

経営財務研究

Japan Journal of Finance
Vol.21 / No.2

Articles

Effects of Asset Securitization on Financing Capacity

Motohiro HAGIWARA

Estimating Default Probabilities Using Financial Statements, Equity and Corporate Bond Prices

Masahiko IWATA

Shareholders' Wealth, Bank Control, and Large Shareholders:
An Analysis of Japanese Mergers

YEH Tsung-ming and Yasuo HOSHINO

Short Paper

Stock Option and Firm Performance: An Empirical Analysis

Yoshiaki MATSUURA

Japan Journal of Finance

— 論文 —

資産流動化の意思決定構造について 萩原 統宏

公開財務情報と株価及び社債市場価格を用いた
倒産確率の推定 岩田 政彦

Shareholders' Wealth, Bank Control, and Large Shareholders:
An Analysis of Japanese Mergers
..... YEH Tsung-ming and Yasuo HOSHINO

— ショート・ペーパー —

ストック・オプション制度の導入に関する実証分析 松浦 義昭

Vol.21 / No.2

2001.12

目次

論文：

資産流動化の意思決定構造について 萩原 統宏 114

公開財務情報と株価及び社債市場価格を用いた倒産確率の推定 岩田 政彦 129

Shareholders' Wealth, Bank Control, and Large Shareholders:
An Analysis of Japanese Mergers

YEH Tsung-ming and Yasuo HOSHINO 150

シヨート・ペーパー：

ストック・オプション制度の導入に関する実証分析 松浦 義昭 167

『経営財務研究双書』総目次 175

雑報——第25回全国大会報告・平成12年度部会報告・投稿規定 183

Shareholders' Wealth, Bank Control, and Large Shareholders: An Analysis of Japanese Mergers

Yeh Tsung-ming

Yasuo Hoshino^(*)

(The University of Tsukuba) (The University of Tsukuba)

ABSTRACT

This study analyzes 89 domestic mergers in Japan during 1981 to 1998. Japanese mergers are associated with negative announcement period of abnormal returns. We find an average -1.01% 3-day cumulated abnormal returns around the initial announcement. Announcement returns are adversely related to the large financial shareholding, particularly by bank shareholding. Bank relation as creditors is not enhancing the bidders' shareholder wealth. In general, Japanese corporate cross-shareholding failed to monitor firms in a manner that maximizes shareholder wealth; however, financial institutional shareholders are behaving more active during the 1990s period.

Key words: Merger, Abnormal Returns, Main Bank, Large Shareholders.

1. Introduction

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⁽¹⁾. 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⁽²⁾. 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

(*) The corresponding author. Yasuo Hoshino, Institute of Policy and Planning Sciences, The University of Tsukuba, 1-1-1 Tennodai, Tsukuba 305-8573 Japan. Tel&Fax: 81-(0)298-535188
E-mail: hoshino@sk.tsukuba.ac.jp.

(1) See Jensen and Warner (1988); Shleifer and Vishny (1997); Weston, et al (1998).

(2) For instance, see Sheard (1989), Hoshi (1990), Aoki et al. (1994), Kaplan et al. (1994), and Kang et al. (1995).

views. A review of relevant literature is given in the next section.

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 enterprises typically is embedded in the complex Japanese keiretsu system and, in theory, serves as a potential monitoring force. We 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). We use mergers as the investigation setting because merger is often an instance representing conflicts of interests between the management and shareholders⁽³⁾. 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. Our study avoids this causality problem because performance (measured by abnormal returns) is only observed over very short periods.

The remaining parts of this paper are arranged as follows. Section two reviews relevant literature. Section three describes the sample and data sources used in the empirical tests. Section four discusses the empirical results. The conclusions are given in the final section.

2. Relevant Literature

2.1 The effects of mergers

The U.S. evidence consistently found that M&As brought about either at best close to zero positive abnormal returns to the bidders' shareholders, while the targets' shareholders gain significantly high abnormal returns (Jensen et al. (1983), Asquith (1983), and Jarrell et al. (1988)). The Japanese evidence showed that shareholders of Japanese merging firms gain positive abnormal returns (Pettway et al. (1986, 1990), Kang et al. (2000), and Usui (2001)).⁽⁴⁾ In general M&As enhanced the wealth of shareholders of Japanese firms more than that of shareholders of the

(3) For example, the managers may initiate merger proposals in pursuit of their own interests, such as empire building or "hubris" --- that managers are overconfident that they can manage the target firm more efficiently (Roll 1986).

(4) All the studies except Pettway et al. (1986, 1990) found significantly positive abnormal returns.

U.S. firms.

On the other hand, the U.S. studies on mergers' effects on operating performances produced somewhat inconsistent results. For instance, Ravenscroft et al. (1989) found profitability declined following a merger, whereas Lev et al. (1972), Smith (1990), Healy et al. (1992), and Cornett et al. (1992) reported an improvement in profitability after the merger. The inconsistency is likely to result from varying sampling firms, investigating period, and sophistication of methodology. However, the studies on Japanese M&As generally indicated disappointing post-merger performance. Hoshino (1981, 1982, 1992), Muramatsu (1986), Odagiri and Hase. (1989), and Yeh and Hoshino (2001) all reported little or deteriorating changes in the merging firms' profitability and growth following mergers.

2.2 The Japanese corporate governance

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.⁽⁵⁾ 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 Jameison 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) presented evidence that banks act mainly to prop up weak keiretsu firms, but their role is primarily to defend creditors', not necessarily shareholders', interests.

(5) For instance, Hoshi et al. (1990) showed that the investments of *keiretsu* firms are less liquidity-constrained because of their closer ties to a major creditor.

3. Sample and Variables

Japanese merger events were mainly identified from the Nihon Keizai Shimbun (Japan Economic Journal). We confine our 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 we obtained 89 merger events ranging from 1981 to 1998. These firms are all publicly traded companies in the Tokyo Stock Exchange so that we 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 we compiled the following variables for each firm. The summary statistics are reported in Table 1.

Table 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 | | |
| Mergers 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 | 1.56% | 1.55% | |
| Pre-announcement average excess returns | 89 | 0.01% | 0.02% | |
| Bank loans/market size | 89 | 19.11% | 17.69% | |
| Main bank loans/market size | 89 | 2.97% | 2.64% | |
| Financial ownership | 89 | 23.72% | 25.35% | |
| Bank ownership | 89 | 15.15% | 15.92% | |
| Insurance ownership | 89 | 7.59% | 7.79% | |
| Securities ownership | 89 | 0.98% | 0% | |
| Corporate ownership | 89 | 4.78% | 4.35% | |
| Individual ownership | 89 | 2.59% | 0% | |
| Director ownership | 89 | 1.43% | 0% | |
| CEO ownership | 89 | 0.97% | 0% | |
| Foreigner ownership | 89 | 1.71% | 0% | |
| Government ownership | 89 | 1.66% | 0% | |

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

As reported in the Panel A of Table 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⁽⁶⁾. Descriptive statistics for the bidders are reported in the Panel B.

Firm size: We 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: We 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%. We 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⁽⁷⁾. The average excess returns for bidders average 0.01%.

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%⁽⁸⁾, 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%⁽⁹⁾. 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.

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⁽¹⁰⁾. 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.

4. Empirical Results

In this section, we first compute the bidders' abnormal returns associated with the initial public announcement of the mergers. Then we investigate the relationships between the abnormal returns and the bidders' governance variables and other control variables. In the univariate analysis, we 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.

(6) The *keiretsu* here refers to the vertical groups such as NKK, Toyota, Toshiba and other commonly known *keiretsu* groups.

(7) 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.

(8) 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.

(9) Shareholding by the bidder's parent company is excluded so that this variable only represents corporate cross-shareholding.

(10) The CEO refers to the chairman or the president of the bidder. In our sample, 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.

4.1 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 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 . We calculated each firm's abnormal returns for the event window from $t = -30$ to the day $t = 30$. Cumulated abnormal return is the summation of the abnormal returns over the event period. The results for abnormal returns are shown in Table 2.

Table 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) | -1.01% | -2.78*** |
| CAR(-2~1) | -0.43% | -1.02 |
| CAR(-3~1) | -0.38% | -0.81 |
| CAR(-3~3) | -1.60% | -2.87*** |
| CAR(-5~5) | 0.03% | 0.04 |
| CAR(-30~-2) | 2.62% | 2.32** |
| CAR(2~30) | -1.42% | -1.25 |
| CAR(-30~30) | 0.19% | 0.12 |

p<0.05. *p<0.01.

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, we 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.

4.2 Univariate tests

We then stratify the sample according to the acquiring firms' governance characteristics. Table 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.

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).

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.

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.

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. Higher individual ownership has a positive effect on the change in the wealth of the firm's shareholders. However, although firms with CEO and directors shareholdings among top 10 shareholders gained positive and higher CAR, the difference 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.

Table 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 | 0.77% | 0.05 | 1.36% | 0.06 |
| Announcements in the 1992-1998 period | 46 | -2.6% | | -1.94% | |
| Not rescue mergers | 69 | -0.91% | 0.89 | -0.28% | 0.88 |
| Rescue mergers | 20 | -1.20% | | -0.58% | |
| Not keiretsu related mergers | 42 | -0.40% | 0.53 | 0.33% | 0.47 |
| Keiretsu related mergers | 47 | -1.49% | | -0.94% | |
| Financial ownership higher than median | 45 | -2.88% | 0.02 | -2.16% | 0.04 |
| Financial ownership lower than median | 44 | 0.97% | | 1.52% | |
| Bank ownership higher than median | 45 | -3.55% | 0.00 | -3.39% | 0.00 |
| Bank ownership lower than median | 44 | 1.66% | | 2.77% | |
| Insurance ownership higher than median | 45 | -2.01% | 0.22 | -1.47% | 0.20 |
| Insurance ownership lower than median | 44 | 0.09% | | 0.81% | |
| Security ownership higher than median | 23 | 0.91% | 0.19 | 1.64% | 0.19 |
| Security ownership lower than median | 66 | -1.63% | | -1.03% | |
| Corporate ownership higher than median | 44 | 0.05% | 0.24 | 0.55% | 0.33 |
| Corporate ownership lower than median | 45 | -1.97% | | -1.21% | |
| Individual ownership higher than median | 28 | 2.30% | 0.01 | 3.05% | 0.01 |
| Individual ownership lower than median | 61 | -2.48% | | -1.90% | |
| Director shareholding higher than median | 15 | 0.47% | 0.45 | 1.74% | 0.30 |
| Director shareholding lower than median | 74 | -1.27% | | -0.77% | |
| CEO shareholding higher than median | 15 | 0.47% | 0.45 | 1.74% | 0.30 |
| CEO shareholding lower than median | 74 | -1.27% | | -0.77% | |
| Foreigner shareholding higher than median | 19 | -0.58% | 0.87 | -0.57% | 0.92 |
| Foreigner shareholding lower than median | 70 | 1.08% | | -0.28% | |
| Bank loans higher than median | 45 | -2.18% | 0.16 | -1.41% | 0.23 |
| Bank loans lower than median | 44 | 0.25% | | 0.74% | |
| Main bank loans higher than median | 44 | -1.59% | 0.48 | -0.84% | 0.59 |
| Main bank loans lower than median | 45 | -0.37% | | 0.14% | |

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.

Our 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.

4.3 Multivariate tests

We then regress the merging firm's cumulated abnormal returns from $t = -1$ to $t = 1$ on the bidders' ownership variables and other control variables⁽¹¹⁾. All equations include the control variables for announcement period, and pre-announcement performance⁽¹²⁾, firm size, rescue merger, and keiretsu-related merger. Table 4 reports the results for the cross-sectional ordinary least squares (OLS) regressions.

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 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⁽¹³⁾.

(11) To test the robustness, we 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.

(12) Regressions using pre-announcement cash flow ratio and average excess returns produced similar results. We only report the results of analyses using pre-announcement cash flow ratio.

(13) Instead of individual shareholding variable, using director or CEO shareholding produced similar results.

Table 4. The cross-sectional regressions of the CAR (t=-1 to 1) on ownership variables and control variables.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| N | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| Adjusted R square | 0.074 | 0.093 | 0.083 | 0.081 | 0.116 | 0.112 | 0.115 |
| F (significance) | 1.706 (0.094) | 1.818 (0.065) | 1.665 (0.092) | 1.649 (0.096) | 2.157 (0.029) | 1.925 (0.044) | 1.952 (0.041) |
| (Constant) | -0.091 | 0.615 | -0.169 | 0.429 | -0.182 | 0.401 | -0.172 |
| 1992-1998 period | -0.040 | 0.023 | -0.028 | 0.130 | -0.030 | 0.119 | -0.024 |
| Cash Flow ratio | 0.375 | 0.434 | 0.425 | 0.382 | 0.327 | 0.544 | 0.420 |
| Log (market value firm size) | 0.013 | 0.428 | 0.020 | 0.286 | 0.021 | 0.263 | 0.020 |
| Rescue merger | -0.005 | 0.806 | -0.006 | 0.739 | -0.006 | 0.752 | -0.006 |
| Keiretsu-related merger | -0.008 | 0.641 | -0.010 | 0.565 | -0.011 | 0.531 | -0.010 |
| Bank borrowings | 0.008 | 0.886 | | | | | |
| Main bank borrowings | | 0.359 | 0.372 | 0.584 | 0.378 | 0.397 | 0.377 |
| Financial shareholding | -0.212 | 0.026 | | | | | |
| Bank shareholding | | -0.372 | 0.005 | -0.372 | 0.006 | -0.367 | 0.007 |
| Insurance shareholding | | -0.067 | 0.635 | -0.086 | 0.361 | -0.066 | 0.643 |
| Security shareholding | | 0.062 | 0.898 | 0.032 | 0.949 | 0.061 | 0.901 |
| Corporate shareholding | 0.039 | 0.525 | 0.023 | 0.671 | 0.023 | 0.672 | 0.025 |
| Foreigner shareholding | 0.120 | 0.368 | | | | | |
| Individual shareholding | 0.137 | 0.337 | 0.152 | 0.300 | 0.152 | 0.300 | 0.147 |
| Main bank borrowings*lower cash flow | | | -0.255 | 0.667 | | | |
| Main bank borrowings*1992-1998 period | | | | | | | |
| Financial shareholding*1992-1998 period | | | | | 0.333 | 0.052 | |
| Bank shareholding*1992-1998 period | | | | | | | |
| Insurance shareholding*1992-1998 period | | | | | | | |
| | | | | | | 0.408 | 0.106 |
| | | | | | | | 0.473 |
| | | | | | | | 0.091 |

* indicates interaction with dummy variable.

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 our sample. 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 bidder's abnormal returns through the analyses. Our results present no supporting evidence for the main bank's roles in enhancing the shareholders' wealth.

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, our 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, we 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⁽¹⁴⁾.

Our multivariate results are not supporting the notion that Japanese main banks (as well as banks) are not acting in a way that enhances the bidding firms' shareholder value. Our result is inconsistent with Kang et al. (2000), whose findings support the main banks' monitoring roles. However our sample contains mergers from 1981 to 1998, while Kang et al. (2000) analyzed cases

(14) We 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.

from 1977 to 1993. More than half of our sample 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.

Another important finding is that large Japanese corporate shareholders (financial or non-financial), on average, are not active in monitoring firms in a manner that enhances the shareholders' value. Instead they are mainly serving as "stable" shareholders, insulating the managers from outside pressure such as hostile takeovers. Bank shareholders are particularly detrimental to the wealth of bidders' shareholders. Boehmer (2000) found a similar negative effect of German banks on the bidders' firms. However, our study indicates signs of Japanese institutional shareholders acting more actively in monitoring firms during the 1990s decade.

5. Conclusions

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 studies investigate 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, our study analyzes mergers in the 1980s and 1990s period, and there is no comparable Japanese study for this period.

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. Large corporate shareholders, financial or non-financial, are not active in monitoring the firms, failing to enhance the wealth of bidders' shareholders. The results suggest that the corporate cross-shareholding arrangements are likely to lead to management entrenchment. Besides, our 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.

We 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.

Our evidence concludes that Japanese corporate cross-shareholding arrangements are not effectively monitoring firms. To make matters worse, inactive large financial shareholders lead to management entrenchment. We also find no evidence that main banks monitor firms in a manner that enhances the shareholder wealth. However, we do find signs that Japanese financial institutional shareholders, such as insurance shareholders, are becoming more active in monitoring

ing the firms in the later-than-1991 period.

Acknowledgements

An earlier version of the paper under the title "Ownership Structure, Board, Bank Control and Shareholders' Wealth: From Evidence of Japanese Acquirers" was presented at the 9th Conference of Nippon Finance Association, Tokyo, Japan, 2-3 June 2001. The authors thank Professor H. Miyajima, Professor T. Wakasugi, Professor T. Yamada, and other participants of the conference for helpful comments. The authors are grateful to the editor and two anonymous referees of the journal for comments that led to improvements in the paper. We acknowledge financial support from the International Centre for the Study of East Asian Development (ICSEAD) for this project, and Hoshino acknowledges the Grant-in-Aid for Scientific Research from Ministry of Education, Culture, Sports, Science and Technology of Japan. We are grateful to Tokyo Stock Exchange for providing stock price data, Ms. Akiko Takano of the University of Tsukuba for programming assistance, and Mr. Thomas Mayer for proofreading this paper.

Appendix

List for the Japanese merging firms and the announcement dates.

| Date | Merging firms | | |
|------------|------------------------------|------------|--------------------------------|
| 1981/12/31 | TOYOTA MOTOR | | AL |
| 1982/3/11 | MITSUBISHI RAYON | 1988/5/28 | OKURA |
| 1982/4/20 | SUMITOMO HEAVY INDUSTRIES | 1988/11/12 | NIPPON VALQUA INDUSTRIES |
| 1982/4/22 | KAKEN PHARMACEUTICAL | 1988/12/8 | NIHON YAMAMURA GLASS |
| 1982/4/23 | CO-OP CHEMICAL | 1989/5/3 | CHUETSU PULP & PAPER |
| 1982/9/1 | YOKOGAWA ELECTRIC | 1989/5/18 | FUJI HEAVY INDUSTRIES |
| 1982/12/14 | SHOWA SHELL SEKIYU | 1989/9/20 | SHIKOKU CHEMICALS |
| 1982/12/25 | KAWASHO | 1989/11/2 | SANKYU |
| 1983/3/31 | KYOCERA | 1990/1/12 | HITACHI CONSTRUCTION MACHINERY |
| 1983/7/16 | KAWASAKI STEEL | | |
| 1983/9/16 | CHUETSU PULP & PAPER | 1990/3/30 | TOSOH |
| 1983/10/25 | COSMO OIL | 1990/4/11 | MITSUBISHI MATERIALS |
| 1985/5/29 | TAITO | 1990/7/6 | NISSIN FOOD PRODUCTS |
| 1985/5/29 | TOMOKU | 1990/8/31 | GODO STEEL |
| 1985/10/27 | MINEBEA | 1990/8/31 | TOHO TITANIUM |
| 1985/12/18 | HONSHU PAPER | 1990/10/3 | TORAY INDUSTRIES |
| 1986/2/6 | SEC | 1991/1/30 | TEIJIN |
| 1986/5/3 | SANYO ELECTRIC | 1991/3/15 | NIPPON YUSEN |
| 1986/8/23 | TODA | 1991/4/26 | ASAHI CHEMICAL INDUSTRY |
| 1987/5/26 | TOYO SHUTTER | 1991/6/10 | CALPIS |
| 1987/5/26 | MIYAKOSHI | 1991/7/2 | TOKAI CARBON |
| 1987/8/31 | MATSUSHITA ELECTRIC INDUSTRI | 1991/9/18 | YUASA TRADING |

| | | | |
|------------|---------------------------|------------|-----------------------------|
| 1991/12/24 | SUMITOMO METAL INDUSTRIES | 1996/5/9 | DAIO PAPER |
| 1992/2/28 | HANSHIN ELECTRIC RAILWAY | 1996/9/9 | mitsui CHEMICALS |
| 1992/3/1 | JAPAN ENERGY | 1997/1/31 | JAPAN PAPERBOARD INDUSTRIES |
| 1992/3/26 | OSG | 1997/2/5 | KURAYA |
| 1992/7/2 | UNISIA JECS | 1997/2/25 | WELFIDE |
| 1992/7/8 | NIPPON PAPER INDUSTRIES | 1997/3/12 | JAPAN TELECOM |
| 1992/7/9 | DAIEI | 1997/7/16 | TOYOTA MOTOR |
| 1992/9/2 | DAIDO HOXAN | 1997/7/25 | SUZUKEN |
| 1992/10/20 | SHOWA | 1997/10/3 | TAIHEIYO CEMENT |
| 1993/1/29 | OJI PAPER | 1997/11/19 | KDD |
| 1993/3/20 | MITSUI O.S.K. LINES | 1997/12/5 | JAPAN TOBACCO |
| 1993/6/14 | DAIEI | 1997/12/19 | SUMITOMO METAL INDUSTRIES |
| 1993/9/18 | TOSHIBA TEC | 1997/12/23 | MITSUBISHI RAYON |
| 1993/11/12 | TAIHEIYO CEMENT | 1998/1/30 | NIHON YAMAMURA GLASS |
| 1993/12/1 | TOYO INK MFG. | 1998/2/9 | RENGO |
| 1993/12/9 | SUN-S | 1998/2/27 | INES |
| 1993/12/24 | MITSUBISHI CHEMICAL | 1998/3/13 | KAWASHO |
| 1994/3/10 | SUMITOMO OSAKA CEMENT | 1998/7/30 | ASATSU-DK |
| 1994/7/27 | TAIYO TOYO SANSO | 1998/9/8 | TOAGOSEI |
| 1994/7/29 | HITACHI | 1998/10/17 | NIPPON LIGHT METAL |
| 1994/11/26 | UNIDEN | 1998/10/28 | NIPPON MITSUBISHI OIL |
| 1995/3/23 | MITSUI O.S.K. LINES | 1998/10/31 | ATSUGI |
| 1995/4/20 | JUJIYA | 1998/10/31 | JAPAN TOBACCO |
| 1996/3/30 | OJI PAPER | | |

《References》

- [1] 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) pp. 353-408.
- [2] Asquith, P. (1983), "Merger Bids, Uncertainty, and Stockholder Returns", *Journal of Financial Economics* 11, pp. 51-83.
- [3] Boehmer, E. (2000), "Business Groups, Bank Control, and Large Shareholders: An Analysis of German Takeovers", *Journal of Financial Intermediation* Vol. 9, No.2, pp.117-148.
- [4] Cornett, M. M. and H. Tehranian (1992), "Change in Corporate Performance Associated with Bank Acquisitions", *Journal of Financial Economics* 31, pp. 211-234.
- [5] 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, pp. 320-335.
- [6] Gibson, M. (1995), "Can Bank Health Affect Investment? Evidence from Japan", *Journal of Business* 68, pp.281-308.
- [7] Healy, P. M., K. G. Palepu and R. S. Ruback (1992), "Does Corporate Performance Improve after Mergers?", *Journal of Financial Economics* 31, pp. 135-175.
- [8] Hoshi, T., A. Kashyap, and D. Scharfstein (1990), "The Role of Banks in Reducing Financial Distress in Japan", *Journal of Financial Economics* 27, pp. 67-88.
- [9] Hoshino, Y. (1981), *Kigyo Gappei no Keiryō Bunseki*, Hakuto Shobo, Tokyo. (Quantitative Analysis of Corporate Mergers, in Japanese.)
- [10] Hoshino, Y. (1982), "The Performance of Corporate Mergers in Japan", *Journal of Business Finance and Accounting* 9, pp. 153-165.
- [11] Hoshino, Y. (1992), *Chushyo Kinyukikan no Gappei Bunseki*, Taga Publication, Tokyo. (Analysis on Mergers among Small and Medium-sized Financial Institutions, in Japanese.)
- [12] 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, pp. 535-556.
- [13] 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, pp. 49-68.
- [14] Jensen, M. (1986), "Agency Costs of Free Cash Flows, Corporate Finance, and Takeovers", *American Economic Review* 76, pp. 323-329.
- [15] Jensen M. C. and R. S. Ruback (1983), "The Market for Corporate Control: The Scientific Evidence", *Journal of Financial Economics* (April), pp. 5-50.
- [16] Jensen, M. C. and J.B. Warner (1988), "The Distribution of Power among Corporate Managers, Shareholders, and Directors", *Journal of Financial Economics* 20, pp. 3-24.
- [17] Kang, J., and A. Shivdasani (1995), "Firm Performance, Corporate Governance, and Top Executive Turnover in Japan", *Journal of Financial Economics* 38, pp. 29-58.
- [18] 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, pp. 1-22.
- [19] 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, pp. 2197-2218.
- [20] Kang, J., and R. Stulz (2000), "Do Banking Shocks Affect Borrowing Firm Performance?", *Journal of business* 73, pp. 1-23.
- [21] Kaplan, S. N., and B. Minton (1994), "Appointments of Outsiders to Japanese Boards: Determinants and Implications for Managers", *Journal of Financial Economics* 36, pp. 225-258.
- [22] Lev, B. and G. Mandelker (1972), "The Microeconomic Consequences of Corporate Mergers", *Journal of Business* (January), pp. 85-104.
- [23] Lichtenberg, F. and G. Pushner (1994), "Ownership Structure and Corporate Performance in Japan", *Japan and the World Economy* 6, pp. 239-261.
- [24] Morck, R., and M. Nakamura (1999), "Banks and Corporate Control in Japan", *Journal of Finance*, Vol. 54, No. 1 (February), pp. 319-339.
- [25] Muramatsu, S. (1986), "Zaimu Deta ni Yoru Gappei Kouka no Bunseki", *Kigyokaikei* 38, pp. 60-69. ("An analysis on the effects of mergers by using financial data", in Japanese.)
- [26] Nakatani, I. (1984), "The Economic Role of Corporate Financial Grouping", in: M. Aoki, ed., *Economic Analysis of the Japanese Firms*, Elsevier, New York.
- [27] Odagiri, H. and T. Hase (1989), "Are Mergers and Acquisitions Going to be Popular in Japan too?" *International Journal of Industrial Organization* 7, pp. 49-72.
- [28] Pettway, R., N. Sicherman and T. Yamada (1990), "Japanese Mergers: Relative Size, Corporate Collectivism, and Shareholders' Wealth", *Pacific-Basin Capital Markets Research* Vol. 1, pp. 181-202.
- [29] Pettway, R. and T. Yamada (1986), "Mergers in Japan and their Impacts upon Stockholders' Wealth", *Financial Management* (Winter), pp. 43-52.
- [30] Prowse, S. (1992), "The Structure of Corporate Ownership in Japan", *Journal of Finance*, Vol. 47, No. 3 (July), pp. 1121-1140.
- [31] Ravenscraft, D. and F. M. Scherer (1989), "The Profitability of Mergers", *International Journal of Indus-*

trial Organization 7, pp. 101-116.

- [32] Roll, R. (1986), "The Hubris Hypothesis of Corporate Takeovers", *Journal of Business* 59, pp. 197-216.
- [33] Sheard, P. (1989), "The Main Bank System and Corporate Monitoring and Control in Japan", *Journal of Economic Behavior and Organization* 11, pp. 399-422.
- [34] Shleifer, A. and R. W. Vishny, (1997), "A Survey of Corporate Governance", *Journal of Finance* 52, pp. 737-783.
- [35] Smith, A. J. (1990), "Corporate Ownership Structure and Performance: the Case of Management Buy-outs", *Journal of Financial Economics* 27, pp. 143-164.
- [36] Usui, A. (2001), "Kabunushikachi To M&A", in: A., Usui, ed., *Value Keiei to M&A Tousei*, Chuo Keizai-isha, Tokyo. ("Shareholder Value and M&A", in Japanese.)
- [37] Weston, J. F., K. S. Chung, and J. A. Siu, (1998), *Takeovers, Restructuring, and Corporate Governance* (Prentice-Hall).
- [38] Yeh, T., and Y. Hoshino (2001), "Productivity and Operating Performance of Japanese Merging Firms: Keiretsu-related and Independent Mergers", *Japan and the World Economy*. (Forthcoming)