

I would also want to appreciate all the professors of the MFin program for their professional instruction. In addition, I would thank my friends who provided help to me when I suffered setbacks. Last but not least, I would like to extend my love to my parents in responding to their firm support and warm concerns during the whole program.

Abstract

The purpose of this paper is to determine the impact of mergers and acquisition on China's IT firms and to make a reasonable conclusion as to whether the market reaction to M&A's is good or bad. 99 acquirer firms on the Shanghai Stock Exchange and Shenzhen Stock Exchange between 2008 and 2012 were randomly chosen for this study.

The Market model and Cumulative Abnormal Return (CAR) were used in this paper to determine whether China's IT firms' value can be increased or decreased through M&A and whether China's IT industry market is semi-strong efficient.

August 26th 2013

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Chapter 1

Introduction

1.1 Merger and Acquisitions (M&A)

Merger and acquisitions (M&A) is a broad concept and it refers to the restructuring and consolidation of two or more independent companies. More specifically, it means one company obtains the operational control and total or part of assets of another company through paying the cost with cash, stocks and debt. In M&A's, the buyers and the sellers are usually called acquiring firms and target firms respectively.

Strictly speaking, a merger or an acquisition is not exactly the same. The standard to distinguish mergers and acquisitions is based on three aspects.

Firstly, to see if a new company is established. In mergers, two single companies agree to join together to establish a new one. In contrast, in acquisitions, an acquired firm loses its independent position and becomes a part of the acquiring firm.

Secondly, the payment types are also one of the determinants on whether the transaction is a merger or an acquisition. Both parties tend to choose cash payment in acquisitions, thus the original shareholders of the acquired firm will be stripped from being shareholders after the transaction and the acquiring firm will be exposed to the post-merger risk. As to mergers, two firms will usually issue stocks of the newly established firm and share these stocks with the shareholders of the two original firms. As a result, the two firms will share the risks of the

new enterprise.

What is more, the size of the involving firms also helps distinguish mergers and acquisitions.

Mergers usually take place between two firms with similar sizes while acquisitions are more like a purchase of a smaller firm by a larger one.

The most popular classification of M&A is accordance with the market relations between the parties of the transaction. There are three basic types:

A horizontal merger is usually between two companies who produce the same products or supply similar services, for example, the combination of two airlines or oil companies. The horizontal merger can remedy the deficiency of companies' asset allocation and improve its competitive strength and profitability. It is a shortcut for companies to obtain assets, reduce costs, expand market share and enter new areas. However, the horizontal merger has its drawbacks in that it may harm the competitive power and lead to a monopoly or a market concentration in the industry. As a result, the efficiency of the entire economy may decline, making the regulation of the horizontal merger to become the focus of anti-trust acts.

A vertical merger happens between two or more companies that have input and output relationship during the successive production stages of one product. In other words, these companies are not competitors, but demanders and suppliers. The vertical mergers can transform market transactions into internal ones thus improve the bargaining power of the

demanders which helps cut down the market risk, save transaction fees and make it easier to set entry barriers as well.

Beside the above two M&A types, there is another one called conglomerate M&A, which takes place between two or more companies with different products. In the conglomerate M&A, acquiring firms and target firms are not only in different sectors, but also do not have vertical relationships. Simply speaking, when the acquiring firm is in different industries and different markets, also there is not close substitutive relations between the products of these industries, it is regarded as a conglomerate M&A.

Through the conglomerate M&A, a company is able to involve a series of different products and services thus achieve multiple operations. A conglomerate M&A has several key effects such as diversifying the unsystematic risk, lowering the difficulty of entering new areas, helping implement the strategic risk.

As an operational strategy, the motives of companies' decisions on M&A are always the key point attracting economists. Although there are different ideas, some of them are broadly agreed on.

- Economies of scale

Economies of scale refer to the reduction of the unit cost by the improvement of production capacity. Companies can achieve internal economies of scale through M&A. M&A makes companies able to produce more and supply more distribution channels, which results in the

decline of costs. Besides, M&A transforms market transactions into internal ones so that all kinds of transaction obstacles and market defects due to the imperfect market would be overcome or reduced.

- Under Valuation Theory

The Under Valuation Theory asserts that the motive of M&A is the underestimation of companies' value. Specifically speaking, when the market value of target firm's stocks does not reflect the firm's 'true' value, this could be the result of a more effective use of the target firm's assets.

- Entering a new industry

The severe competition and multiple business risks make some companies tend to change its single business strategy. Seeking an existing company in the target sector and making a consolidation not only diversifies the firm, but reduces entry risks.

- Obtaining advanced technology and talents

The market competition is in essence the competition of technology and management talent. Acquiring firms control the operation through M&A and then consequently gain the target firms' technology and talent.

- Synergy effects

Synergy effects refer to the company's competitive strength being improved after M&A. Its free cash flow exceeds the sum of two single companies' expected free cash flow, which means the intrinsic value of the company after M&A is higher than the total of companies' before M&A. The rationale behind this is because some company's resources can be used simultaneously without cost by several parts of the whole company.

1.2 Shanghai Stock Exchange (SSE)

The Shanghai Stock Exchange (SSE) is one of two exchanges on the Chinese mainland. It was established on November 26th 1990 and started the business on December 19th 1990.

According to the total value of market capitalization, until 2012, SSE was ranked as the sixth largest stock exchange in the world and is a member of the International Organization of Securities Commissions (IOSCO), Asian and Oceanian Stock Exchanges Federation (AOSEF), World Federation of Exchanges (WFE). The market currently has 954 listed companies with a total market capitalization of ¥15.7 trillion with ten basic sectors: energy, material, industrial, finance, information, utility, consumer discretionary, consumer staples, health care and telecommunications.

1.3 Shenzhen Stock Exchange (SZSE)

The Shenzhen Stock Exchange (SZSE) is another stock exchange in the Chinese Mainland. It was established on December 1st 1990 and started business on July 3rd 1991. In the past twenty years, SZSE was grown rapidly with 1540 listed companies with a total market capitalization of about ¥7.17 trillion by the end of 2012. It devotes itself to Chinese small and medium-sized enterprises' development. In May 2004, a SME sector was established and in October 2009, the Growth Enterprise Market sector officially started. The frame of multi-level capital market had been basically established.

1.4 CSI300 Index

The CSI300 Index is a capitalization-weighted stock market index designed to reflect the performance of the whole A-shares market in the Shanghai and Shenzhen stock exchanges.

The index was compiled by the China Securities Index Company, Ltd.. It was released on April 8th, 2005 and its value is normalized relative to a base of 1000 on December 31st, 2004.

CSI300 covers 60% of the total market capitalization of both SSE and SZSE, so it is regarded as the best representative of Chinese A-shares market.

1.5 China's Information Technology (IT) Industry

The Chinese information technology industry is growing rapidly in recent years and is becoming an important economic pillar. For example, whether the IT industry develops well will affect GDP's growth. According to the National Development and Reform Commission's statistics, the gross output of Chinese software industry was only ¥59.3 billion in 2000 while this amount became ¥230 billion by 2004. However, the bottleneck of the IT industry reflects the contradiction between the supply of IT products and public demand which is caused by the small-scale production in the industry. Therefore, more and more IT firms turn to solve this problem through mergers and acquisitions. On the other hand, the globalization and the rapid development of information technology make Chinese IT companies having to set a global development plan. In short, the economic globalization has accelerated Chinese IT firms' M&A. According to Deloitte & Touch's overseas trading report (2012), about technology, media and telecommunications sectors during late 2010 and early 2011, IT companies perform the most actively. Tencent, Shenda, Wanmei and the Nine City experienced the overseas M&A's.

There are two main modes of Chinese IT companies' globalization: one is M&A and another is to invest abroad to set up factories. The representatives of the former are TCL and Lenovo and Haier is typically the latter one. However, Haier considered acquiring Maytag in 2009, which shows M&A had become an important alternative to Chinese IT companies during the globalization process.

1.6 Organization of the Study

In Chapter 2, the concept of the efficient market hypothesis (EMH) will be briefly introduced. Then the paper will discuss some previous academic studies on M&A. In Chapter 3, this paper will use the Market Model, Average Abnormal Return Model (AAR) and Average Cumulative Abnormal Return Model (ACAR) methodologies to explain the rationale about how to measure the impact of M&A. The analysis of results is in Chapter 4 and Chapter 5 provides conclusions and recommendations.

Chapter 2

Literature Review

2.1 Efficient Market Hypothesis (EMH)

The Efficient Market Hypothesis (EMH) originated in the early 20th century. A French Mathematician named Louis Bachelier applied statistical methods in analyzing stocks' return, finding that the mathematical expectation of the return is always zero.

In 1965, Eugene Fama published "Random Walks in Stock Market Prices" in the Financial Analysis Journal and was the first to mention the concept of an Efficient Market. The prices of securities in a market reflect all available information.

There are two signs to examine whether the market is efficient: one is whether the prices can change freely according to the information; another is whether the information can be disclosed fully and equally to the investors to make them acquire the information with the same quality and quantity at the same time.

According to this hypothesis, investors will use all the information rapidly and efficiently when they buy and sell stocks. All known factors that can affect the stock prices have been reflected in the stock prices, thus technical analysis is useless. There are three forms under the EMH:

- Weak-Form Market Efficiency

EMH believes that under weak-form market efficiency, the market prices fully reflect the historical price information including transaction prices and volume. Technical analysis on

the stock prices is useless. If investors do not use the information beside the price series, the best estimation of tomorrow's price is today's price. Fundamental analysis, in the contrast, may still help investors to get excess returns.

- **Semi-Strong-Form Market Efficiency**

The hypothesis believes that prices have reflected all public information including transaction prices, volume, earnings, earning prediction, company's management condition and so on. If investors can acquire such information quickly, the stock prices should respond to it rapidly.

This is because given current disclosed information, current prices are appropriate. The price's changes in the future do not relate to disclosed information but based on new information disclosed tomorrow. Under the semi-strong-form market efficiency, both technical analysis and fundamental analysis become useless. Only inside information may help obtain excess return.

- **Strong-Form Market Efficiency**

The strong-form market efficiency hypothesis asserts that all the information about company's operation, including disclosed information and inside information have been reflected in the stock price. No methods can help investors obtain excess return even knowing inside information. To the management of the portfolio, strong-form market efficiency is often set to be the environment. Under strong-form market efficiency, the portfolio managers will choose passive style, seeking the average returns of the market.

2.2 Event Studies on M&A

Like a dividend payment, stock split and the change of management members, a M&A is regarded as an event in the company. The most popular method to measure if the event does have an impact on the company's stock price is to utilize an event study. It examines whether the stock price reacts to an event so that abnormal returns are generated.

Fuller, et al (2002) perform an event study on the data collected from Securities Data Corporation's (SDC) U.S. Mergers and Acquisitions Database, finding that for 1990 and 2000 acquirers' returns are significantly negative when target firms are public firms and are significantly positive when target firms are private firms. Their sample covered acquiring firms that had at least 5 M&A's.

Chang (1998) studied on the acquirers' returns as they announce to acquiring privately held target firms including 291 cases between 1981 and 1992 in the U.S. market. The acquirers' information was collected from the Wall Street Journal and Dow Jones News Retrieval. He found that although there are abnormal returns to acquirer firms in cash payments by examining acquirers' returns, they were not statistically significant. In the condition that acquirer firms and target firms share the stocks, the acquirer firms have a positive abnormal return.

Hansen and Lott (1996) investigated 252 worldwide purchasers acquiring private and public targets during 1985 to 1991. The data came from the Lotus OneSource database. The results

shows that the purchasers have a two percent higher return when the target firm is a private firm.

Bellamy and Lewin's (1992) focus was on the Australian Stock Exchange, selecting a sample composed of 52 stock offer cases and 81 cash payments cases involving listed companies from January 1st 1980 to July 31st 1988. They find that on the M&A's announcement day, the acquirer firms earn a significantly negative abnormal return of 2.97% in stock offers cases and an insignificant return of 0.03% in 8 cash payments cases.

Bugeja and Walter (1995) also for Australia find that acquirer firms with stock offers earn significantly positive abnormal returns during the event window which was from 60 days before the announcement to one day after the announcement. However, they earn significantly negative abnormal returns with cash payments during the event window.

Although the cumulative abnormal returns during the event window support the Bellamy and Lewin's finding, Bugeja and Walter's study results show that the acquirer firms do experience significant positive abnormal returns when using cash payments.

Travlos (1987) performs an event study on a sample composed of the cases from 1972 to 1981 in the U.S. market and finds that when the transaction uses stock offers, the acquirer firms experience significant losses due to the M&A announcement and when the transaction is completed through a cash offer, the acquirer firms earn insignificant returns.

The previous event studies categorize the acquirer firms according to the properties and payments respectively and examined whether there exist abnormal returns during the M&A's announcement period and the differences between groups of observations. This paper is going to focus on not only the abnormal returns, but also investors' reaction to the M&A's announcements.

Chapter 3

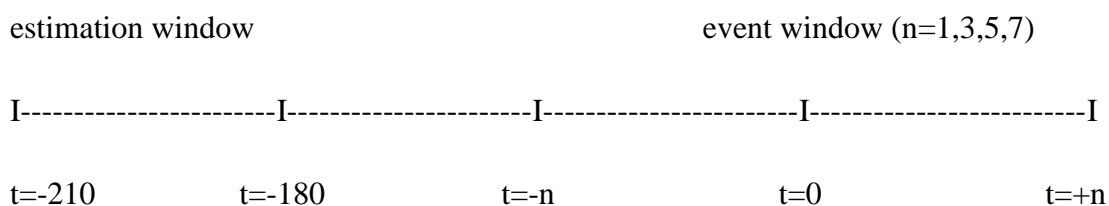
Methodology

3.1 Rationale

The rationale of an event study is to examine whether the stock price moves to generate abnormal returns when an event happens in order to make sure the fluctuation is due to the event in question. The study will select the M&A's announcement day as $t=0$. Then design four scenarios with different size of event window which is 3-day, 7-day, 11-day and 15-day. The return during the whole event window is denominated as R_0 . Beside the event window, the study needs to determine an estimation window fixed as 30 trading days which is 180 trading days before the announcement day. We use R_{-1} to represent the return of estimation window.

The study will calculate R_{-1} , R_0 and then make a comparison between them. The difference between R_0 and R_{-1} measures the impact of M&A announcement on stock price. If R_0 is bigger than both R_{-1} and zero and statistically significant, an M&A's announcement has an impact on a stock price's movements. The difference between R_0 and R_{-1} shows the added value due to the M&A.

Figure 3.1



The objective to design four scenarios is to examine if there is a delayed market response to the M&A announcements.

3.2 Models

3.2.1 Market Model

Semi-strong form EMH is tested, using the Market Model. Firstly, we have to calculate the return on the stocks. The formula is as follows (Equation 3.1):

$$R_t = \frac{P_t}{P_{t-1}} - 1 \dots\dots\dots 3.1$$

where:

R_t = return on stock during period t

P_t = stock price during period t

P_{t-1} = stock price during period t-1

Secondly, the following formula represents the Market Model.

$$R_{i,t} = \hat{\alpha}_i + \hat{\beta}_i R_{m,t} + \varepsilon_{i,t} \dots\dots\dots 3.2$$

where:

$R_{i,t}$ = return on security I during period t

$\hat{\alpha}_i$ = intercept of the equation for security i

$\hat{\beta}_i$ = slope of the equation for security i

$R_{m,t}$ = return on the market during period t

$\varepsilon_{i,t}$ = error term

STATA is used for the regression on Equation 3.2 and where $R_{m,t}$ was the CSI300 Index return during period t.

When doing the regression, there are four assumptions as follows:

The expected value of the random error e : $E(e)=0$

The variance of the random error e : $\text{var}(e)=\sigma^2$

The covariance between any pair of random errors e_i and e_j : $\text{cov}(e_i, e_j)=0$

The values of e are normally distributed about their mean: $e \sim N(0, \sigma^2)$

3.2.2 Abnormal Returns (AR) & Average Abnormal Returns (AAR) & Average Cumulative Abnormal Returns (ACAR)

- **Abnormal Return (AR)**

$$AR_{i,t} = R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_i R_{m,t}) \dots\dots\dots 3.3$$

where,

$AR_{i,t}$ = the abnormal return on security I during period t.

$R_{i,t}$ = return on security i during period t.

$R_{m,t}$ = index

$\hat{\alpha}_i$ and $\hat{\beta}_i$ come from Equation 3.2 and $R_{m,t}$ is CSI300 Index return during period t.

- **Average Abnormal Returns (AAR)**

$$AAR_t = \frac{1}{N} \sum AR_{i,t} \dots\dots\dots 3.4$$

where, N represents the number of securities.

T-test:

H_0 : $AAR_t = 0$, which means the market is efficient.

H_a: $AAR_t \neq 0$, which means the market is inefficient.

According to the Efficient Market Hypothesis, investors cannot obtain excess return after M&A announcement if the market is semi-strong efficient.

● **Average Cumulative Abnormal Returns (ACAR)**

$$CAR_{i,t} = CAR_{i,t-1} + AR_{i,t} \dots\dots\dots 3.5$$

$$ACAR_t = \frac{1}{N} \sum CAR_{i,t} \dots\dots\dots 3.6$$

H₀: $CAR_t = 0$, which means the market is efficient.

H_a: $CAR_t \neq 0$, which means the market is inefficient.

3.3 Data Description

There are two datasets in all. The event dates dataset has two columns: company id and event dates. The stock data has four columns: company id, date, daily returns and market daily returns. The companies used to perform the event study are chosen to satisfy the requirements as follows:

- The companies come from the A-shares market of the SSE and SZSE;
- The companies had been public for more than one year until the announcement date and last for more than one year after that day;
- If in an event window, there are more than once M&A for one company, then only the first time is used.

3.4 Data Sources

The study will use the data from the CSMAR which provides a range of information including accounting, finance, and economic data for China relating to stock trading, financial statements of China listed firms, investment fund, information disclosure, IPOs, corporate governance, bond trade and quote, M&A and asset restructuring; cash and stock dividends; interim and annual reports announcement dates.

Chapter 4

Analysis of Results

4.1 Overview

This chapter will use STATA to analyze the sample comprised of 99 companies during the period from 2008 to 2012 to see if the announcements bring abnormal returns and in which time period the abnormal returns exist. The results can also be the evidence on whether the target market is semi-strong efficient.

4.2 Regression Analysis

A regression analysis is usually used to check if there is a linear relationship between two variables. Before the event study, we will run a general regression to see if the China's IT industry firms' returns are tracking the Index returns. The sample includes the data from January 4th, 2007 to August 2nd, 2013. The results are exhibited as follows:

Table 4.1

| Source | SS | df | MS | | | |
|----------|------------------|----|------------|-----------------|----------|--|
| Model | 60.3249071 | 1 | 60.3249071 | Number of obs = | 194596 | |
| Residual | 241.439649194594 | | .001240735 | F(1,194594) = | 48620.29 | |
| Total | 301.764556194595 | | .001550731 | Prob > F = | 0.0000 | |
| | | | | R-squared = | 0.1999 | |
| | | | | Adj R-squared = | 0.1999 | |
| | | | | Root MSE = | .03522 | |

| ret | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|--------------|----------|-----------|--------|-------|----------------------|----------|
| market_ret~n | .9776535 | .0044338 | 220.50 | 0.000 | .9689634 | .9863437 |
| _cons | .0012557 | .0000798 | 15.73 | 0.000 | .0010992 | .0014122 |

As is shown in Table 4.1, the intercept coefficient α is 0.0012557 which means even if the Index return is zero, as a whole, the IT industry firms have a return at 0.12557%. The slope coefficient of the Market Model β is 0.9776535. β is regarded to measure the sensitivity of a security in responding to the changes of market return. The larger the β is, the more

sensitive the security is. 0.9776535 is a high β value which means the China's IT firms' returns are relatively easier to move due to the changes of market return.

Another meaningful value is R-squared, which is used to measure the goodness of fit of the regression. The R-squared value is between 0 and 1. The larger the value is, the better the regression fits the observations in the sample. In this case, R-squared is only 0.1999 which is very low, meaning that the China's IT firms' returns do not have a linear relationship with the market return.

4.3 Cumulative Abnormal Return Results

We design four scenarios to examine if there is cumulative abnormal return (CAR) and if it is statistically significant using event window methodology. The difference of the four scenarios is the size of the event window while the estimation window is fixed as 30 trading days which is 180 trading days before the announcement date.

4.3.1 3-Day Event Window Scenario

In this scenario, we chose 3 days as an event window, including one day before the event date, the event date and one day after the event date. The results are as follows:

Table 4.2

Linear regression

Number of obs = 347
 F(0, 346) = 0.00
 Prob > F = .
 R-squared = 0.0000
 Root MSE = .06535

| cumulative~n | Coef. | Robust Std. Err. | t | P> t | [95% Conf. Interval] | |
|--------------|-----------|------------------|-------|-------|----------------------|----------|
| _cons | -.0032077 | .0035083 | -0.91 | 0.361 | -.010108 | .0036927 |

The P value is 0.361 which is larger than 0.05, so we accept the null hypothesis that $CAR = 0$.

This means that during the 3-day event window, cumulative abnormal returns are not statistically significant, which seems to prove that the market is semi-strong efficient.

4.3.2 7-Day Event Window Scenario

In this scenario, we chose 7 days as an event window including 3 days before the event date, the event date and 3 days after the event date. The results are as follows:

Table 4.3

Linear regression

Number of obs = 347
 F(0, 346) = 0.00
 Prob > F = .
 R-squared = 0.0000
 Root MSE = .08083

| cumulative~n | Coef. | Robust Std. Err. | t | P> t | [95% Conf. Interval] | |
|--------------|-----------|------------------|-------|-------|----------------------|----------|
| _cons | -.0066953 | .0043389 | -1.54 | 0.124 | -.0152293 | .0018387 |

The P value is 0.124 which is larger than 0.05, so we accept the null hypothesis that $CAR = 0$.

This means that during the 7-day event window, once more cumulative abnormal returns are not statistically significant, which also seems to prove that the market is semi-strong efficient.

4.3.3 11-Day Event Window Scenario

In this scenario, we chose 11 days as an event window including 5 days before the event date, the event date and 5 days after the event date. The results are as follows:

Table 4.4

| | | | | |
|-------------------|--|-----------------|--------|--|
| Linear regression | | Number of obs = | 347 | |
| | | F(0, 346) = | 0.00 | |
| | | Prob > F = | . | |
| | | R-squared = | 0.0000 | |
| | | Root MSE = | .10204 | |

| cumulative~n | Coef. | Robust Std. Err. | t | P> t | [95% Conf. Interval] | |
|--------------|------------------|------------------|--------------|--------------|----------------------|------------------|
| _cons | -.0182165 | .0054777 | -3.33 | 0.001 | -.0289903 | -.0074428 |

The P value is 0.001 which is under 0.05, so we reject the null hypothesis that CAR = 0. This means that during the 11-day event window, there is statistically significant negative cumulative abnormal returns of -1.82165%, which proves that the market is not semi-strong efficient.

4.3.4 15-Day Event Window Scenario

In this scenario, we chose 15 days as an event window including 7 days before the event date, the event date and 7 days after the event date. The results are as follows:

Table 4.5

| | | | | |
|-------------------|--|-----------------|--------|--|
| Linear regression | | Number of obs = | 347 | |
| | | F(0, 346) = | 0.00 | |
| | | Prob > F = | . | |
| | | R-squared = | 0.0000 | |
| | | Root MSE = | .12442 | |

| cumulative~n | Coef. | Robust Std. Err. | t | P> t | [95% Conf. Interval] | |
|--------------|------------------|------------------|--------------|--------------|----------------------|------------------|
| _cons | -.0260079 | .0066793 | -3.89 | 0.000 | -.039145 | -.0128708 |

The P value is almost zero which is under 0.05, so we reject the null hypothesis that CAR = 0. This means that during the 15-day event window, there is statistically significant negative cumulative abnormal returns of -2.60079%, which proves that the market is not semi-strong efficient.

4.3.5 Summary

As we expand the event window, the cumulative abnormal returns become statistically significant negative. This is probably because that the market has a delayed response to the M&A event, which supports that China's IT industry market is not semi-strong efficient.

Chapter 5

Conclusion

5.1 Conclusions

The purpose of this paper is to determine the impact of M&A of China's IT firms. It examines whether M&A can increase or reduce value for the IT firms in China. Also it can be concluded if China's IT industry market is semi-strong efficient. The study uses daily securities' returns of acquiring firms during 2008 and 2012 in the China's IT industry to perform the empirical research.

The results of the research can be concluded as follows:

1. The securities in China's IT sector do not track the movement of the CSI300 Index due to the low R-square value.
2. Statistically significant cumulative abnormal return exist when the event window is expanded, which means the market does not respond to the event rapidly, in other words, the market is not semi-strong efficient.
3. The cumulative abnormal return is significant negative, meaning the M&A's reduce value for China's IT companies.

5.2 Recommendations

Improving the market efficiency is in essence to solve the problems in the process of forming the securities' prices, including the disclosure, the delivery, the realizing and the feedback of the information. The most key point is to establish a system of compulsory disclosure of

information. This system is the base of efficient capital markets as well as the origin of improving the efficiency of the capital market.

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<http://www.csindex.com.cn/>

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APPENDIX A

COMPANY LIST

| Announce Date | Acquirer Name | Acquirer Code |
|---------------|--|---------------|
| 09-11-25 | Shenzhen Kaifa Technology Co., Ltd. | 000021 |
| 11-09-08 | China Greatwall Computer Shenzhen Co., Ltd. | 000066 |
| 09-01-14 | Shenzhen SDG Information Co., Ltd. | 000070 |
| 10-06-28 | Chinascholars Group Co., Ltd. | 000547 |
| 10-07-29 | Shaanxi Fenghuo Electronics Co., Ltd. | 000561 |
| 09-03-17 | Greatwall Information Industry Co.,Ltd. | 000748 |
| 08-07-14 | Sichuan Jiuzhou Electronic Co.,Ltd. | 000801 |
| 09-06-02 | Tianjin Xinmao Science & Technology Co.,Ltd. | 000836 |
| 12-12-25 | Gohigh Data Networks Technology Co.,Ltd. | 000851 |
| 09-11-23 | Stellar Megaunion Corporation | 000892 |
| 10-12-28 | Soyea Technology Co.,Ltd. | 000909 |
| 08-05-15 | Inspur Electronic Information Industry Co.,Ltd. | 000977 |
| 09-12-18 | Eastcompeace Smart Card Co.,Ltd. | 002017 |
| 09-10-27 | Hedy Holding Co.,Ltd. | 002027 |
| 12-04-23 | Shenzhen Coship Electronics Co.,Ltd. | 002052 |
| 10-03-31 | YGSOFT Inc. | 002063 |
| 09-10-23 | DHC SOFTWARE Co.,Ltd. | 002065 |
| 09-12-03 | Mesnac Co.,Ltd. | 002073 |
| 08-03-28 | Suzhou New Sea Union Telecom Technology Co., Ltd. | 002089 |
| 08-04-02 | Guomai Technologies,Inc. | 002093 |
| 08-05-05 | Zhejiang NetSun Co.,Ltd. | 002095 |
| 10-02-12 | Sunwave Communications Co., Ltd. | 002115 |
| 10-04-27 | Beijing Bewinner Communications Co.,Ltd. | 002148 |
| 10-11-02 | Beijing BDStar Navigation Co.,Ltd. | 002151 |
| 09-04-24 | Beijing Shiji Information Technology Co.,Ltd. | 002153 |
| 10-12-31 | Invengo Information Technology Co., Ltd. | 002161 |
| 08-12-02 | Shanghai Hi-Tech Control System Co.,Ltd. | 002184 |
| 11-04-13 | Shanghai Hyron Software Co.,Ltd. | 002195 |
| 11-11-03 | Anhui USTC iFLYTEK Co.,Ltd. | 002230 |
| 11-02-11 | Wissoft Co.,Ltd. | 002253 |
| 10-09-29 | Talkweb Information System Co.,Ltd. | 002261 |
| 11-03-30 | Beijing Join-Cheer Software CO., LTD. | 002279 |
| 11-11-15 | Hangzhou New Century Information Technology Co.,Ltd. | 002280 |
| 12-12-04 | Accelink Technologies Co.,Ltd. | 002281 |
| 11-10-21 | HeNan Splendor Science & Technology Co., Ltd. | 002296 |
| 11-01-27 | Sunsea Telecommunications Co.,Ltd. | 002313 |
| 11-03-08 | Shenzhen Keybridge Communications Co.,Ltd. | 002316 |
| 11-09-23 | Anhui Wantong Technology Co.,Ltd. | 002331 |
| 12-04-19 | Taiji Computer Corporation Limited | 002368 |
| 11-09-20 | Shenzhen Zowee Tech. Co., Ltd. | 002369 |
| 12-12-26 | China Shipping Network Technology Co.,Ltd. | 002401 |
| 11-11-25 | Navinfo Co.,Ltd. | 002405 |

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| 12-07-24 | Shenzhen Das Intellitech Co., Ltd. | 002421 |
| 12-05-15 | Guangzhou Haige Communications Group Incorporated Co. | 002465 |
| 12-11-06 | Net263 Co.,Ltd. | 002467 |
| 12-05-29 | Hytera Communications Corporation Limited | 002583 |
| 11-03-09 | Beijing Ultrapower Software Co.,Ltd. | 300002 |
| 12-07-11 | Wangsu Science & Technology Co.,Ltd. | 300017 |
| 11-01-25 | Enjoyor Co.,Ltd. | 300020 |
| 10-12-30 | Hangzhou Huaxing Chuangye Communication Technology Co. | 300025 |
| 11-04-19 | Beijing Supermap Software Co.,Ltd. | 300036 |
| 12-08-03 | Beijing Miteno Communication Technology Co.,Ltd. | 300038 |
| 12-11-20 | Hwa Create Co. Ltd. | 300045 |
| 11-05-13 | Xiamen 35.Com Technology Co.,Ltd. | 300051 |
| 12-12-06 | Beijing eGOVA Co.,Ltd. | 300075 |
| 12-06-07 | Sumavision Technologies Co.,Ltd. | 300079 |
| 12-03-06 | Shenzhen Info tech Technologies Co.,Ltd. | 300085 |
| 12-12-25 | YLZ Information Technology Co., Ltd. | 300096 |
| 11-11-21 | Gosuncn technology group Co., Ltd. | 300098 |
| 12-05-10 | Shenzhen Tat Fook Technology Co.,Ltd. | 300134 |
| 12-03-23 | Beijing Orient National Communication Science & Tech | 300166 |
| 12-09-28 | Hand Enterprise Solutions Co.,Ltd. | 300170 |
| 12-03-16 | Beijing Jetsen Technology Co.,Ltd. | 300182 |
| 12-12-13 | Xiamen Meiya Pico Information Co., Ltd. | 300188 |
| 12-07-12 | Beijing TRS Information Technology Co.,Ltd. | 300229 |
| 12-12-21 | Hangzhou CNCR-IT Co.,Ltd. | 300250 |
| 12-12-20 | Chongqing mas sci.&Tech.Co.,Ltd. | 300275 |
| 12-11-22 | China United Network Communications Limited | 600050 |
| 08-10-31 | Sundy Land Investment Co.,Ltd. | 600077 |
| 08-06-03 | Tsinghuatongfang Co.,Ltd. | 600100 |
| 09-04-28 | Jiangsu Etern Co.,Ltd. | 600105 |
| 10-08-17 | Ningbo Bird Co.,Ltd. | 600130 |
| 08-10-28 | Datang Telecom Technology Co.,Ltd. | 600198 |
| 09-01-07 | Aisino Co.Ltd. | 600271 |
| 09-04-02 | Daheng New Epoch Technology, Inc. | 600288 |
| 09-04-30 | Bright Oceans Inter-Telecom Corporation | 600289 |
| 10-05-21 | Wuhan Yangtze Communication Industry Group Co.,Ltd. | 600345 |
| 12-08-01 | Tiancheng Co.,Ltd. of Taiyuan University of Technology | 600392 |
| 12-11-07 | NARI Technology Development Limited Company | 600406 |
| 11-07-28 | Beijing Teamsun Technology Co.,Ltd. | 600410 |
| 08-07-22 | Hengtong Optic-Electric Co.,Ltd. | 600487 |
| 11-12-13 | Fiberhome Telecommunication Technologies Co.,Ltd. | 600498 |
| 11-12-14 | Jiangsu Zhongtian Technology Co., Ltd. | 600522 |
| 10-09-28 | China National Software & Service Co., Ltd. | 600536 |
| 08-10-24 | Hundsun Technologies Inc. | 600570 |
| 09-09-01 | Yonyou Software Co., Ltd. | 600588 |

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| 10-09-29 | Shanghai Broadband Technology Co.,Ltd. | 600608 |
| 11-04-29 | Besttone Holding Co.,Ltd. | 600640 |
| 12-10-08 | Shanghai Potevio Co.,Ltd. | 600680 |
| 11-01-11 | Neusoft Corporation | 600718 |
| 10-06-29 | Pci-suntek Technology Co., Ltd. | 600728 |
| 12-01-19 | Shandong Inspur software Co.,Ltd. | 600756 |
| 11-11-18 | Nanjing Panda Electronics Co., Ltd. | 600775 |
| 12-10-31 | Insigma Technology Co.,Ltd. | 600797 |
| 11-09-09 | Chengdu Dr. Peng Telecom&Media Group Co.,Ltd. | 600804 |
| 12-06-20 | Shanghai Baosight Software Co.,Ltd. | 600845 |
| 12-06-21 | Shanghai East-China Computer Co.,Ltd. | 600850 |
| 10-04-22 | Anhui Sun-Create Electronics Co., Ltd. | 600990 |
| 12-02-28 | Shanghai Great Wisdom Co., Ltd. | 601519 |