

DA  
2765 HG  
2001

**Research on the Performance of Mergers and Acquisitions:  
From the Evidence of Japan and Taiwan**

Submitted in partial fulfillment of the requirements for the degree of

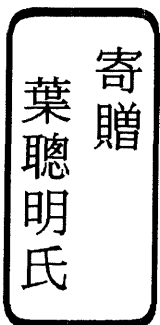
Doctor of Philosophy  
in  
Management

By

Yeh, Tsung-ming

Doctoral Program in Policy and Planning Sciences  
University of Tsukuba  
Japan

January 2002



02304239

## Preface

---

This doctoral dissertation is mainly composed of the papers which I wrote with my coauthors (noted in the chapters) over the past five years as a doctoral program student in the University of Tsukuba. These papers address issues on the mergers and acquisitions (M&A) and the corporate governance. These works emanated from the desire to understand the possible motives pushing firms to undertake mergers and acquisitions (for instance, to improve efficiency). A thorough investigation of such motives can lead to better organizational and management decision-making quality. To accomplish these goals, it is necessary to observe the corporate activities and infer from the empirical evidence. The majority of this study is dedicated to accomplishing these goals.

Many people deserve recognition for their contribution to this work, including my coauthors, the editors and anonymous referees of the journals in which the original articles were published, and the participants of those conferences in which these articles were presented. Many of them are noted in the acknowledgements section at the end of the dissertation. I am also grateful to comments from Professor Y. Monden, Professor Y. Hoshino, Professor H. Onishi, Professor I. Shoji, Professor H. Takehara, Professor S. Watanabe, and two anonymous referees among the committee members who reviewed the preliminary version of this work submitted in partial fulfillment of the requirements for the Ph.D. in the University of Tsukuba. Ms. Akiko Takano provided helpful programming assistance, and Mr. Thomas Mayer partly proofread the manuscripts. I also acknowledge financial support from the Interchange Association Scholarship (1996-1998), Rotary Club Otsuka Scholarship (2000), Tokyu International Student Scholarship (2001), Matsushita International Foundation Research Grant (2001), and International Centre for the Study of East Asian Development (2001).

Yeh, Tsung-ming

January 2002

# Contents

PREFACE	I
CHAPTER 1	1
INTRODUCTION	1
1.1. The Rationale of Mergers	2
1.2. Organization of the Study	4
CHAPTER 2	5
LITERATURE REVIEW	5
2.1. Literature Review on the Impact of M&A	5
2.2. Japanese Corporate Governance	6
CHAPTER 3	8
THE IMPACT OF M&A ON TAIWANESE CORPORATIONS	8
3.1. M&As in Taiwan	9
3.2. Sample and Data	10
3.2.1. Announcement-period Abnormal Stock Return	10
3.2.2. Accounting-based Performance Measurements	11
3.3. The Empirical Results	13
3.3.1. The Abnormal Returns	13
3.3.2. The Change in Corporate Performance	14
3.3.3. An Alternative Test for Accounting Performance	15
3.4. Summary	16
CHAPTER 4	24
POSTMERGER OPERATING PERFORMANCE OF JAPANESE FIRMS	24
4.1. Sample and Data Sources	25
4.2. The Empirical Results	26
4.2.1. Premerger Firm Performance	26

4.2.2. Postmerger Firm Performance	27
4.2.3. Premerger versus Postmerger Industry-adjusted Financial Ratios	28
4.3. Summary	30
CHAPTER 5	37
BANK CONTROL, LARGE SHAREHOLDERS, AND THE ABNORMAL RETURNS	37
5.1. Sample and Variables	38
5.2. Empirical Results	41
5.2.1. The Effect of Mergers on the Wealth of Bidders' Shareholders	42
5.2.2. Univariate Tests	43
5.2.3 Multivariate Tests	46
5.3. Summary	49
CHAPTER 6	56
CONCLUSION	56
6.1. Merger Motives and Performance	57
6.2. Market Reaction in Relation with Corporate Governance	57
6.3. Implications for Further Research	58
ACKNOWLEDGEMENTS	60
REFERENCES	61
APPENDIX 1. LIST OF THE TAIWANESE ACQUIRING FIRM ANALYZED IN CHAPTER 3	66
APPENDIX 2. LIST OF THE JAPANESE MERGING FIRMS ANALYZED IN CHAPTER 4	67
APPENDIX 3. LIST OF THE JAPANESE MERGING FIRMS ANALYZED IN CHAPTER 5	70

# CHAPTER 1

## Introduction

---

In recent years, mergers and acquisitions (M&A) are becoming a frequently used strategy for external growth or for restructuring purpose. Almost every week the economic journals around the world, for example, the *Wall Street Journal*, *Nihon Keizai Shimbun*, report major mergers and takeover events. Although the United States is still the largest M&A market in the world economy, M&A is also increasingly gaining momentum in other developed economies and emerging markets. In Japan, the long-term stagnant businesses in the 1990s have led many corporations to merge or restructure the unnecessary assets. The recent Asia financial crisis beginning mid-1997 has contributed to a sharply increasing number of foreign acquisitions in some Asian countries, according to a report by UNCTAD (United Nations Conference on Trade and Development, 1998).

Given the important roles of M&A as a corporate strategy and their economic relevance, an enormous amount of studies attempted to explain the motivations of M&A. A vigorous school of thought sought to explain the causes and efficiency benefits of mergers through the study of stock price behavior. One of the first contributions found the patten of stock price movements to support the hypothesis that "mergers are a mechanism by which the market system replaces incompetent management" (Mandelker, 1974). Meanwhile another school focused with growing skepticism on the fruits of past mergers. For example, Peter Drucker observed that two mergers out of five are "outright disasters", two "neither live nor die" and one "works" (*Forbes*, January 18, 1982, p.36). Statistical data published by W.T. Grim Company reveal that for every 100 acquisitions recorded between 1971 and 1980, there were 40 divestitures (Mergersta Review: 1980).

How can we reconcile these conflicting views of the merger effect? And how are firms motivated to undertake M&A in other countries where the business culture is distinguished from Anglo-American style. For example, the practice of inter-corporate shareholdings has been a reason for the missing of a corporate takeover market in Japan (Sheard, 1989). Then what motivates the Japanese managers to merge? This study attempts to seek answers to these issues. First, I investigate a comprehensive set of M&A in Japan and Taiwan and assess their economic consequences. I choose these two countries because Japan is the largest economy in Asia, and Taiwanese firms began to actively undertake M&A activity in the late 1980s. Then I go on to test alternative hypotheses explaining the motivations of M&A.

### **1.1. The Rationale of Mergers**

Why do mergers occur? In most mergers, there are more or less clearly identified buyers and sellers. The simplest explanation must be that both parties consider themselves to be better off from the transaction than without it. But how do the parties become better off, that is, what are the sources of value increases from M&A?

One frequently advanced argument is the synergy, or "two plus two equals five" effect. It may be operating synergy, financial synergy, or diversification. These synergies include introducing superior management into the merged firm, the realization of complementarities in production or marketing, the exploitation of scale economy and the elimination of duplicative functions, and the enhancement of monopoly power by combining competing interests (Ravenscraft and Scherer, 1987).

Meanwhile, some observers consider mergers as a manifestation of agency problems of inefficient, external investments by managers. The agency problem arises when managers own only a fraction of the ownership shares of the firm. This partial ownership may cause managers to work less vigorously than otherwise or consume more perquisites because the majority owners bear most of the cost (Jensen and Meckling, 1976). Jensen (1986) considered the agency costs

associated with conflicts between managers and shareholders over the payout of free cash flow to be a major cause of takeover activity (the free cash flow hypothesis).

An interesting hypothesis regarding takeover motives has been proposed by Roll (1986). He hypothesizes that managers committed errors of over-optimism in evaluating merger opportunities due to hubris (their excessive confidence such as pride and arrogance). His proposition suggests that an important human element enters takeovers when individuals are interacting and negotiating the purchase of a company.

It is surely true if one carefully investigates a large enough sample of mergers, all of these motives plus others will be found in varying proportions, either simultaneously or in conflict with one another. It would be useful to know whether certain merger motives, or cluster of motives, predominate. Seeking such knowledge, usually with the added assumption that motives can be inferred from consequences, scholars have turned to statistical studies of merger behaviors.

This statistical research has taken two main forms. One is the analysis of profits, sales, employment, and other data generated internally by one or both of the merged enterprises. The other is the analysis of external data, such as stock market reaction to events occurring at the time of merger or in its aftermath. Both methodologies have strengths and weaknesses. Most previous studies only examine the effect on either the stock prices or the accounting performance, which sometimes lead to inconsistent results. In the analyses of this study, both methodologies are employed to evaluate the mergers' economic consequences.

The research results in this study reveal synergy anticipated from M&A in Japan and frequently did not materialize. Merging firms, in these two countries, are reporting deteriorating post-merger performance. Such results prompt the further tests on the agency conflict hypothesis. The basic idea goes like this: if mergers are initiated by the managers as a agency conflict behavior, firms with less agency conflicts, or better corporate governance, are more likely to make a "better" investment (M&A) decision. I use Japanese mergers as the investigation setting since they have larger set of samples. In addition, the analysis attempts to

find out which corporate governance mechanism in corporate Japan helps mitigate or exacerbate the agency conflicts embedded in mergers.

For example, the study will look at, among other things, the monitoring roles assumed by large financial institutions and *main banks*. If they monitor the management effectively, the merger decisions made by the managers are more likely to be favorably perceived by the market investors, leading to upward stock price movement.

## **1.2. Organization of the Study**

The remaining parts of study are organized as follows. Chapter Two first reviews the previous empirical studies on the M&A in the United States, Japan and Taiwan. Then it discusses the corporate governance mechanisms, mainly in the United States and Japan, and reviews relevant studies.

In Chapter Three, I investigate the economic consequences of Taiwanese M&A. The analysis not only examines the changes in the firms' stock returns associated with the announcement of the merger, but also looks at the longer-term postmerger operating performance.

In Chapter Four, which studies a larger sample of Japanese mergers, I focus on the firms' postmerger operating performance, particularly in profitability and growth. Chapter Five examines the stock market's reaction to the announcement of Japanese mergers. In association with the agency conflict hypothesis, I further test whether or/and how the market's reaction varies with the magnitude of the firms' potential agency conflicts, measured by the variables such as the insiders' ownership shares, the monitoring from *main banks*, and other corporate governance variables.

Chapter Six gives conclusions on the basis of the researches conducted in this study. Also discussed are the implications for further research.



## **CHAPTER 2**

### **Literature Review**

---

#### **2.1. Literature Review on the Impact of M&A**

An enormous amount of research has been dedicated to M&A in the Western developed countries, especially in the U.S. Previous studies analyzing the stock prices around the announcement of an acquisition (event study method) report similar findings: the acquired firms shareholders enjoy significant positive excess returns, while the acquiring firms shareholders receive at best modest excess returns. (Jensen and Ruback, 1983; Asquith, 1983; Jarrell, Brickley and Netter, 1988.) However, empirical studies investigating the accounting financial data show inconsistent results. Some find no or negative impact on the earnings for the merging firms. (Hogarty, 1970; Bradford, 1978; Ravenscraft and Scherer, 1989.) Some report positive effect on the profitability for the acquiring firms (Lev and Mandelker, 1972; Smith, 1990) or the productivity. (Lichtenberg and Siegel, 1990.) The inconsistent accounting test results may be due to different measurement methodology employed and different sample selection.

Evidence of M&A effects in Asian countries may have the most extensive literature in Japan, the largest economy in Asia. Empirical studies using accounting-based data generally report deteriorating postmerger performance for Japanese firms. (Hoshino, 1982, 1992; Muramatsu, 1986; Odagiri and Hase, 1989.) However, studies using event study method find similar findings: the shareholders of Japanese merging firms gain positive abnormal returns (Pettway et al., 1986, 1990; Kang et al., 2000, Usui, 2001). In general M&A enhance the wealth of shareholders of Japanese firms more than that of shareholders of the U.S. firms. Another study by Pettway, Sichernman and Spiess (1993) reports

significant positive gains for shareholders of the Japanese firms undertaking M&A in the U.S.

As for evidence on Taiwanese M&A, two studies report positive abnormal returns for the shareholders of the acquiring firms. (Yen & Peng, 1993; Huang & Huang, 1995.) However, the cumulated abnormal returns lack strong significance over the event period. Evidence on the merged or acquired firms is unavailable because most of them are not public listed companies. On the other hand, an accounting data test by Yen (1991) reports that the merging manufacturing firms underperformed relative to a group of comparable firms after the mergers. Due to the limited number of M&A in Taiwan, sample sizes in these studies are quite small (no more than 30 firms) compared with U.S. and Japanese studies.

## **2.2. Japanese Corporate Governance**

One of Japan's corporate governance characteristics is the *keiretsu* arrangement. There are mainly two types of Japanese *keiretsu*. The first is vertical grouping of upstream suppliers and downstream distributors affiliated with a large manufacturing or commercial firm. The second represents diversified groups consisting of a commercial bank along with other financial institutions joined with one or more trading companies as well as a range of large manufacturing firms. The latter is usually referred to as financial *keiretsu*.

The traditional view is that close relationships among banks, shareholders and business partners associated with a *keiretsu* are effective in channeling the activities of corporate managers in the direction of long-term growth and profitability. For instance, Hoshi et al. (1990) show that the investments of *keiretsu* firms are less liquidity-constrained because of their closer ties to a major creditor. In theory, the powerful position of banks as owners and lenders will lead to effective monitoring of business performance. The main bank, a commercial bank from which Japanese firms obtain a substantial fraction of their debt financing, carries out an important monitoring role in Japanese companies (Sheard, 1989; Aoki et al., 1994; and Kang et al., 1995, 2000). Lichtenberg et al. (1994) found that financial institutions' shareholding and director ownership have a

positive effect on the productivity and profitability of Japanese companies, while inter-corporate shareholdings insulate firms from their own problems at the expense of firm performance. Prowse (1992) showed that the governance within a *keiretsu* is a complex interaction of monitoring forces simultaneously performed by shareholders, debtholders, and (possibly) trading partners. Ferris et al. (1995) found that these arrangements within a *keiretsu* provide an effective mechanism to mitigate the agency conflicts.

An alternative opposing view is that cross-shareholdings among *keiretsu* firms are devices to entrench management. Nakatani (1984) highlighted some of the costs associated with these arrangements. The reciprocal shareholdings within a *keiretsu* may lead to inter-locking directorates and thereby dampen the discipline of market forces. Consequently it makes managers easier to make decisions that pursue their own benefits. Consistent with this line of argument, Kang et al. (1999) found that bank-affiliated firms are less profitable than independent firms, and Jameson et al. (2000) found no support for the hypothesis that the *keiretsu* firms are more effective at maximizing shareholder wealth than independents. Morck et al. (1999) present evidence that banks act mainly to prop up weak *keiretsu* firms, but their role is primarily to defend creditors', not necessarily shareholders', interests.

## CHAPTER 3

### The Impact of M&A on Taiwanese Corporations<sup>1</sup>

---

While mergers and acquisitions (M&A) have been prevalent in the Western economically advanced countries, they have been relatively unpopular in Taiwan. Such difference in the enthusiasm toward M&A can be attributed to some economic and culture characteristics. For example, in Taiwan M&A were unpopular partly due to a unique entrepreneurial business culture. This can be represented by an old Chinese saying “better the head of a chicken than the tail of an ox”, meaning that Chinese people prefer to work for themselves or work at a company run by their family or relatives. Besides, many Taiwanese companies are under control of the founders or their family, who are usually the top management and also the top largest shareholders. M&A, friendly or hostile, are almost impossible without the approval of the management.

In the past decade, however, as Taiwan embarked on financial deregulation and liberalization, it has come to face more intensive competition and now seeks M&A as an alternative strategy to internal growth. For instance, dozens of M&A have occurred among Taiwan’s large companies from the late 1980s, and the tendency of increasing M&A in 1990s indicates that M&A are gaining momentum in Taiwan. In the next section, a brief description on the M&A activity in Taiwan is given.

---

<sup>1</sup> This chapter is based on the paper, co-authored with Y. Hoshino, titled “The Effects of Mergers and Acquisitions on Taiwanese Corporations”, *Review of Pacific Basin Financial Markets and Policies*, Vol. 3, No. 2, pp 183-199, 2000.

### 3.1. M&As in Taiwan

Until the recent decade, M&A activities in Taiwan were quite few. There had been no formal official statistics on M&A until 1992 when Taiwan Free Trade Commission (FTC) was set up. One of the reasons for the few M&As is that most Taiwanese firms are small-medium-sized firms with limited financing capability for M&As. According to government statistics, about 98% of the firms in Taiwan are small and medium enterprises (SMEs).

Some scholars point to a unique entrepreneurship among Taiwanese businessmen as the basic reason: the Taiwanese prefer not to work for other people. Such independent spirit, they argue, made managers feel it unacceptable to be merged or acquired, since that means losing authority and control fully or partly. This is reflected from the fact that most companies in Taiwan are SMEs. There are also few large-scale corporations in Taiwan, as can be seen in its neighboring countries such as Japan and Korea.

Since late 1980s, however, as Taiwan dollar appreciated persistently and the domestic capital market developed prosperously, cash-abundant public corporations were starting to turning to M&As as an alternative to internal expansion. They searched for their M&A targets not only in the domestic markets but also in the international markets. For example, Acer, one of the largest computer makers in the world, has been aggressive in acquisitions since 1980s. A wave of M&As can be seen in electronics industry in late 1980s, and many of the participants are rapidly growing computer-related manufacturers. For its part, the government has been using tax incentives since 1980s to urge small-medium-sized firms to merge, in an effort to achieve economies of scale.

Under such circumstances, nowadays there is great interest about M&A in Taiwan. This can be reflected in the increasing number of M&A cases in recent years, though still quite small comparing to other advanced countries. Figure 3.1 shows the number of M&As approved by FTC. In 1992, there were only 4 cases approved, however, the number rises to 16 cases as of 1997. Only those deals that may result in undermining competition in the market are required to apply for approval. Most M&As involving smaller SMEs did not have to apply for approval, thus not included in the statistic number.

### 3.2. Sample and Data

This study is mainly concerned with the *acquiring* firms, since many acquired firms are non-public companies and the financial data are unavailable. M&A activities and the initial announcement date were identified mainly by searching the Database of Newspaper Articles, previous literature, the *Gazette of Taiwan Free Trade Commission*, and other sources. This study excluded those firms whose announcement dates are unidentified and whose financial data are insufficient for the analysis (2 years before and 4 years after the acquisition). Firms that experienced two or more instances of M&A are also excluded from the sample to avoid the problem of confounding events. There remained 20 useful sample firms that undertook M&A during 1987 to 1992. Appendix 1 gives the list of the acquiring firms used in this study.

#### 3.2.1. Announcement-period Abnormal Stock Return

The daily stock return rate data ( $R_{it}$ ) for sample firm  $i$  were collected from the *Listed Stocks' Rates of Return Statistical Databank*, and the Taiwan Stock Exchange (TSE) weighted stock index data from the *Stock Market Statistical Databank*<sup>2</sup>. The TSE weighted stock index data are used to compute the daily market return rate ( $R_{mt}$ ).

To test for a stock-price reaction to the acquisition announcement, we applied a standard event study method to calculate the abnormal returns. For each firm  $i$ , the abnormal return ( $AR_{it}$ ) for event date  $t$  is calculated as

$$AR_{it} = R_{it} - (\hat{a}_i + \hat{b}_i R_{mt})$$

---

<sup>2</sup> The Listed Stocks' Rates of Return Statistical Databank and the Stock Market Statistical Databank, were created jointly by the Ministry of Education and National Taiwan University in 1987 and has been maintained since then to serve primarily researchers (academic, governmental and, increasingly, of private enterprises) in Taiwan. They are operated currently by a non-profit organization, Taiwan Economic Data Center (TEDC).

where  $R_{it}$  is the rate of return on firm  $i$  on event day  $t$  and  $R_{mt}$  is the rate of return of the market on event day  $t$ . The coefficients  $\hat{a}_i$  and  $\hat{b}_i$  are the ordinary least squares estimates of the intercept and slope of the market model regression. The estimation period is from day  $t = -87$  to day  $t = -11$  in relation to the initial announcement date of the M&A ( $t = 0$ ). Abnormal returns,  $AR_{it}$ , are calculated for each firm over the interval from day  $t = -7$  to the day  $t = 7$ .

The one-day abnormal returns averaged over  $N$  firms are  $AR_t = \frac{1}{N} \sum_{i=1}^N AR_{it}$ . The corresponding test statistic for the hypothesis that the one-day  $AR_t$  is zero, is as follows:

$$\frac{AR_t}{\hat{S}(AR)} = \frac{AR_t}{\sqrt{\frac{1}{76} \sum_{t=-87}^{-11} (AR_t - \overline{AR})^2}}$$

where  $\overline{AR} = \frac{1}{77} \sum_{t=-87}^{-11} AR_t$ .

The cumulated abnormal return,  $CAR = \sum_{t=L1}^{L2} AR_t$ , is the summation of the abnormal returns over the event period from  $t = L1$  to  $L2$ . The test statistic for  $CAR$  for the  $N$  firms over the period from  $t = L1$  to  $L2$  is as follows:

$$\frac{CAR}{\hat{S}(CAR)} = \frac{\sum_{t=L1}^{L2} AR_t}{\sqrt{\sum_{t=L1}^{L2} \hat{S}(AR)^2}}$$

### 3.2.2. Accounting-based Performance Measurements

Accounting financial data for the acquiring firms were downloaded from the *Taiwan Economic Journal* (TEJ) Database, which contains complete financial data dating from 1983 for corporations whose share are traded on Taiwan Stock Exchange<sup>3</sup>. In order to examine the medium-to-long term M&A effect, the acquiring firm's financial data must include 2 years before the acquisition is

<sup>3</sup> Taiwan Economic Journal (TEJ) is a financial and economic research firm, whose databanks have been widely used for academic research.

completed (year -2, year -1), and 4 years after the acquisition (year 1 to year 4). Year 0 is the year the takeover is completed for a particular firm and will be a different calendar year for different firms. We do not enter the data for year 0 because varying merger accounting practices may bias the financial measurements in the year of consolidation. Exclusion of data for year 0 can minimize the effect of such “noise”. Using the financial data, we computed 7 performance indicators to measure the firm’s profitability, growth, leverage and liquidity. They were calculated as follows:

*(1) Profitability*

$$\text{Return on assets (ROA)} = \text{Pretax income} / \text{Total assets}$$

$$\text{Return on equity (ROE)} = \text{Pretax income} / \text{Net worth}$$

*(2) Financial Leverage*

$$\text{Long term liabilities to total assets (LLTA)} = \text{Long term liabilities} / \text{Total assets}$$

$$\text{Debt equity (DE)} = \text{Total liabilities} / \text{Equity}$$

*(3) Liquidity ratios*

$$\text{Current ratio (CR)} = \text{Current assets} / \text{Current liabilities}$$

*(4) Growth*

$$\text{Sales growth (GROWTH)} = (\text{Sales of current year} / \text{Sales of previous year}) - 1$$

*(5) Operating Expenses*

$$\text{Operating expenses ratio (OES)} = \text{Operating expenses} / \text{Sales}$$

Comparing the postmerger performance with premerger performance provide a measure of the change in corporate performance. But some of the difference between the premerger and postmerger performance may be due to the economy-wide and industry factors. Hence, the performance measurements for each sample firm are adjusted by their industry average. For each year and firm, industry-adjusted performance measures are calculated by subtracting the industry median from the sample firm value. The industry median is the median of the public listed firms in the same industry corresponding to each sample firm and each year. Industry data are collected from the *General Corporation Financial*



*Analysis in Taiwan*, compiled by China Credit Information Service Services, Ltd. We use the industry-adjusted performance indicators to measure the change in corporate performance from premerger period to postmerger period.

### **3.3. The Empirical Results**

#### **3.3.1. The Abnormal Returns**

Table 3.1 documents the mean cumulated abnormal returns (CAR) for the 20 acquiring firms over various event intervals by using the methods described in the methodology section. On the date of announcement, acquiring firms are gaining an average of 0.46% abnormal returns, which is not statistically significant. On date  $t=-1$  (one day before the announcement) and  $t=1$  (one day after the announcement), the abnormal returns are 0.05% and 0.28%, respectively, although there is still statistically insignificant. The mean three-day cumulated abnormal returns ( $t=-1$  to  $t=1$ ) are 0.91%, but again this is still statistically insignificant. Other window periods report positive cumulated abnormal returns, sometimes showing statistical significance. For example, the interval from  $t = -5$  to  $t = 2$  shows the highest CARs, 3.42%, significant at the level of 1%. Intervals including longer pre-announcement days generally show significant positive gains, however, there is little significance when more post-announcement days are included in the interval. The larger abnormal gains in the pre-announcement period are possibly due to the leakage of merger proposals to the market before the press report.

How do we interpret this result? Given the short-term periods of the stock data movements, little can be said about the efficiency effects of the mergers without further examination of longer-run performance. What can be said at this point is that the merging firms' shareholders gain only modest returns in association with the press report of merger proposals. The market should have reasons to believe that firm's value could be enhanced by achieving economy of scale or scope, because Taiwanese corporations are in general moderate in size comparing to its neighboring economies. For instance, the largest Korean company is 16 times as big as the largest Taiwanese firm, and for Japan, the figure is 80 times (The Economist, "A Survey on Taiwan", November 7-13,

1998). Taiwanese acquiring firms might have been operating at levels that fall short of achieving the potentials of economy of scale. However, to assess whether mergers enhance the firms' efficiency, it is necessary to examine the longer-run operating performance, which is conducted the following section.

### 3.3.2. The Change in Corporate Performance

To investigate how M&A affected the corporate performance, I used industry-adjusted performance indicators to measure the change from premerger to postmerger period. The postmerger N-year average industry-adjusted performance of the acquiring firms is compared with their premerger 2-year average industry-adjusted performance with N=1,2,3,4. Table 3.2 reports the raw financial data (pre-adjusted) as well as industry-adjusted performance data for each indicator, for each year over the 2 years before and 4 years after the M&A. Empirical results for the change from premerger to postmerger period by using industry-adjusted performance indicators are reported in Table 3.3.

*Profitability Indicators:* As can be seen from Table 3.3, industry-adjusted ROE and ROA for acquiring firms deteriorated in postmerger periods relative to premerger periods. Acquiring firms outperformed their industry peers in ROE by 3.4% in the premerger 2-year period, however, this relative superiority reversed in the postmerger 4-year period with ROE 2.6% lower than the industry. The change (-6.0%) is statistically significant at 5% level. Change in ROA performance from premerger 2-year period to postmerger 4-year period also shows significant difference (-4.0%) at level of 5% significance. Results for other postmerger periods less than 4 years report a similar trend: acquiring firms' profitability measures deteriorated after the M&A activity.

*Leverage and Liquidity:* Table 3.3 shows that leverage measures, long-term liabilities to assets ratio (LLTA) and debt to equity ratio (DE), have no significant change from premerger to postmerger periods. However, current ratio (CR) decreased significantly from premerger 83.2% to 16.7% (difference = -66.5%) for the first year at 0.5% level of significance. Although insignificant, the change in CR is around -40% for postmerger 2-, 3-, and 4-year period. The downward change in liquidity (CR) but no difference in leverage (LLTA and DE)

may reflect a sample characteristic that many of the Taiwanese M&A are financed by cash.

*Growth:* The premerger sales growth rate (GROWTH) for acquiring firms is outperforming the industry (by 8.9%), however, the superiority reversed after the acquisitions. The acquiring firms' postmerger 2-year growth performance is lower than industry by 8.5%, and the change from premerger to postmerger period is significant at 5% level. The under-performance in sales growth continues for other postmerger periods, but it lacks significance at level of 5 percent.

The empirical results of examining acquiring firms' accounting performance indicate a preliminary finding that in general M&A brought about no improvement in corporate at for 4 years after the M&A activity. Moreover, acquiring firms deteriorated significantly in some profitability indicators.

### **3.3.3. An Alternative Test for Accounting Performance**

As suggested by Healy, et al (1992), some of the difference between premerger and postmerger performance could be also due to economic and industry factors, or to a continuation of firm-specific performance before the M&A activity. In the previous test, I used industry-adjusted performance measures to allow for industry effect. However, the possibility that negative M&A effects in the previous test is partly due to a continuation of firm-specific performance before the acquisitions cannot be completely ruled out. If we take a further look at the time-series industry-adjusted performance data in Table 3.2, we find a downward direction for some performance measures before the M&A activity. Figure 3.2 depicts a time-series profile of acquiring firms' industry-adjusted ROE and ROA values for each of the premerger 2 years and postmerger 4 years. As shown in the graph, both ROE and ROA are continuously declining from year -2 to year -1, year 1, stopping at year 2, and increasing slightly at year 3 and 4. Hence, deteriorating performance in the postmerger periods reported in previous tests might be due to not only M&A activity, but also the continuation of premerger downward performance.

I adopted a measure used by Healy, et al (1992) to take into consideration the relation between premerger and postmerger performance. Abnormal industry-adjusted performance is estimated using the following cross-sectional regression

$$P_{post.i} = \alpha + \beta P_{pre.i} + \varepsilon_i$$

where  $P_{post.i}$  is the industry-adjusted performance measure for company  $i$  from the postmerger years, and  $P_{pre.i}$  is the premerger 2-year industry performance measures for the same company. The measure for impact of M&A on corporate performance is  $\alpha$  from the above equation.  $\beta$  captures any correlation in performance measures between premerger and postmerger years and therefore  $\alpha$  is independent of premerger performance. The results for ROE and ROA are reported in Table 3.4<sup>4</sup>.

As shown in Table 3.4, in the postmerger 2-year period the estimate of  $\alpha$  for ROE and ROA are  $-0.044$  and  $-0.025$ , respectively, and the values are significantly different from zero. The negative sign of the estimates indicates a deteriorating performance for postmerger 2 years even after allowing for the relationship with premerger performance. Postmerger 3-year and 4-year period also report negative abnormal ROE and ROA, and they are significant at level of 10%. The results are indicating a deteriorating change in acquiring firm's profitability for the overall postmerger periods, which are consistent with previous test results.

### 3.4. Summary

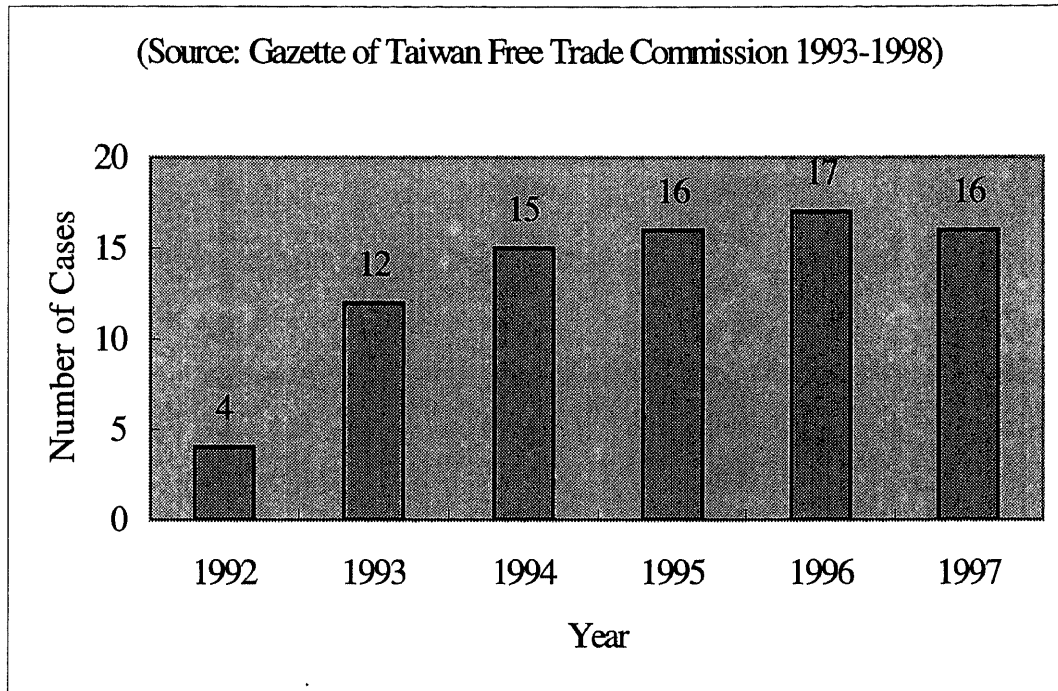
This Chapter examines the announcements-associated stock prices movement and accounting performance of 20 Taiwanese acquiring firms during late 1980s to early 1990s. It finds that the merging firms only gain modest abnormal returns around the press report of the merger proposals. Further

---

<sup>4</sup> To check whether the variance of the dependent variable is the same for all values of the independent variables, I plot the Studentized residuals against the predicted values. Since no certain patterns in the data points are observed, the assumptions of constant variances are met.

examination reports a downward change in the acquiring firms' accounting profitability performance from premerger to postmerger periods.

The evidence suggests that mergers, on average, fail to improve Taiwanese firms' operating efficiency. However, care must be taken in inferring merger motives from the results. The efficiency theory cannot be rejected flatly on the basis of the results of this study, particular the sample of Taiwanese mergers is quite small in this study. Besides, potential synergy from the economy of scale though mergers may also exist, considering the relative small size of Taiwanese firms. As Kitching (1967) suggests, "the mere existence of potential synergism is no guarantee that the combined operation will realize the potential." Changes in the business environment or market may be a reason causing the deteriorating postmerger performance. More will be discussed in the Chapter Six after evidence on Japanese mergers are investigated.

**Figure 3.1. Number of M&As approved by FTC in Taiwan**

**Table 3.1. Cumulated abnormal stock returns around the first public announcement of the merger or acquisition by the 20 Taiwanese firms during 1987 to 1992**

Window period	Mean cumulated abnormal return (%)	Test statistic (Two-tailed)
-7	0.5	1.458
-6	-0.6	-1.426
-5	0.6	1.444
-4	0.3	0.294
-3	0.4	0.954
-2	0.5	1.131
-1	0.1	0.147
0	0.5	1.228
1	0.4	0.416
2	0.7	1.802
3	-0.3	-1.521
4	-0.3	-0.904
5	-0.4	-0.841
6	-0.1	-0.299
7	0.0	-0.040
(-1 ~ 1)	0.9	1.041
(-3 ~ 1)	1.8	1.748
(-5 ~ 1)	2.7	2.147*
(-7 ~ 1)	2.6	1.899
(-2 ~ 2)	2.1	2.138*
(-5 ~ 2)	3.4	2.655**
(-7 ~ 2)	3.3	2.380*
(-3 ~ 3)	2.1	1.572
(-7 ~ 3)	2.9	1.793
(-4 ~ 4)	2.1	1.182
(-5 ~ 5)	2.4	1.263
(-6 ~ 6)	1.6	0.673
(-7 ~ 7)	2.1	1.038

\* p<0.05. \*\* p<0.01.

**Table 3.2. The raw (pre-adjusted) and industry-adjusted financial performance indicators for the 20 sample acquiring firms for each year over the 2 years before and 4 years after the acquisition**

	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4
Raw (pre-adjusted) financial performance indicators						
Profitability						
ROE	0.192***	0.141***	0.087***	0.053*	0.076*	0.064**
ROA	0.114***	0.078***	0.052***	0.038**	0.047**	0.037**
Leverage						
LLTA	0.092**	0.081***	0.100***	0.102**	0.083**	0.097**
DE	0.966***	0.938***	0.791***	0.836***	0.725***	0.658***
Liquidity						
CR	2.503**	2.180***	1.763***	1.889**	1.910***	1.921***
GROWTH	0.221**	0.134**		0.068	0.130**	0.076
OES	0.141***	0.149***	0.142***	0.156***	0.162***	0.162***
Industry-adjusted financial performance indicators						
Profitability						
ROE	0.050*	0.016	-0.014	-0.045	-0.024	-0.020
ROA	0.042*	0.010	-0.007	-0.022	-0.014	-0.013
Leverage						
LLTA	0.035*	0.016	0.034	-0.037	0.009	0.016
DE	0.139	0.180	0.151	0.193	0.098	-0.007
Liquidity						
CR	0.887	0.822	0.167	0.502	0.515	0.530
GROWTH	0.113	0.035		-0.085	0.016	-0.003
OES	0.005	0.009	-0.008	0.013	0.016	0.016

\* p<0.05. \*\* p<0.01. \*\*\* p<0.001. (for two-tailed t-test whether the value is equal to zero)

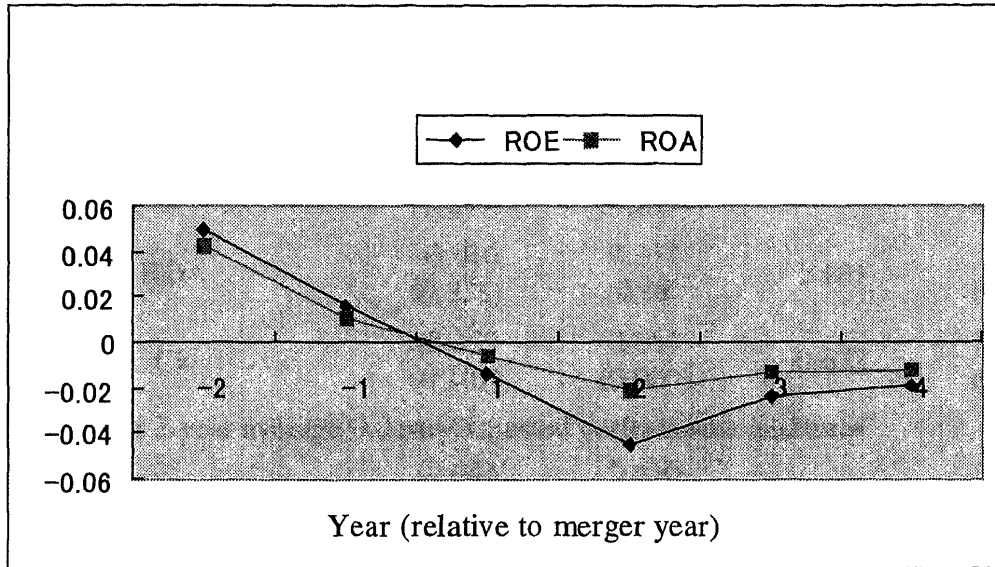


**Table 3.3. The change in industry-adjusted performance indicators from premerger 2-year average to postmerger period average for the 20 sample acquiring firms**

	Change in performance from premerger 2 year to postmerger 1 year average	Change in performance from premerger 2 year to postmerger 2 year average	Change in performance from premerger 2 year to postmerger 3 year average	Change in performance from premerger 2 year to postmerger 4 year average
ROE	-0.048	-0.064**	-0.062*	-0.060*
premerger	0.034	0.034	0.034	0.034
postmerger	-0.014	-0.030	-0.028	-0.026
ROA	-0.033*	-0.041**	-0.040**	-0.040*
premerger	0.027	0.027	0.027	0.027
postmerger	-0.007	-0.014	-0.014	-0.014
LLTA	0.009	0.010	0.002	-0.001
premerger	0.025	0.025	0.025	0.025
postmerger	0.034	0.035	0.026	0.024
DE	-0.006	0.015	-0.009	-0.048
premerger	0.157	0.157	0.157	0.157
postmerger	0.151	0.172	0.148	0.109
CR	-0.665*	-0.497	-0.437	-0.403
premerger	0.832	0.832	0.832	0.832
postmerger	0.167	0.334	0.395	0.429
GROWTH		-0.174*	-0.123	-0.113
premerger		0.089	0.089	0.089
postmerger		-0.085	-0.035	-0.024
OES	-0.015	-0.004	0.000	0.003
premerger	0.007	0.007	0.007	0.007
postmerger	-0.008	0.002	0.007	0.009

\* p<0.05. \*\* p<0.01. (for two-tailed t-test whether the difference between premerger and postmerger periods is equal to zero)

**Figure 3.2. Profile analysis of the industry-adjusted ROE and ROA for the 20 acquiring firms over 6 years around the acquisition**



**Table 3.4. Regression of postmerger industry-adjusted performance measures on premerger 2-year average industry-adjusted performance measures for the 20 Taiwanese acquiring firms**

	Intercept estimate	Slope estimate	R square	F-value
Postmerger 1 year industry-adjusted performance measures				
ROE	-0.024 (0.299)	0.304 (0.237)	0.077	1.494 (0.237)
ROA	-0.016 (0.228)	0.357 (0.08)	0.161	3.451 (0.080)
CR	-0.459 (0.107)	0.753 (0.000)	0.672	36.952 (0.000)
Postmerger 2-year average industry-adjusted performance measures				
ROE	-0.044 (0.035)	0.430 (0.057)	0.187	4.138 (0.057)
ROA	-0.025 (0.039)	0.400 (0.026)	0.245	5.842 (0.026)
Postmerger 3-year average industry-adjusted performance measures				
ROE	-0.039 (0.053)	0.323 (0.131)	0.122	2.510 (0.131)
ROA	-0.022 (0.052)	0.299 (0.072)	0.169	3.653 (0.072)
Postmerger 4-year average industry-adjusted performance measures				
ROE	-0.033 (0.064)	0.222 (0.243)	0.075	1.458 (0.243)
ROA	-0.019 (0.072)	0.198 (0.192)	0.092	1.834 (0.192)

Values in the parentheses are p-values for the regressions' F values and the coefficient estimates.

## CHAPTER 4

### Postmerger Operating Performance of Japanese Firms<sup>5</sup>

---

It is well known that corporate mergers and acquisitions (M&A) in Japan are different in the nature from Anglo-American M&A. For example, the practice of inter-corporate shareholdings has been a reason for the missing of a corporate takeover market in Japan (Sheard (1989)). Hostile takeovers are almost non-existent in Japan because of the harmony-emphasizing, conflict-avoiding corporate culture and mutual shareholding practice. Japanese mergers are used in a passive sense: the sellers are only willing to be merged when having financial problems (rescue-oriented merger). Japanese corporate culture and business practices have been making the M&A market quite small, in terms of both the number and value of the deals. Although M&As received greater attention in recent years in Japan, the literature on Japanese M&As is limited comparing with the enormous amount of studies in the U.S.

This Chapter aims to extend this literature by investigating an extensive set of mergers from the late 1970s to the early 1990s. The empirical study examines the effects of mergers on the firms' operating performance, such as proficiency and growth. The results will shed some light on the effectiveness of Japanese mergers in improving the firms' efficiency (the efficiency-improving hypothesis).

---

<sup>5</sup> This chapter is based on the paper, co-authored with Y. Hoshino, titled "Productivity and Operating Performance of Japanese Merging Firms: Keiretsu-related and Independent Mergers", *Japan and the World Economy*, forthcoming.

#### 4.1. Sample and Data Sources

To investigate the mergers' effects on firms' efficiency, I collect data on corporate mergers carried out by Japanese firms. To avoid noises I focus only on *merger* events and exclude other combinations such as stock acquisitions or capital participation. The merger events were mainly identified from the Nihon Keizai Shimbun (Japan Economic Newspaper). I further confine the sample to domestic non-financial Japanese companies. Also excluded are mergers between parent company and its subsidiary, since in these cases the merged firm had been under complete control of the merging firm before the merger. In final I obtained 73 merging events ranging from 1977 to 1994. I focus mainly on the merging firms, since most of the merged are non-public companies and their financial data are unavailable. The financial data for merging firms are collected from the NEEDS (Nikkei Economic Electronic Databank System), documented by Nihon Keizai Shimbun. I compile financial data of the merging firms for 4 years before and 5 years after the merger completion year, hence 9 years in total for each firm. However, data for the merger completion year are omitted to avoid biases caused by varying accounting practices.

Among the 73 sample mergers, 26 mergers were completed in the period 1990–1994, 22 mergers during 1985–1989, and 25 mergers during 1977–1984. According to NEEDS two-digit industry classification, 58 of the merging firms belong to manufacturing industry, 9 are trading firms, 4 are transportation related firms, and the remaining 2 are classified into the service industry.

I then calculated the performance measures using the accounting data. Specifically I calculated the merging firms' return on assets (ROA), return on equity (ROE), growth in sales (SALES), and growth in employment (EMPL). These ratios are calculated as follows:

$$\text{ROA} = (\text{Operating Income} / \text{Total Assets})$$

$$\text{ROE} = (\text{Current Income} / \text{Equity})$$

$$\text{SALES} = (\text{Sales of Current Year} / \text{Sales of Previous Year}) - 1$$

$EMPL = (\text{Employee Number of Current Year} / \text{Employee Number of Previous Year}) - 1$

These measures are calculated for each merging firm for each year from four years before merger (year -4, -3, -2, -1, respectively) to five years after the merger (Year 1, 2, 3, 4, 5, respectively). Year zero is the year a merger is completed for a particular firm and will be a different calendar year for different firms. Data for year zero is omitted for the reason of minimizing the "noises" caused by different merger accounting practices in the year of consolidation. Note that since calculation of SALES and EMPL involves two years of data, these two variables in year 1 are not available because the data for year zero are required. Henceforth, there are only eight years of data for SALES and EMPL, from year -4, to year -1 and from year 2 to year 5.

Since premerger versus postmerger change in these accounting measures may be subject to economy-wide or industry factors other than the merger, it is necessary to account for these factors. One frequently used way is to adjust for industry median or mean. For each merging firm in the sample, I compute the median financial ratios for all the other firms with the same five-digit NEEDS industry code. These industry medians are computed for each year corresponding to each merging firm.

## **4.2. The Empirical Results**

### **4.2.1. Premerger Firm Performance**

Table 4.1 reports the merging firms' performance against their industry benchmark (industry median) in terms of ROA, ROE, sales growth, and employees growth during the premerger years. Also reported are the results of the *t*-tests that the difference in these financial ratios between merging firms and their industry medians is zero.

In general, the merging firms are less profitable than their industry medians before the merger. The ROA ratio of merging firms is consistently lower than the industry medians from Year -4 to Year -1, and in Year -1, the difference is statistically significant at the level of 5%. For ROE ratio, the trend is quite

similar, with the only exception of Year -1, where the ROE of merging firms is slightly higher than industry medians (but insignificantly). Also, the merging firms' premerger 4-year medians for profitability are on average lower than their industry benchmarks: the difference in ROE is significant at the level of 5%, while the difference in ROA is insignificant but the significant level is close to 10%.

As for the growth in sales, although the merging firms are growing at a larger rate than their industry benchmarks during Year -4 to Year -2, the merging firms' growth rate becomes lower than their industry benchmarks in Year -1. However, the differences are all insignificant. Also, the merging firms' premerger 4-year medians for sales growth are on average lower than their industry benchmarks, although the difference is still insignificant.

With respect to growth in employee numbers, the merging firms are growing at a larger rate than their industry benchmarks in Year -3 and Year -2, but at a lower rate in Year -1. The differences are also insignificant (except in Year -4). And although the merging firms' premerger 4-year medians for employees growth are on average higher than their industry benchmarks, the difference is insignificant.

#### **4.2.2. Postmerger Firm Performance**

Table 4.2 reports the merging firms' performance against their industry benchmarks (industry medians) during the postmerger years. Also reported are the results of the *t*-tests that the difference in these financial ratios between merging firms and their industry medians is zero.

As can be seen, the merging firms are becoming far less profitable than their industry benchmarks during the postmerger 5 years. ROA ratios of the merging firms are all significantly lower than those of industry benchmarks in the postmerger 5 years. The results for ROE are showing similar trends.

As for the sales growth, only in Year 2 is the merging firms' growth rate higher than industry benchmarks significantly (10% level). Merging firms lose the momentum in the following years: the growth rates for merging firms are

becoming lower than industry medians (although insignificantly). On average, the merging firms' postmerger 4-year medians for sales growth are lower than their industry benchmarks, and the difference is insignificant.

As for the growth in employee numbers, the growth rates for merging firms are lower than their industry medians in Year 2, but the difference is not statistically significant. However, from Year 3 on both the merging firms and the industry benchmarks are reporting negative growth rates in employee numbers. Merging firms are decreasing their employee numbers at a greater magnitude than the industry benchmarks in Year 3 and Year 4. But the differences in individual years are all statistically insignificant. However, in terms of the postmerger 4-year medians for employees growth, it can be seen that the merging firms are slashing their employees at a greater magnitude than the industry benchmarks (the difference is significant at the level of 10%).

Figure 4.1 and 4.2 provide graphical presentation of the merging firms' financial ratios against their industry benchmarks. Merging firms have been less profitable than their industry benchmarks through premerger to postmerger years. It is obvious that mergers fail to improve the firms' profitability. Meanwhile, merging firms have been growing at a greater rate several years before the merger but were outperformed by their industry benchmarks just 1 year before the merger year. Mergers only prop up the sales growth temporarily in the first year after merger, and the sales fell down again in the subsequent years.

#### 4.2.3. Premerger versus Postmerger Industry-adjusted Financial Ratios

In this section, I regress the merging firms' postmerger financial ratios on the premerger ones to measure the merger's effect. To account for industry factors, I subtract the corresponding industry median from each merging firm's financial ratios for each year. To measure the premerger versus postmerger change in the merging firms' industry-adjusted financial ratios, the following cross-sectional regression is estimated:

$$P_{post.i} = \alpha + \beta P_{pre.i} + \varepsilon_i$$



where  $P_{post.i}$  is the postmerger 5-year median for company  $i$ 's industry-adjusted financial ratios, and  $P_{pre.i}$  is the premerger 4-year median for company  $i$ 's industry-adjusted financial ratios. The measure for impact of mergers on corporate performance is  $\alpha$  from the above equation. Since  $\beta$  captures any correlation in financial ratios between premerger and postmerger periods,  $\alpha$  is independent of premerger financial performance. Table 4.3 reports the ordinary least square estimates for the regressions<sup>6</sup>.

It can be seen in the first regression that postmerger ROA is highly related with premerger ROA. Taking account of the premerger performance, the constant term  $\alpha$  for ROA is  $-0.6\%$ , significant at the level of 1%. The negative sign of the constant term indicates a deteriorating performance for postmerger years after allowing for the relationship with premerger performance. Regression for ROE also produces similar result. As for the growth in sales, the third regression also shows a negative constant term, although insignificant. As for the growth in employee numbers, the fourth regression produces a negative constant term ( $-1\%$ ), significant at the level of 5%. In general, the results indicate deteriorating changes in the merging firms' postmerger performance, particularly in the profitability and growth.

The empirical results regarding merger effect on various performance measures, in general, indicate a negative impact. The results on profitability and sales growth coincide with most previous empirical studies on Japanese mergers (Hoshino (1982, 1992); Muramatsu (1986); and Odagiri et al. (1989)). Unlike their Anglo-American counterparts, a great deal of mergers in Japan have been used to bail out financially troubled or mismanaged companies, or as a restructuring tool to consolidate affiliated firms. Strategic M&As are less

---

<sup>6</sup> To check whether the variance of the dependent variable is the same for all values of the independent variables, I plot the Studentized residuals against the predicted values. Since no certain patterns in the data points are observed, the assumptions of constant variances are met.

prevalent in Japanese markets than in the western advanced economies. Hostile takeovers are almost nonexistent in corporate Japan due to cross-shareholding practices among Japanese corporations and an antipathy towards the "corporate raider". The western theories on M&As have suggested that M&As act as a discipline for managers to maximize the firm value, and as a mechanism by which the market system replaces incompetent management. But in Japanese M&A, no significant reshuffles of the management in the merged firms were carried out after the merger and layoffs remain a taboo.<sup>7</sup> In many cases, the merged firm's CEO remained in the director board of the amalgamating firm. Under these circumstances it would be hard to expect the amalgamating firm to be capable of realizing the potential synergy, if any.

### 4.3. Summary

Examining 73 Japanese corporate mergers completed from 1977 to 1994, I found the following results:

(1) Merging firms are less profitable than their industry benchmarks before the mergers. They also are showing declining growth rate in sales and employee numbers as approaching the merger year. These results suggest merging firms may look to mergers for improving such unfavorable performance. In fact, the press articles reveal that a great deal of Japanese mergers used in this study are undertaken in a defensive sense, for example, to cope with the intensified market competition or declining demand.

---

<sup>7</sup> In fact, the press reports have revealed that the employees of the merged firms, in many cases, are absorbed into the new amalgamating firms and no harsh layoffs are carried out following the mergers. But the empirical results in this study show that the employee growth rate is declining following the mergers. This implies that although Japanese mergers usually accompany little layoffs, the new amalgamating firms restrain employment growth following the mergers. Such moderate practices are also observed in corporate Japan during hard times or economic recessions.

(2) Inconsistent with the announcement-associated high abnormal returns reported by previous works, Japanese mergers did not improve the firm efficiency, and even caused deterioration in the firms' operating performances such as profitability, sales growth and employee growth. The results confirm the commonly held impression in Japan that merger is not an effective way of improving financial performance. As a matter of fact, in Japan, where stockholder value is outweighed by other corporate objectives, mergers are adopted more in a defensive sense, as a means to restructure slack businesses or to stave off hard times caused by intensive competition or recession. Unique business systems and paternalistic practices in corporate Japan have stifled radical reforms and changes following the consolidation. The turf battles and a taboo against layoffs also make it difficult to achieve efficiency. These factors have kept many skeptical about the workability of mergers in Japan.

**Table 4.1. The financial ratios for the merging firms and their corresponding industry median during the 4 years before the mergers**

	Year -4		Year -3		Year -2		Year -1		Premerger 4-year median	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
ROA for merging firms	67	0.054	70	0.054	73	0.053	73	0.045	73	0.051
Industry median ROA	67	0.058 (0.302)	70	0.059 (0.231)	73	0.057 (0.333)	73	0.054 (0.033)	73	0.058 (0.115)
ROE for merging firms	67	0.100	70	0.111	73	0.087	72	0.112	73	0.085
Industry median ROE	67	0.148 (0.183)	70	0.149 (0.238)	73	0.127 (0.039)	72	0.101 (0.728)	73	0.127 (0.014)
Sales growth rate for merging firms	67	0.128	69	0.124	71	0.146	72	0.041	72	0.088
Industry median sales growth rate	67	0.116 (0.702)	69	0.112 (0.682)	71	0.110 (0.479)	72	0.067 (0.159)	72	0.092 (0.385)
Employees growth rate for merging firms	67	-0.019	69	0.041	71	0.019	73	0.001	73	0.011
Industry median employees growth rate	67	0.001 (0.081)	69	0.006 (0.275)	71	0.006 (0.509)	73	0.013 (0.521)	73	0.005 (0.719)

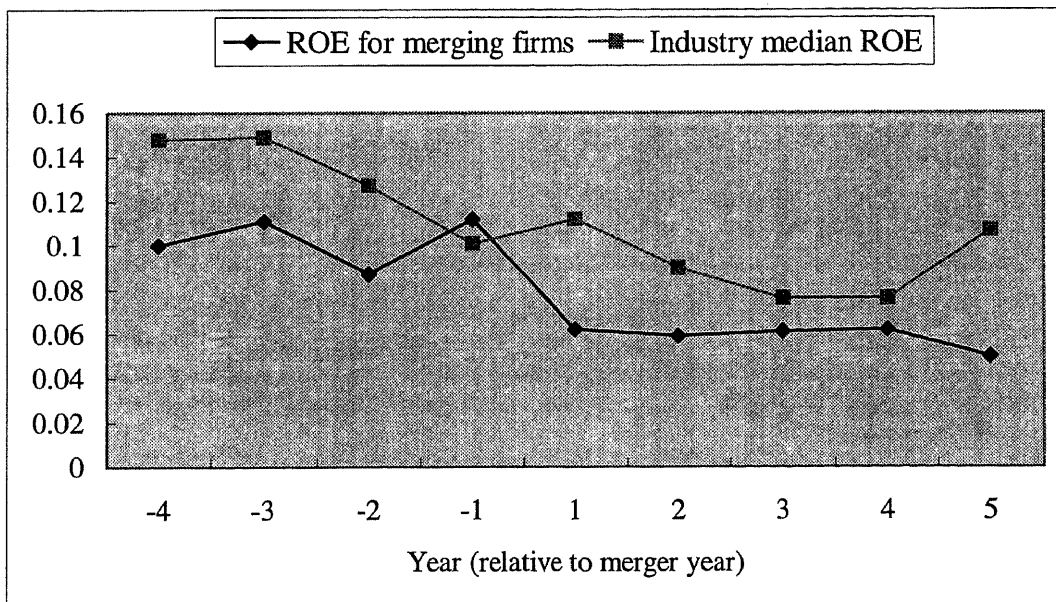
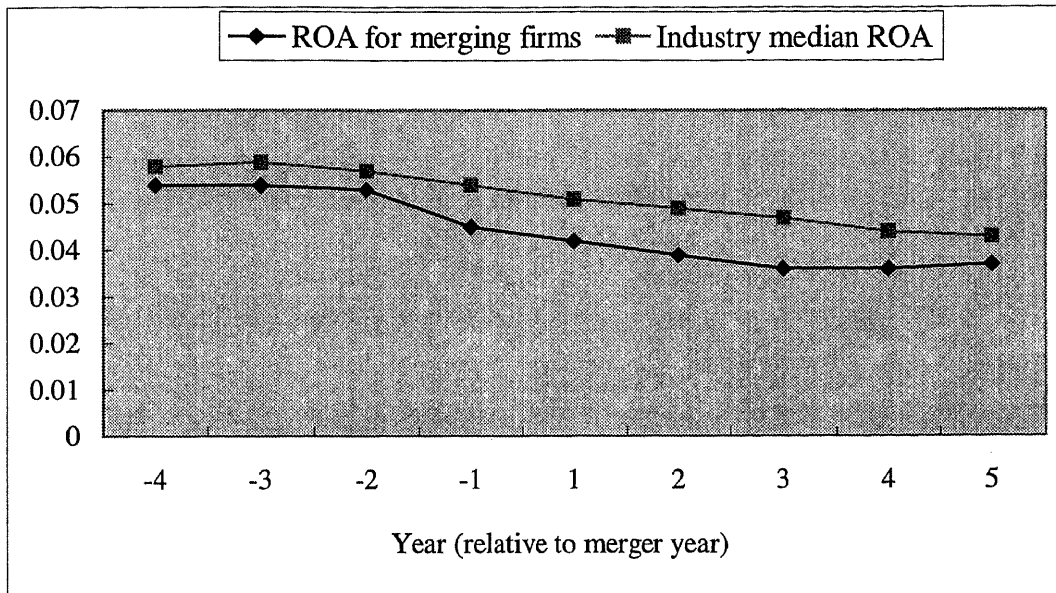
Values in the parentheses are p-values for the two-tailed t-tests that the difference in financial ratios between merging firms and industry median is zero.

**Table 4.2. The financial ratios for the merging firms and their corresponding industry median during the 5 years after the mergers**

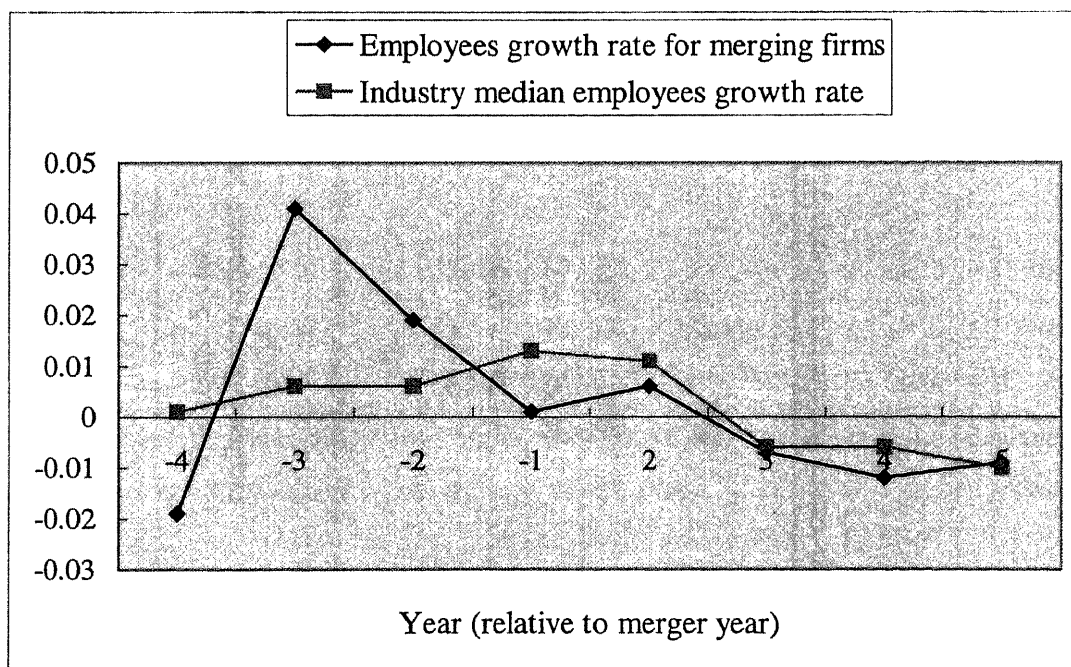
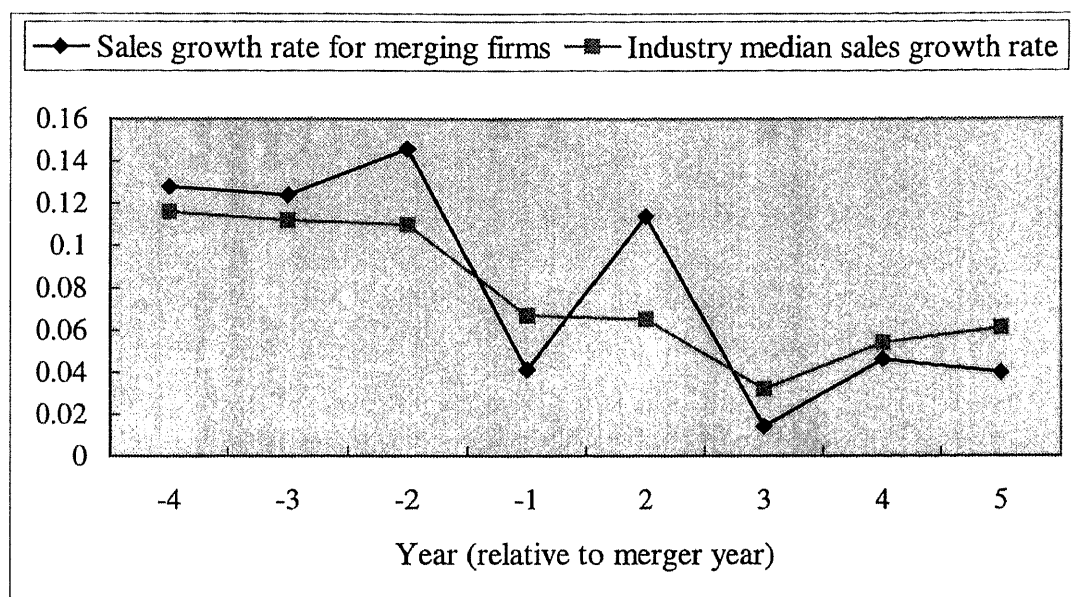
	Year 1		Year 2		Year 3		Year 4		Year 5		Postmerger 5-year median	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
ROA for merging firms	73	0.042	73	0.039	73	0.036	72	0.036	72	0.037	73	0.037
Industry median ROA	73	0.051 (0.022)	73	0.049 (0.009)	73	0.047 (0.001)	72	0.044 (0.056)	72	0.043 (0.056)	73	0.047 (0.003)
ROE for merging firms	73	0.062	73	0.059	73	0.061	70	0.062	71	0.050	73	0.051
Industry median ROE	73	0.112 (0.000)	73	0.090 (0.001)	73	0.076 (0.202)	70	0.076 (0.166)	71	0.107 (0.04)	73	0.076 (0.000)
Sales growth rate for merging firms	72	0.114	72	0.114	72	0.014	72	0.046	72	0.040	73	0.039
Industry median sales growth rate	72	0.065 (0.097)	72	0.065 (0.097)	72	0.032 (0.225)	72	0.054 (0.679)	72	0.061 (0.377)	73	0.041 (0.6)
Employees growth rate for merging firms	72	0.006	72	0.006	73	-0.007	72	-0.012	72	-0.009	73	-0.014
Industry median employees growth rate	72	0.011 (0.689)	72	0.011 (0.689)	73	-0.006 (0.821)	72	-0.006 (0.622)	72	-0.010 (0.942)	73	-0.005 (0.079)

Values in the parentheses are p-values for the two-tailed t-tests that the difference in financial ratios between merging firms and industry median is zero.

**Figure 4.1. Graphical description of ROA and ROE for the merging firms and their industry medians**



**Figure 4.2. Graphical description of growth in sales and employee numbers for the merging firms and their industry medians**



**Table 4.3. Regression of postmerger industry-adjusted financial ratios on premerger industry-adjusted financial ratios**

	(1)	(2)	(3)	(4)
Dependent Variable:	Postmerger 5-year median industry-adjusted ROA	Postmerger 5-year median industry-adjusted ROE	Postmerger 4-year median industry-adjusted sales growth	Postmerger 4-year median industry-adjusted employees growth
Independent Variable: Premerger 4-year median for industry-adjusted financial ratios				
N	73	73	72	73
Adjusted R square	0.185	0.121	0.010	0.116
F	17.38 (0.000)	10.92 (0.001)	1.69 (0.198)	10.48 (0.002)
Constant	-0.006 (0.012)	-0.018 (0.003)	-0.008 (0.348)	-0.010 (0.046)
ROA	0.327 (0.000)			
ROE		0.147 (0.001)		
Sales growth			0.111 (0.198)	
Employees growth				0.137 (0.002)

Values in the parentheses are p-values for the regressions' F values and the coefficient estimates.



## CHAPTER 5

# Bank Control, Large Shareholders, and the Abnormal Returns<sup>8</sup>

---

In the U.S., important corporate governance mechanisms include incentive-compensation contracts such as stock option plans and performance-related pay, management equity ownership, monitoring by outside board directors, large shareholders and external market forces such as hostile takeovers and proxy contests (Jensen and Warner (1988); Shleifer and Vishny (1997); Weston, Chung, and Siu (1998)). In corporate Japan, where the governance mechanisms are distinct from Anglo-American ones, it is worth asking the questions like how Japanese firms are monitored and whether the monitoring system is effectively reducing the agency problems engendered by the separation of ownership and control. Considerable work has been devoted to addressing these issues, with the attention most concentrated on the main bank or *keiretsu*'s governing systems (For instance, Sheard (1989), Hoshi (1990), Aoki et al. (1994), Kaplan et al. (1994), and Kang et al. (1995)). While earlier previous work argued that the main bank system plays an important role in governing their client firms in Japan, some recent studies suggested alternative opposing views.

This paper aims to provide empirical evidence on the monitoring roles of Japanese large shareholders and bank creditors in the firms' investment decisions. The large ownership by financial institutions and non-financial affiliated

---

<sup>8</sup> This chapter is based on the paper, co-authored with Y. Hoshino, titled "Shareholders' Wealth, Bank Control, and Large Shareholders: An Analysis of Japanese Mergers", *Keieizaimu-kenkyu* Vol. 21 No. 2 (forthcoming).

enterprises typically is embedded in the complex Japanese keiretsu system and, in theory, serves as a potential monitoring force. I examine a sample set of 89 Japanese merger events from 1981 to 1998 and investigate the effects of the ownership structure on merger announcement-associated gains (or losses). I use mergers as the investigation setting because merger is often an instance representing conflicts of interests between the management and shareholders. Besides, merger decisions are important corporate events, requiring approval from the majority of shareholders. If effective monitoring by block shareholders can reduce the agency conflicts, firms with better monitoring should, therefore, make better merger decisions, that is, with higher abnormal returns. Therefore, by examining the relationship between merger-associated abnormal returns and the large shareholder as well as bank creditors, this study provides some insights into Japanese corporate governance mechanisms.

An additional advantage of using such event-study approach is that it can resolve the problem of ambiguous causality between ownership structure and firm performance; that is, the firm performance may be influenced by the firm's ownership structure, but it is also possible that the firm performance may cause changes in the firm's ownership structure. This study avoids this causality problem because performance (measured by abnormal returns) is only observed over very short periods.

### **5.1. Sample and Variables**

Japanese merger events were mainly identified from the Nihon Keizai Shimbun (Japan Economic Newspaper). I confine the sample to domestic non-financial Japanese companies. Also excluded are mergers between parent company and its subsidiary, since these cases typically represent instances of internal reorganizations. In final I obtained 89 merger events ranging from 1981 to 1998. These firms are all publicly traded companies in the Tokyo Stock Exchange so that I can acquire complete financial data. Stock price data are obtained from Tokyo Stock Exchange, and Nihon Keizai Shimbun's stock price databases. Corporate information and accounting data are obtained from Nihon Keizai

Shimbun's NEEDS database and Kigyo Keiretsu Soran. Drawing on the data I compiled the following variables for each firm. The summary statistics are reported in Table 5.1.

As reported in the Panel A of Table 5.1, among the 89 merger events, 43 cases were announced in the 1981-1991 period, and 46 cases were announced in the 1992-1998 period. 20 mergers were initiated for rescue purpose. There are 47 mergers in which the merging and the merged firms belong to the same keiretsu member<sup>9</sup>. Descriptive statistics for the bidders are reported in the Panel B.

*Firm size:* I calculated the bidders' book value and market value based size. First, the book value of the total assets at the end of the year prior to the merger announcement averages 537 billion Yen. The market value based size variable is the sum of the book value of total debts and the market value of equity. The market value of equity is computed as the product of bidder's outstanding shares and the stock price as of the 200th business day prior to the announcement. The average of the market value based size is 794 billion Yen.

*Pre-announcement performance:* I use the level of cash flow to measure the bidders' performance before the merger announcement. Cash flow is calculated as the sum of the bidder's net income and depreciation at the end of the year prior to the announcement. The ratio of the bidders' cash flow to the market value based firm size is averaged at 1.56%. I also calculate another measure, the bidders' average excess returns over the period from 200 business days before to 30 days before the initial announcement. The excess returns are calculated as the bidders' daily returns minus the TOPIX-based daily returns<sup>10</sup>. The average excess returns for bidders average 0.01%.

---

<sup>9</sup> The *keiretsu* here refers to the groups such as NKK, Toyota, Toshiba and other commonly known *keiretsu* groups.

<sup>10</sup> The Tokyo Stock Exchange's Stock Price Index (TOPIX) is calculated as the total market value of all stocks listed on the first section of the TSE at a specific point in time to their total market value on the base date of January 4, 1968.

*Bank borrowing:* In theory, the debts restrain the amount of free cash flow that managers would have expended in pursuing their own benefits, thereby reducing the agency costs (Jensen (1986)). However, as discussed in the section of Relevant Literature, there were skeptical views on the effectiveness of Japanese banks' monitoring roles. The ratio of the amount of bank borrowing to the bidder's market value based firm size, is averaged at 19.11%. Among the creditor banks, the main bank particularly possesses the strongest influence and is assuming the most important role in monitoring the firm. Defined as a firm's largest bank lender, the ratio of main bank borrowing to the firm's size averages 2.97%.

*Financial ownership:* The financial ownership variable is calculated as the percentage of the bidders' shares held by financial institutions (including commercial banks, security firms, and insurance firms) among the top 10 shareholders as of the year prior to the announcement. This measure represents the magnitude of the influence of large financial shareholders on the bidders' important decision-making. Financial institutions among top 10 shareholders own an average 23.72% of shares in the bidders. Among them, banks own 15.15%<sup>11</sup>, insurances firms own 7.59%, and security firms own 0.98% shares in the bidders.

*Corporate ownership:* The percentage of shares held by non-financial corporations among top 10 shareholders averages 4.78%<sup>12</sup>. Industrial firms typically own shares reciprocally among related firms and trading business partners. Although it was argued that such mutual shareholdings could insulate the firms' management from outside pressure (such as hostile takeovers) so that managers are able to make decisions from a long-term perspective, the interlocking shareholding relationship could also provide the managers with greater power and discretion and lead to agency conflicts.

---

<sup>11</sup> By law the shareholding of other firms by banks is limited to a maximum of 5% after the year 1987; before that, banks could hold up to 10% firm equity.

<sup>12</sup> Shareholding by the bidder's parent company is excluded so that this variable only represents corporate cross-shareholding.

*Individual ownership:* The percentage of shares held by individuals among top 10 shareholders averages 2.59%. Among them, the directors held 1.43%, and the Chief Executive Officer (CEO) held 0.97% shares<sup>13</sup>. Firms with strong individual shareholders are more likely to be owner-manager or family-run enterprises. Through the high level of personal stakes in the business, the interests of these individuals are tightly aligned with the firms', creating more incentives to behave in the interest of the firms. On the other hand, too powerful owner-managers may lead to management entrenchment, that is, they will pursue self-interest at the expense of other shareholders interest.

*Other ownership:* The government institutions own an average 1.66% shares and foreign companies own an average 1.71% shares among the top 10 shareholders. Only 2 bidders have government shareholders among the top 10 shareholders, and there are 19 bidders with foreigner shareholders among the top 10 shareholders.

## 5.2. Empirical Results

In this section, I first compute the bidders' abnormal returns associated with the initial public announcement of the mergers. Then I investigate the relationships between the abnormal returns and the bidders' governance variables and other control variables. In the univariate analysis, I separate the bidders into two groups according to these variables and compare their abnormal returns. In the multivariate analysis, the bidders' announcement-associated cumulated abnormal returns are regressed on the bidders' ownership variables and other control variables.

---

<sup>13</sup> The CEO refers to the chairman or the president of the bidder. In the sample of this study, there are many cases in which some large individual shareholders are family members or relatives of the CEO or directors but do not assume any position in the firms.

### 5.2.1. The Effect of Mergers on the Wealth of Bidders' Shareholders

A standard event study method is applied to calculate the merger-associated abnormal returns. The abnormal returns are the difference between the actual returns and the “normal” returns, the returns firms would have gained if there were not the merger announcements. For each firm  $i$ , the “normal” return is calculated as  $\hat{\alpha}_i + \hat{\beta}_i R_{m,t}$ , where the  $R_{m,t}$  is the TOPIX market returns at event date  $t$ ,  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  are the ordinary least squares estimates of the intercept and slope of the market model regression for each firm  $i$  from 200 to 31 days prior to the announcement date. The announcement date ( $t=0$ ) is the day at which the news about the merger was first reported by the press. Each firm's abnormal returns  $AR_{it}$  are calculated as  $R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_i R_{m,t})$  where  $R_{i,t}$  is the firm  $i$ 's daily returns at event date  $t$ . I calculated each firm's abnormal returns for the event window from  $t = -30$  to the day  $t = 30$ .

The one-day abnormal returns averaged over  $N$  firms are  $AR_t = \frac{1}{N} \sum_{i=1}^N AR_{it}$ . The corresponding test statistic for the hypothesis that the one-day  $AR_t$  is zero, is as follows:

$$\frac{AR_t}{\hat{S}(AR)} = \frac{AR_t}{\sqrt{\frac{1}{169} \sum_{t=-200}^{-31} (AR_t - \overline{AR})^2}}$$

where  $\overline{AR} = \frac{1}{170} \sum_{t=-200}^{-31} AR_t$ .

The cumulated abnormal return,  $CAR = \sum_{t=L1}^{L2} AR_t$ , is the summation of the abnormal returns over the event period from  $t = L1$  to  $L2$ . The test statistic for  $CAR$  for the  $N$  firms over the period from  $t = L1$  to  $L2$  is as follows:

$$\frac{CAR}{\hat{S}(CAR)} = \frac{\sum_{t=L1}^{L2} AR_t}{\sqrt{\sum_{t=L1}^{L2} \hat{S}(AR)^2}}$$

The results for abnormal returns are shown in Table 5.2. The mean 3-day cumulated abnormal returns ( $CAR$ ), from  $t = -1$  to  $t = 1$ , are  $-1.01\%$ , which is

significant at 0.01 level. To account for the possibility that the news about mergers is likely to have been leaked to the market before the announcement, I also examined CAR for earlier periods. The 4-day mean CAR for the interval from  $t = -2$  to  $t = 1$  is  $-0.43\%$  (insignificant) and the 5-day mean CAR for the interval from  $t = -3$  to  $t = 1$  is  $-0.38\%$  (insignificant). The 7-day CAR ( $t = -3$  to  $t = 3$ ) is  $-1.6\%$  (significant at 0.01 level) and The 11-day CAR ( $t = -5$  to  $t = 5$ ) is  $0.03\%$  (insignificant). In generally the CAR around the initial announcement is close to zero or negative. Looking at the patterns of CAR, the CAR before the announcement interval (from  $t = -30$  to  $t = -2$ ) is  $2.62\%$  (significant at 0.05 level); the post-announcement CAR ( $t = 2$  to  $t = 30$ ) is  $-1.42\%$  (insignificant). The whole interval from  $t = -30$  to  $t = 30$  shows an average of  $0.19\%$  (insignificant). Overall, mergers announcement failed to enhance the wealth of the bidders' shareholders.

The results contradict with previous studies on Japanese M&A, which reported the merging firms gained positive returns. However, earlier studies analyzed M&A mainly during the 1970s and 1980s, whereas this study used M&A in the 1980s and 1990s period. Although there are no comparable Japanese studies, the 43 bidders during the 1981-1991 period produced positive CAR, reported in Table 3, while 46 bidders during the 1992-1998 period produced negative CAR. However, the results are consistent with Anglo-American results that the bidders' shareholders only gained modest abnormal returns (close to zero) or even negative returns.

### 5.2.2. Univariate Tests

A firm with corporate governance mechanisms working well is supposed to make merger decisions that enhance the firms' value. In corporate Japan, what mechanisms are working well? In this section, univariate analysis is applied to test whether and how the merger announcement-associated abnormal returns are related to the bidder's corporate governance characteristics. I stratify the sample according to the acquiring firms' governance characteristics. Table 5.3 reports the cumulated abnormal returns from  $t = -1$  to  $t = 1$  as well as from  $t = -3$  to  $t = 1$  for each

stratified subgroup of bidders. T-tests are employed to test whether the mean CAR are equal between the two subgroups.

Mergers ( $n=20$ ) that were motivated for rescue purpose have lower CAR than those that were not, but the differences are not statistically significant. This result is consistent with Kang et al. (2000). Although the mean CAR for the 47 bidders of keiretsu-related mergers are smaller than the 42 bidders of non-keiretsu-related mergers, the differences are not statistically significant. This result is partly consistent with Pettway et al. (1990).

Large financial shareholders (such as banks) possess potential strong influence toward the firms' management and decision-making. Given the banks' business expertise, firms with majority financial ownership are supposed to make better corporate decisions (such as mergers) should banks monitor the firms effectively. For the 45 firms with large financial ownership higher than sample median (25%), the mean CAR are negative, while the remaining 44 firms with large financial shareholders lower than sample median gain positive CAR. The differences are statistically significant at 0.05 level. Firms with larger financial ownership are associated with lower abnormal returns, implying that majority control by financial institutions provide no benefit. When separated by bank shareholding, the 45 firms with bank shareholding higher than median (16%) produced negative CAR, while the 44 firms with lower bank shareholding gained positive CAR. The differences are statistically significant at 0.01 level. When separated by insurance firms, although firms with insurance firm shareholders higher than median (8%) produced negative CAR, the differences are statistically insignificant. When separated by security firms, firms with security firm shareholders higher than median (8%) produced positive CAR, and the differences are statistically insignificant. The results suggest large bank shareholders are not effectively monitoring the firms.

In Japan, corporate cross-shareholding practices are applied to insulate the firms or the managers from outside market pressure (such as hostile takeovers). However, a potential problem is that this will strength the less-monitored managers' power and lead to management entrenchment. Merger is a typical



instance which the managers initiate in pursuit of their own interests (such as empire-building). For the 44 firms with large corporate ownership more than the sample median (4%) the CAR are positive and higher than the remaining 45 firms with lower corporate ownership, but the differences are statistically insignificant. It implies that Japanese corporate shareholders, mainly serving as "stable" shareholders, have little effect in monitoring the firms.

Large individual shareholders, particularly director ownership or inside ownership, can align their own interests closely with the firm's, providing incentives for them to behave in the interests of the firm. Meanwhile, it is also possible that too powerful owner-managers can also lead to management entrenchment. The 45 firms with individual ownership among top 10 shareholders gained positive CAR, while those without large individual shareholders generated negative CAR. The differences are significant at 0.01 level. Bidders with higher individual ownership gain higher abnormal returns. However, although firms with CEO and directors shareholdings among top 10 shareholders gained positive and higher CAR, the differences are statistically insignificant.

The differences in the CAR are not statistically significant between the 19 bidders with large foreign shareholders among top 10 shareholders and the 70 bidders without. Both groups show negative CAR.

As creditors, Japanese financial banks also exert their control over their clients firms. The mean CAR for firms with bank borrowing ratio higher than the sample median are negative, while those with lower bank borrowing ratio gain positive CAR. However, the differences are not statistically significant. Separated by main bank borrowing, the differences in CAR between the two groups become less clear. The results failed to support the notion that main banks help monitor the firms effectively on the merger decisions.

The univariate results indicate that the bidders' abnormal returns are positively related only to large individual shareholding, but are inversely related to large financial institution shareholding, particularly bank shareholding. Other variables such as corporate ownership and (main) bank borrowings have no effect on the acquirers' abnormal returns.

### 5.2.3 Multivariate Tests

In this section, multivariate analysis is applied to test whether and how the merger announcement-associated abnormal returns are related to the bidder's corporate governance characteristics. I regress the merging firm's cumulated abnormal returns from  $t = -1$  to  $t = 1$  on the bidders' ownership variables and other control variables<sup>14</sup>. All equations include the control variables for announcement period, and pre-announcement performance<sup>15</sup>, firm size, rescue merger, and keiretsu-related merger. Table 5.4 reports the results for cross-sectional the ordinary least squares (OLS) regressions<sup>16</sup>.

In the first regression, the 3-day CAR are presented as a function of the above control variables, and variables for bank borrowings ratio and the main ownership among the top 10 shareholders. The result shows that mergers announced in the 1992-1998 period produced lower abnormal returns, and the shareholdings by financial institutions had an adverse effect on the abnormal returns. The negative effect of financial shareholding confirms the univariate result and suggests that the large financial shareholders' inactive monitoring roles. Coefficients for other variables are insignificant, with results similar with those in the univariate test except bank borrowing ratio. The coefficient for bank

---

<sup>14</sup> To test the robustness, I also ran regressions using 5-day CAR from  $t=-3$  to 1 as dependent variable. The results are similar with regressions using 3-day CAR from  $t=-1$  to 1 as dependent variable.

<sup>15</sup> Regressions using pre-announcement cash flow ratio and average excess returns produced similar results. I only report the results of analyses using pre-announcement cash flow ratio.

<sup>16</sup> To check whether the variance of the dependent variable is the same for all values of the independent variables, I plot the Studentized residuals against the predicted values. Since no certain patterns in the data points are observed, the assumptions of constant variances are met.

borrowing ratio is positive in the regression, but it is not different from zero statistically (The result is similar when using main bank borrowing variable).

The second regression replaces the financial ownership variable with shareholding by banks, insurance firms, and security firms. It is bank shareholding that shows a significant negative effect on the bidders' abnormal returns. As in the univariate test, shareholding by insurance and security firms have no significant effect (the effect's direction is also similar). Other ownership variables remain statistically insignificant<sup>17</sup>.

It is possible that main bank (creditor) only exerts its influence when the client firms experienced financial difficulty. In Japan, when the client firms experienced financial trouble, main bank would come to rescue, for example, by providing more loans to the firms. The third regression adds an interaction term between the main bank borrowings ratio and a dummy for the bidder whose cash flow ratio is below the sample median. However this interaction is statistically significant.

Gibson (1995) and Kang and Stulz (2000) argue that bank relations are unlikely to be valuable in circumstances when banks themselves perform poorly. The highly growing Japan economy (the bubble) burst around the year 1991, and during the post-bubble decade, the banks have been burdened with staggering non-performing debts. Japanese banks are particularly weak regarding their magnitude in monitoring the firms in the 1992-1998 period for the sample in this study. The fourth regression includes an interaction term between main banks borrowings ratio and the dummy for the 1992-1998 period. The result shows no significance for this interaction. As a fact of fact, the main bank (as well as bank) borrowings are not significantly related to the bidders' abnormal returns through the analyses. The results in this study present no supporting evidence for the main bank' roles in enhancing the shareholders' wealth.

---

<sup>17</sup> Instead of individual shareholding variable, using director or CEO shareholding produced similar results.

On the other hand, in the 1990s period, Japanese institutional shareholders are likely to exert their influence more actively towards the firms through their large equity-holding, partly due to the increasingly competitive business environment and the introduction of American-style corporate governance. The fifth regression includes an interaction between financial shareholding and the dummy variable for the 1992-1998 period. The interaction displays a significantly positive coefficient. While the financial shareholding variable shows a negative coefficient, the result indicates the financial institutional investors are monitoring more actively in the later-than-1991 period.

Since the financial institutional shareholders include banks, insurance, and security firms, I further examine their monitoring roles in the 1992-1998 period. The sixth regression includes the interaction between bank shareholding and the dummy variable for the 1992-1998 period, but the interaction is not significant (although the coefficient is positive). The seventh regression contains the interaction between insurance firms' shareholding and the dummy variable for the 1992-1998 period. The significantly positive coefficient for the interaction demonstrates that insurance shareholders are more active in the later-than-1991 period<sup>18</sup>.

Our multivariate results are not supporting the notion that Japanese main banks (as well as banks) monitor the firms effectively. Our result is inconsistent with Kang et al. (2000), whose findings support the main banks' monitoring roles. However the sample of this study contains mergers from 1981 to 1998, while Kang et al. (2000) analyzed cases from 1977 to 1993. More than half of the sample in this study is occurring later than 1991, a period when banks are weakened by the mounting bad debts. The difference in the sample structure may lead to the inconsistent findings on the main banks' monitoring roles.

---

<sup>18</sup> I also tested the interaction between security firm's shareholding and the dummy variable for the 1992-1998 period. However, the coefficient is insignificant and the results are not reported here.

Another important finding is that large Japanese corporate shareholders (financial or non-financial), on average, are not active in monitoring firms. Instead they are mainly serving as "stable" shareholders, insulating the managers from outside pressure such as hostile takeovers. Bidders with large bank shareholders are particularly receiving unfavorable reaction from the market. Boemer (2000) found a similar negative effect of German banks on the bidders' firms' abnormal returns. However, this study indicates signs of Japanese institutional shareholders acting more actively in monitoring firms during the 1990s decade.

### 5.3. Summary

This study addresses issues regarding the monitoring roles of Japanese large shareholders as well as bank creditors. Examining 89 corporate merger events from 1981 to 1998, the empirical study investigates the relationship between merger-associated returns and the shareholding of the bidder's large shareholders and the borrowings from the banks.

The announcement period abnormal returns are negative, contradicting with previous studies on Japanese M&A, which reported positive returns on the bidders. However, this study analyzes mergers in the 1980s and 1990s period, and there is no comparable Japanese study for this period. But this result is consistent with American evidence, which reports negative or statistically insignificant abnormal returns on the bidders.

The variations in the bidders' gains are mainly related to the level of large financial shareholding; bidders with larger financial ownership, particular bank shareholders, are associated with lower abnormal returns. The result suggests that large corporate shareholders, financial or non-financial, are not active in monitoring the firms. Rather, the corporate cross-shareholding arrangements are likely to lead to management entrenchment. Besides, the results partly support the notion that director shareholding (including indirect shareholding by their family or relatives) helps align their interests with the firm's interest, creating incentives for directors to increasing the firm value.

I find no relationship between the amount of bank or main bank borrowing and the merger-associated abnormal returns. Bank creditors in Japan are performing poorer in the 1990s, weakening their monitoring capabilities. Since this study contains more than half of merger sample during this period, it implies that Japanese main banks are likely to have become weaker in monitoring the firms in the 1990s period.

The evidence in this study concludes that Japanese corporate cross-shareholding arrangements are not effectively monitoring firms. To make matters worse, inactive large financial shareholders lead to management entrenchment. I also find no evidence supporting the main banks' monitoring roles. However, I do find signs that Japanese financial institutional shareholders, such as insurance shareholders, are becoming more active in monitoring the firms in the later-than-1991 period.

**Table 5.1. The descriptive statistics for the 89 Japanese mergers and the bidding firms**

Panel A			
	N		
Total merger events	89		
Mergers announced in the 1981-1991 period	43		
Mergers announced in the 1992-1998 period	46		
Mergers for rescue purpose	20		
Merger among firms within the same keiretsu	47		
Panel B			
Variables	N	Mean	Median
Total asset (billion Yen)	89	537	238
Market size (=book value of debt + market value of equity) (billion Yen)	89	794	297
Pre-announcement cash flow ratio	89	1.6%	1.6%
Pre-announcement average excess returns	89	0.0%	0.0%
Bank loans/market size	89	19.1%	17.7%
Main bank loans/market size	89	3.0%	2.6%
Financial ownership	89	23.7%	25.4%
Bank ownership	89	15.2%	15.9%
Insurance ownership	89	7.6%	7.8%
Securities ownership	89	1.0%	0.0%
Corporate ownership	89	4.8%	4.4%
Individual ownership	89	2.6%	0.0%
Director ownership	89	1.4%	0.0%
CEO ownership	89	1.0%	0.0%
Foreigner ownership	89	1.7%	0.0%
Government ownership	89	1.7%	0.0%

\*The ownership variables are the shareholding among the top 10 shareholders.

**Table 5.2. Cumulated abnormal stock returns around the initial announcement date of the merger by the 89 Japanese firms during 1981 to 1998**

Window period	Mean cumulated abnormal return	Test statistic (Two-tailed)
CAR(-1~1)	-1.0%	-2.782***
CAR(-2~1)	-0.4%	-1.021
CAR(-3~1)	-0.4%	-0.811
CAR(-3~3)	-1.6%	-2.872***
CAR(-5~5)	0.0%	0.041
CAR(-30~-2)	2.6%	2.325**
CAR(2~30)	-1.4%	-1.250
CAR(-30~30)	0.2%	0.123

\*\* p<0.05. \*\*\* p<0.01.



**Table 5.3. Cumulated abnormal returns for various subgroups of bidders**

	N	CAR (-1~1)	P-value (two-tailed)	CAR (-3~1)	P-value (two-tailed)
Announcements in the 1981-1991 period	43	0.8%	0.052	1.4%	0.061
Announcements in the 1992-1998 period	46	-2.6%		-1.9%	
Not rescue mergers	69	-0.9%	0.886	-0.3%	0.880
Rescue mergers	20	-1.2%		-0.6%	
Not keiretsu related mergers	42	-0.4%	0.534	0.3%	0.471
Keiretsu related mergers	47	-1.5%		-0.9%	
Financial ownership higher than median	45	-2.9%	0.021	-2.2%	0.045
Financial ownership lower than median	44	1.0%		1.5%	
Bank ownership higher than median	45	-3.6%	0.000	-3.4%	0.000
Bank ownership lower than median	44	1.7%		2.8%	
Insurance ownership higher than median	45	-2.0%	0.224	-1.5%	0.201
Insurance ownership lower than median	44	0.1%		0.8%	
Security ownership higher than median	23	0.9%	0.191	1.6%	0.193
Security ownership lower than median	66	-1.6%		-1.0%	
Corporate ownership higher than median	44	0.1%	0.242	0.6%	0.331
Corporate ownership lower than median	45	-2.0%		-1.2%	
Individual ownership higher than median	28	2.3%	0.010	3.1%	0.010
Individual ownership lower than median	61	-2.5%		-1.9%	

	N	CAR (-1~1)	P-value (two-tailed)	CAR (-3~1)	P-value (two-tailed)
Director shareholdings higher than median	15	0.5%	0.451	1.7%	0.301
Director shareholdings lower than median	74	-1.3%		-0.8%	
CEO shareholding higher than median	15	0.5%	0.453	1.7%	0.302
CEO shareholding lower than median	74	-1.3%		-0.8%	
Foreigner shareholding higher than median	19	-0.6%	0.872	-0.6%	0.921
Foreigner shareholding lower than median	70	-1.1%		-28.1%	
Bank loans higher than median	45	-2.2%	0.163	-1.4%	0.235
Bank loans lower than median	44	0.3%		0.7%	
Main bank loans higher than median	44	-1.6%	0.481	-0.8%	0.591
Main bank loans Lower than median	45	-0.4%		0.1%	

P values is the significance for the t-test statistic whether the mean CAR are equal between the two subgroups.



## CHAPTER 6

### Conclusion

---

There have been various theories on why mergers are made, since merger motives are complex, and multiple motives may exist in any given decision. It is still an unsolved issue as to what exactly motivates mergers. Despite the difficulties, it is useful to see what light this study shed on the question. Among other things, this final chapter attempts to explain what motives may lead companies to make merger decisions, and suggests some implications for further researches.

The efficiency theory says that mergers occurred because they improve the combined firms' operations—for example, by introducing superior management into the merged firm, the realization of complementarities in production or marketing, the exploitation of scale economy and the elimination of duplicative functions, and the enhancement of monopoly power by combining competing interests. The agency conflict theory points to the potential conflicts between the managers and the shareholders, arising from the partial managerial ownership shares of the firm. Managers make merger decisions in pursuit of their own benefits, even if shareholders' wealth is reduced in the process. Empire building theory proposes that mergers are initiated by the managers to seek the power, prestige, and perquisites of controlling a large organization. Hubris theory suggests that managers make acquisitions because they are too confident to over-evaluate the merger opportunities.

It must be noted that this is certainly an incomplete list of the existing theories explaining the motives of mergers. However, under the framework of the studies conducted in this study, the attempt is made to examine the above arguments by looking at corporate mergers in Japan and Taiwan. No of these theories can be

rejected flatly on the basis of the evidence in this study. What can be said is about the degrees of plausibility and importance.

### **6.1. Merger Motives and Performance**

From the empirical studies in Chapter 3 to Chapter 5, the operating performances of Taiwanese and Japanese firms are, on average, deteriorating after the mergers are completed. Also the merger firms only received modest or even abnormal returns around the date of merger announcement. The findings cast doubts on the applicability of an efficiency theory of merger motives. But care must be taken in inferring the motives from the results. One possibility is that synergies are anticipated from the mergers but not fully utilized. The business environments may have changed after the mergers are made. Merger-makers tend to expect more than the circumstances proved to support, which is one reason why profitability was disappointing.

What does not emerge from studies on Japanese mergers is support for the efficiency-through-management-displacement merger motive. In Japanese mergers, the merged (acquired) firm's managements (including CEO) are often retained in the combined firm. Under these circumstances it would be hard to expect the amalgamating firm to be capable of drastic corporate reforms and improving efficiency.

### **6.2. Market Reaction in Relation with Corporate Governance**

Chapter 5 also looks at the Japanese merging firms' ownership structure, main bank influence before the merger decisions are made. Given the relatively small management ownership in the firms, potential agency conflicts exist in corporate Japan. The study tests whether Japanese large corporate shareholders and main banks monitor the firms' merger decisions. The empirical study finds that the market reacts most unfavorably to mergers made by firms with large financial ownership, particular bank shareholders, suggesting that large corporate shareholders are not active in monitoring the firms. In fact, these corporate shareholders are, in many cases, "stable" shareholders, as commonly known in

Japan. They are part of the cross-shareholding arrangements to insulate the management from outside market pressure. The evidence in this study suggests cross-shareholding arrangements are more likely to lead to management entrenchment. Besides, there is little evidence in the study that Japanese banks monitor the merger decisions effectively. This may be because bank creditors are likely to behave in a manner that is of their own interests, not of the firm's shareholders'. In fact, it is found that market reacts most favorably to mergers made by firms with higher inside ownership, because the management's interests are more tightly aligned with the firm's.

### **6.3. Implications for Further Research**

Given the evidence that mergers on average are not more profitable, it is puzzling that mergers are still increasingly occurring. One possible explanation suggested by this study is that the agency conflicts are never perfectly resolved. The important issue for management practitioners is therefore to figure out the appropriate corporate governance mechanism that can mitigate the agency conflicts. The evidence in this study suggests that it is beneficial to align the managers' interest with the firm's. In recent years, more Japanese corporations are beginning to introduce incentive-enhancing systems such stock options and performance-related compensation. Legal changes are also being considered to oblige large corporations to introduce outside directors into their board.

Although the findings in this study cast doubts on the workability of mergers, the efficiency or synergy theories are not rejected flatly. It is possible that synergies are anticipated from the mergers but not fully utilized due to the unexpected changes in the business environments following mergers, or the postmerger integration problems. In fact, Japanese corporations are starting to pay attention to the integration issues from the bitter experiences in previous mergers. For example, it is a difficult task to integrate successfully two firms with different business cultures, compensation and promotion systems, organization structure, and the labor unions. Mergers may also undermine the employees' morale. Difficulties in dealing with these issues may make a merger fail that has potential synergy. One of the

implications for further research is to take into consideration the integration issues and human factors.

## Acknowledgements

---

### *Chapter 3*

This chapter is based on the paper, co-authored with Y. Hoshino, titled "The Effects of Mergers and Acquisitions on Taiwanese Corporations", *Review of Pacific Basin Financial Markets and Policies*, Vol. 3, No. 2, pp 183-199, 2000. I am grateful to comments from the editor and one anonymous referee of the journal, and the participants in the Seventh Conference on Pacific Basin Finance, Economics and Accounting, 1999, the 10<sup>th</sup> National Conference of Japan Financial Management Association, 1999, and the Western Academy of Management (WAM)-Shizuoka International Management Conference, 2000.

### *Chapter 4*

This chapter is based on the paper, co-authored with Y. Hoshino, titled "Productivity and Operating Performance of Japanese Merging Firms: Keiretsu-related and Independent Mergers", *Japan and the World Economy*, forthcoming. I am grateful to comments from the editor and one anonymous referee of the journal. I thank Thomas Mayer for proofreading the manuscript.

### *Chapter 5*

This chapter is based on the paper, co-authored with Y. Hoshino, titled "Shareholders' Wealth, Bank Control, and Large Shareholders: An Analysis of Japanese Mergers", *Keieizaimu-kenkyu*, forthcoming. I am grateful to comments from the editor and two anonymous referees of the journal, and the participants the 9<sup>th</sup> National Conference of Nippon Finance Association. Akiko Takano provided helpful programming assistance. The author acknowledges financial support from the International Centre for the Study of East Asian Development (ICSEAD).



## References

---

- Aoki, M., H. Patrick, and P. Sheard, 1994, "The Japanese Main Bank System: An Introductory Overview." in M. Aoki and H. Patrick, eds., *The Japanese Main Bank System: Its Relevancy for Developing and Transforming Socialist Economies* (Oxford University Press, Cary, NC) . 353-408.
- Asquith, P., 1983, "Merger Bids, Uncertainty, and Stockholder Returns", *Journal of Financial Economics* 11, 51-83.
- Boehmer, E., 2000, "Business Groups, Bank Control, and Large Shareholders: An Analysis of German Takeovers", *Journal of Financial Intermediation* Vol. 9, No.2, 117-148.
- Bradford, W., 1978, "The Performance of Merging Savings and Loan Associations", *Journal of Business* Vol. 51, No. 1, 115-125.
- Cartwright, S. and C. Cooper, *Managing Mergers, Acquisitions and Strategic Alliances*. Butterworth-Heinemann, 1996.
- China Credit Information Service, Ltd., *General Corporation Financial Analysis*. 1985-1996.
- Cornett, M. M. and H. Tehranian, 1992, "Change in Corporate Performance Associated with Bank Acquisitions", *Journal of Financial Economics* 31, 211-234.
- Demsetz, H., and K. Lehn, 1985, "The Structure of Corporate Ownership: Causes and Consequences", *Journal of Political Economy* 93, 1155-1177.
- The Economist, "A Survey on Taiwan", *The Economist*, (November 7-13, 1998).
- Ferris, S., R. Kumar, and A. Sarin, 1995, "The Role of Corporate Grouping in Controlling Agency Conflicts: The Case of Keiretsu", *Pacific-Basin Finance Journal* 3, 320-335.

- Forbes, "Why Some Mergers Work and Many More Don't?" (interview with Peter Drucker), *Forbes*, (January 18, 1982).
- Gibson, M., 1995, "Can Bank Health Affect Investment? Evidence from Japan", *Journal of Business* 68, 281-308.
- Healy, P. M., K. G. Palepu and R. S. Ruback, 1992, "Does Corporate Performance Improve after Mergers?", *Journal of Financial Economics* 31, 135-175.
- Hogarty, T. F., 1970, "The Profitability of Corporate Mergers", *Journal of Business*, 371-327.
- Hoshi, T., A. Kashyap, and D. Scharfstein, 1990, "The Role of Banks in Reducing Financial Distress in Japan", *Journal of Financial Economics* 27, 67-88.
- Hoshino, Y., 1982, "The Performance of Corporate Mergers in Japan", *Journal of Business Finance and Accounting* 9, 153-165.
- Hoshino, Y., *Chushyo Kinyukikan No Gappei Bunseki*, Taga Publication, 1992. (Analysis on mergers among small and medium-sized financial institutions, in Japanese.)
- Huang, C. and R. Huang, 1995, "Zhi Ben Jie Gou Dui Qi Ye He Bing Ji Xiao Zhi Yen Jiu", *Taiwan Yinghang Jikan* 46(4), 1-36, (December). ("The effects of capital structure on corporate M&A performance", in Chinese.)
- Jameson, M., M. Sullivan, and R. Constand, 2000, "Ownership Structure and Performance of Japanese Firms: Horizontal Keiretsu, Vertical Keiretsu, and Independents", *Review of Pacific Basin Financial Markets and Policies*, Vol. 3, No. 4, 535-556.
- Jarrell, G. A., J. A. Brickley and J. M. Netter, 1988, "The Market for Corporate Control: The Empirical Evidence since 1980", *Journal of Economic Perspectives* 2, 49-68.
- Jensen M. C. and R. S. Ruback, 1983, "The Market for Corporate Control: The Scientific Evidence", *Journal of Financial Economics* (April), 5-50.
- Jensen, M., 1986, "Agency Costs of Free Cash Flows, Corporate Finance, and Takeovers", *American Economic Review* 76, 323-329.

- Jensen, M. C. and J.B. Warner, 1988, "The Distribution of Power among Corporate Managers, Shareholders, and Directors", *Journal of Financial Economics* 20, 3-24.
- Jensen, M., and W. Meckling, 1976, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of financial Economics* 3, 305-360.
- Kang, J., A. Shivdasani, and T. Yamada, 2000, "The Effect of Bank Relations on Investment Decisions: An Investigation of Japanese Takeover Bids", *Journal of Finance* Vol. LV, No. 5, 2197-2218.
- Kang, J., and A. Shivdasani, 1995, "Firm Performance, Corporate Governance, and Top Executive Turnover in Japan", *Journal of Financial Economics* 38, 29-58.
- Kang, J., and A. Shivdasani, 1999, "Alternative Mechanisms for Corporate Governance in Japan: An Analysis of Independent and Bank-affiliated Firms", *Pacific-Basin Finance Journal* 7, 1-22.
- Kang, J., and R. Stulz, 2000, "Do Banking Shocks Affect Borrowing Firm Performance?", *Journal of Business* 73, 1-23.
- Kaplan, S. N., and B. Minton, 1994, "Appointments of Outsiders to Japanese Boards: Determinants and Implications for Managers", *Journal of Financial Economics* 36, 225-258.
- Kitching, L., 1967, "Why Do Mergers Miscarry?", *Harvard Business Review*, (November/December 1967).
- Lev, B. and G. Mandelker, 1972, "The Microeconomic Consequences of Corporate Mergers", *Journal of Business*, 85-104.
- Lichtenberg, F. R. and D. Siegel, 1990, "The Effects of Leveraged Buyouts on Productivity and Related Aspects of Firm Behavior", *Journal of Financial Economics* 27, 165-194.
- Lichtenberg, F. and G. Pushner, 1994, "Ownership Structure and Corporate Performance in Japan", *Japan and the World Economy* 6, 239-261.
- Mandelker, G., 1974, "Risk and Return: The Case of Merging Firms", *Journal of Financial Economics* Vol. 1, No. 3, 303-335.
- Mergersta Review*: 1980 (Chicago: Grimm, 1981).

- Morck, R., A. Shleifer, and R. W. Vishny, 1990, "Do Managerial Objectives Drive Bad Acquisitions?", *Journal of Finance*, Vol. 45, No. 1 (March), 31-48.
- Morck, R., and M. Nakamura, 1999, "Banks and Corporate Control in Japan", *Journal of Finance*, Vol. 54. No. 1 (February), 319-339.
- Muramatsu, S., 1986, "Zaimu Deita Ni Yoru Gappei Kouka No Bunseki", *Kigyoukaikei* 38, 60-69. ("An analysis on the effects of mergers by using financial data", in Japanese.)
- Nakatani, I., 1984, "The Economic Role of Corporate Financial Grouping", in: Aoki, M., (Eds.) *Economic Analysis of the Japanese Firms*, Elsevier, New York.
- Odagiri, H. and T. Hase, 1989, "Are Mergers and Acquisitions Going to be Popular in Japan too?", *International Journal of Industrial Organization* 7, 49-72.
- Pettway, R. , N. Sicherman and T. Yamada, 1990, "Japanese Mergers: Relative Size, Corporate Collectivism, and Shareholders' Wealth", *Pacific-Basin Capital Markets Research* Vol. 1, 181-202.
- Pettway, R. H. and T. Yamada, 1986, "Mergers in Japan and their Impacts upon Stockholders' Wealth", *Financial Management* (Winter), 43-52.
- Pettway, R. H., N. W. Sichertman and K. Spiess, 1993, "Japanese Foreign Direct Investment: Wealth Effects from Purchases and Sales of U.S. Assets", *Financial Management* (Winter), 82-95.
- Prowse, S., 1992, "The Structure of Corporate Ownership in Japan", *Journal of Finance* Vol. 47, No. 3 (July), 1121-1140.
- Ravenscraft, D. and F. M. Scherer, 1989, "The Profitability of Mergers", *International Journal of Industrial Organization* 7, 101-116.
- Ravenscraft, D. and F. M. Scherer, *Mergers, Sell-offs, and Economic Efficiency*. The Brookings Institution, 1987.
- Roll, R., 1986, "The Hubris Hypothesis of Corporate Takeovers", *Journal of Business* 59, 197-216.
- Sheard, P., 1989, "The Main Bank System and Corporate Monitoring and Control in Japan", *Journal of Economic Behavior and Organization* 11, 399-422.
- Shleifer, A. and R. W. Vishny, 1997, "A Survey of Corporate Governance", *Journal of Finance* 52, 737-783.

- Smith, A. J., 1990, "Corporate Ownership Structure and Performance: the Case of Management Buyouts", *Journal of Financial Economics* 27, 143-164.
- Taiwan Free Trade Commission, *Gazette of Taiwan Free Trade Commission*. 1993.
- United Nations Conference on Trade and Development, *World Investment Report 1998: Trends and Determinants*, 1998.
- Usui, A., 2001, "Kabunushikachi To M&A", in: Usui, A., (Eds.) *Value Keiei To M&A Toshi*, Chuo Keizaisha, Tokyo. ("The wealth of shareholders and M&A", in Japanese.)
- Weston, J. F., K. S. Chung, and J. A. Siu, *Takeovers, Restructuring, and Corporate Governance*, 1998 (Prentice-Hall).
- Yeh, T. and Y. Hoshino, "Productivity and Operating Performance of Japanese Merging Firms: Keiretsu-related and Independent Mergers", *Japan and the World Economy*, forthcoming.
- Yeh, T. and Y. Hoshino, "Shareholders' Wealth, Bank Control, and Large Shareholders: An Analysis of Japanese Mergers", *Keiezaimu-kenkyu*, Vol. 21, No. 2. forthcoming.
- Yeh, T. and Y. Hoshino, 2000, "The Effects of Mergers and Acquisitions on Taiwanese Corporations", *Review of Pacific Basin Financial Markets and Policies*, Vol. 3, No. 2, 183-199.
- Yen, S. and I. Peng, 1993, "Taiwan Qiye Guoji Binggou Xuangao Dui Gudong Caifu Yingxiang Zhi Shizheng Yanjiu", *Taiwan Yinghang Jikan* 44(2), 139-173, (July). ("The effects of Taiwanese corporate M&A announcements on the wealth of the stockholders", in Chinese.)
- Yen, S., 1991, "Qiye Hebing Yu Caiwu Ji Xiaoguan Xi Zhi Yanjiu", Master paper at National Cheng-Kung University. ("The relationship between corporate mergers and financial performance", in Chinese.)

**Appendix 1. List of the Taiwanese acquiring firm analyzed in Chapter 3**

The Initial Announcement Date of M&A	Name of the Acquiring Firm
1987/04/11	LITON
1987/10/14	NAN YA
1988/01/20	YUEN FOONG YU
1988/05/28	TAIWAN FLUORESCENT
1989/11/21	HOTEL GARDEN
1989/12/12	USI FAR EAST
1990/03/06	MICROTEK
1990/07/30	PICVUE
1990/08/11	TAIWAN PINEAPPLE
1990/08/18	SILITEK
1991/07/01	CHINA RUBBER
1991/07/01	TAIWAN CEMENT
1992/02/13	MITAC
1992/02/17	EVERGREEN MARINE
1992/02/18	MICROELECTRONICS
1992/02/29	U MING
1992/09/12	WEI CHUAN
1992/09/22	FIRST HOTEL
1992/11/27	MERIDA
1992/12/12	A/D/I

**Appendix 2. List of the Japanese merging firms analyzed in Chapter 4**

Merger Completion Year	Name of the Acquiring Firm
77	ASICS
78	SODA NIKKA
78	SEIREI INDUSTRY
79	SHOWA DENKO
78	OJI PAPER
79	MARUZEN OIL
80	LION
80	TOYO PULP
81	MARUETSU
81	JIDOSHA BUHIN KOGYO
82	SEIKITOKYU KOGYO
82	TOYOTA MOTOR
82	SUMITOMO HEAVY INDUSTRIES
83	CO-OP CHEMICAL
82	KAKEN PHARMACEUTICAL
83	YOKOGAWA ELECTRIC
83	KAWASHO
83	KYOCERA
84	KAWASAKI STEEL
84	NIPPON STEEL CHEMICAL
83	TOKYO SANYO ELECTRIC
84	CHUETSU PULP & PAPER
83	MAMIYA OP
84	NIPPEI TOYAMA
85	SHOWA SHELL SEKIYU
84	MITSUBISHI MOTORS
85	JAPAN FOUNDATION ENGINEERING
85	TAITO
85	TOMOKU

Merger Completion Year	Name of the Acquiring Firm
86	COSMO OIL
85	MINEBEA
86	HONSHU PAPER
86	SANYO ELECTRIC
86	FOSTER ELECTRIC
86	SEC
86	TODA
87	MIYAKOSHI
87	TOYO SHUTTER
88	MATSUSHITA ELECTRIC INDUSTRIAL
88	OKURA
88	AUTOMOBILE FOUNDRY
89	NIPPON VALQUA INDUSTRIES
88	NIHON YAMAMURA GLASS
89	NAVIX LINE
89	KING
89	YAMATANE
89	JAPAN TELECOM
90	SANKYU
90	TOSOH
90	mitsubishi materials
91	GODO STEEL
92	TOKAI CARBON
91	TEIJIN
91	ASAHI CHEMICAL INDUSTRY
91	TOYO SHUTTER
92	YUASA TRADING
92	SUMITOMO METAL INDUSTRIES
92	HANSHIN ELECTRIC RAILWAY
92	JAPAN ENERGY



---

Merger Completion Year	Name of the Acquiring Firm
93	UNISIA JECS
93	NIPPON PAPER INDUSTRIES
93	DAIDO HOXAN
93	SUMIKIN BUSSAN
92	SHOWA
93	OJI PAPER
93	ZEXEL
93	MITSUI O.S.K. LINES
93	MISAWA VAN
94	AZWELL
94	TAIHEIYO CEMENT
94	SUN-S
94	MITSUBISHI CHEMICAL
94	SUMITOMO OSAKA CEMENT

---

**Appendix 3. List of the Japanese merging firms analyzed in Chapter 5**

The Initial Announcement Date of M&A	Name of the Acquiring Firm
1982/1/25	TOYOTA MOTOR
1982/4/20	SUMITOMO HEAVY INDUSTRIES
1982/4/22	CO-OP CHEMICAL
1982/4/22	KAKEN PHARMACEUTICAL
1982/9/1	YOKOGAWA ELECTRIC
1983/1/13	KAWASHO
1983/3/31	KYOCERA
1983/7/15	KAWASAKI STEEL
1983/9/14	CHUETSU PULP & PAPER
1984/5/2	SHOWA SHELL SEKIYU
1985/5/28	TAITO
1985/5/28	TOMOKU
1985/8/1	COSMO OIL
1985/10/27	MINEBEA
1985/12/18	HONSHU PAPER
1986/5/2	SANYO ELECTRIC
1986/7/3	SEC
1986/8/22	TODA
1987/5/25	MIYAKOSHI
1987/5/26	TOYO SHUTTER
1987/8/31	MATSUSHITA ELECTRIC INDUSTRIAL
1988/5/28	OKURA TRADING
1988/11/11	NIPPON VALQUA INDUSTRIES
1988/12/7	YAMAMURA GLASS
1988/12/23	NAVIX LINE
1989/11/2	SANKYU
1990/1/11	HITACHI CONSTRUCTION MACHINERY

The Initial Announcement Date of M&A	Name of the Acquiring Firm
1990/3/29	TOSOH
1990/4/10	MITSUBISHI MATERIALS
1990/7/5	NISSIN FOOD PRODUCTS
1990/8/30	GODO STEEL
1990/8/30	TOHO TITANIUM
1990/10/2	TORAY INDUSTRIES
1991/1/1	TOKAI CARBON
1991/1/29	TEIJIN
1991/3/15	NIPPON YUSEN
1991/4/25	ASAHI CHEMICAL INDUSTRY
1991/6/10	CALPIS
1991/9/18	YUASA TRADING
1991/12/24	SUMITOMO METAL INDUSTRIES
1992/2/27	HANSHIN ELECTRIC RAILWAY
1992/3/11	JAPAN ENERGY
1992/3/25	OSG
1992/9/1	DAIDO HOXAN
1992/10/19	SHOWA
1993/1/29	SHIN OJI PAPER
1993/3/19	MITSUMI O.S.K. LINES
1993/6/14	DAIEI
1993/9/20	TOSHIBA TEC
1993/11/11	CHICHIBUONODA CEMENT
1993/11/30	TOYO INK MFG.
1993/12/9	SUN-S
1993/12/24	MITSUBISHI CHEMICAL
1994/3/10	SUMITOMO OSAKA CEMENT
1994/7/26	TAIYO TOYO SANSO
1994/7/28	HITACHI

The Initial Announcement Date of M&A	Name of the Acquiring Firm
1994/11/25	UNIDEN
1995/3/22	mitsui O.S.K. LINES
1995/4/19	JUJIYA
1996/3/29	OJI PAPER
1996/5/8	DAIO PAPER
1996/10/7	mitsui CHEMICALS
1997/2/4	KURAYA
1997/2/12	JAPAN PAPERBOARD INDUSTRIES
1997/2/24	WELFIDE
1997/3/18	JAPAN TELECOM
1997/7/15	TOYOTA MOTOR
1997/7/24	SUZUKEN
1997/10/2	TAIHEIYO CEMENT
1997/11/25	KDD
1997/12/4	JAPAN TOBACCO
1997/12/18	SUMITOMO METAL INDUSTRIES
1997/12/22	mitsubishi RAYON
1998/1/29	NIHON YAMAMURA GLASS
1998/2/27	INES
1998/3/12	KAWASHO
1998/5/22	RENGO
1998/7/30	ASATSU-DK
1998/9/7	TOAGOSEI
1998/10/16	NIPPON LIGHT METAL
1998/10/28	NIPPON MITSUBISHI OIL
1998/10/30	JAPAN TOBACCO
1998/10/30	ATSUGI