

Impact of Japanese Mergers on Shareholder Wealth: An Analysis of Bidder and Target Companies

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ABSTRACT AND KEYWORDS	
Abstract	<p>The market for corporate control in the second largest economy in the world behaves very different from that in the U.S. Using a sample of 91 mergers in the period 1982-2003 we document several distinctive features of this market in Japan. First, we show that in stark contrast to the pro-cyclical U.S. merger waves, mergers in Japan tend to be counter-cyclical, both with respect to the general economy as well as with respect to stock market valuations. Second, and again in contrast to the U.S. experience, we find that a significant fraction of Japanese mergers are orchestrated by the main banks; in such cases, mergers are not between two weak companies, but at least one of the merging companies is financially strong. Other distinctive features of Japanese mergers are the positive pre-announcement returns accruing to both bidders and targets, with bidders capturing approximately half the gains that accrue to target firms. We also find differential shareholder wealth effects in the bubble period (1982-1989), the early 1990s, and the post-financial regulation regime (1997-2003). Overall our results point to a market for corporate control that is distinctly less shareholder-centered than that in the U.S. and one where creditors play an important, perhaps dominant, role.</p>
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Impact of Japanese mergers on shareholder wealth

An analysis of bidder and target companies

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Abstract

The market for corporate control in the second largest economy in the world behaves very different from that in the U.S. Using a sample of 91 mergers in the period 1982-2003 we document several distinctive features of this market in Japan. First, we show that in stark contrast to the pro-cyclical U.S. merger waves, mergers in Japan tend to be counter-cyclical, both with respect to the general economy as well as with respect to stock market valuations. Second, and again in contrast to the U.S. experience, we find that a significant fraction of Japanese mergers are orchestrated by the main banks; in such cases, mergers are not between two weak companies, but at least one of the merging companies is financially strong. Other distinctive features of Japanese mergers are the positive pre-announcement returns accruing to both bidders and targets, with bidders capturing approximately half the gains that accrue to target firms. We also find differential shareholder wealth effects in the bubble period (1982-1989), the early 1990s, and the post-financial regulation regime (1997-2003). Overall our results point to a market for corporate control that is distinctly less shareholder-centered than that in the U.S. and one where creditors play an important, perhaps dominant, role.

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1 Introduction

This paper shows that an analysis of mergers not only needs to include detailed data on the merging companies, but also macro-economic and country-specific factors, as these have an important influence on the motives for mergers. Shleifer and Vishny (2003) argue that merger waves coincide with high stock market valuation because overvalued stock will be used to acquire the assets of undervalued or less overvalued companies. According to Mitchell and Mulherin (1996), mergers result from shocks to an industry's economic, technological or regulatory environment. After an industrial shock takes place, assets will be reallocated as quickly and efficiently as possible in the form of M&A activity. Harford (2005) adds that sufficient capital liquidity is necessary to accommodate reallocation of assets. Andrade and Stafford (2004) make a distinction between the "expansionary" and "contractionary" role of mergers, the former increases capital stock of a company, similar to an internal investment, and the latter facilitates consolidation and reduction of a company's asset base. According to the expansion hypothesis, mergers are a means to respond to increasing economic growth and a positive business cycle; a merger increases a company's market power or efficiency and provides possibilities to exploit the market. According to the retardation hypothesis, the contractionary role of mergers is that a company can preserve profits when economic growth is falling. Mergers occur when the overall business cycle is negative, demand falls or competition is rising. A negative business cycle can cause financial difficulties for companies, resulting in corporate bankruptcies or rescue mergers of failing firms (Nelson 1959).

Merger waves are driven by specific factors that influence total M&A activity, whereas merger motives concern individual M&A cases. The synergy motive implies that synergy gains are realized when two companies are combined (Berkovitch and Narayanan 1993; Bradley et al. 1988; Goergen and Renneboog 2003). The hubris motive argues that a bidder company's management overestimates obtainable synergies and therefore overpays for the target company (Berkovitch and Narayanan 1993; Roll 1986; Malmendier and Tate 2003). A rescue merger can be seen as an alternative to bankruptcy for one of the merging companies, which, in general, is the target company (Weston and Mansinghka 1971; Melicher and Rush 1974).

In this paper we examine whether rescue mergers occur in Japan and what role the main bank plays in these mergers. Morck and Nakamura (1999) show that main banks act in the interest of creditors instead of shareholders. Bankers are appointed to the board of directors of companies with poor performance and low liquidity. Their evidence supports the "bank

power hypothesis". When we relate the bank power hypothesis to mergers, we can assume that the main bank of a company in financial distress will attempt to arrange a merger of a weak company with a stronger company. The merger will protect the main bank's interests as a creditor and is not necessarily motivated by the desire to increase shareholder wealth. Kang et al. (2000) investigate bidder returns in mergers with 108 unlisted targets and 46 listed targets during the period 1973-1993, of which 45 percent occurs in the period 1988 and 1992. They find significant positive abnormal returns for bidder companies that are affiliated with a main bank and conclude that the main bank enhances shareholder wealth.

More recent research, although not primarily focused on the role of the main bank, presents mixed results on merger motives. Arikawa and Miyajima (2007) investigate the period from 1991 to 2004 and find that the second merger wave in Japan was caused by economic shocks. They demonstrate that during the wave the role of mergers was both reactionary and expansionary; industries with negative shocks (negative changes to growth opportunities and decreasing sales) experienced larger M&A deals as well as industries with positive shocks. At a firm level they find that target companies are companies with lower growth opportunities and high leverage, which suggests that M&A is used as a means of corporate restructuring during this period. Kruse et al. (2007) investigate 69 mergers of companies listed on the Tokyo Stock Exchange during 1969 to 1999. They find that operating performance improves after the merger, especially for inter-industry mergers. They only make a comparison between the time-periods 1969-89 and 1990-99 in relation to changes in employment, and find that this is positively related to post-merger performance for mergers in the period 1969-89. There is no relation between operating performance and changes in employment during 1990-99, existing relationships among merging firms, and distressed targets.

Lin et al. (2008) examine whether bidder companies in Japan are motivated by hubris. They find that high (low) hubris bidder companies have negative (positive) abnormal returns and argue that this is largely consistent with the hubris hypothesis, which argues that over-confident managers engage in value-destroying M&A activities. In their investigation of sub-sample periods they find that hubris is more likely to occur during the period 1999-2003 than 1989-1998.

This paper reviews the results on the main bank as indicated by Morck et al. (1999) and Kang et al. (2000). We investigate 91 mergers between listed companies in the period 1982-2003 and examine whether the main bank is involved in mergers in which a failing firm is involved. We argue that a main bank, being interested in payment of interest and repayment of its loans,

is less likely to be concerned in periods of high economic growth than in times of economic recession. In the latter case companies with falling profitability or in financial distress are likely to be restructured by the main bank.

In previous research the influence of the main bank is examined by primarily focusing on the bidder company. Kang et al. (2000) only mention the influence of the target company's main bank with reference to the fact that the bidder is unlikely to overpay for the target as it can take advantage of the information of the main bank (p.2209). We argue that the main bank of the target company should be most important in the analysis of the bank power hypothesis. When failing firms are involved in mergers, these are most likely the target companies in the transaction. The main bank of the failing company is therefore most concerned about its interests, most active in finding a way to secure these, and its role can only be deduced from the actions towards the failing company. We further argue that only when the merging companies have the same main bank it is possible to maintain that the main bank engages in activities to protect its own interests. The same main bank will gain by arranging a merger of a company in financial distress with a financially strong company, as it can herewith secure its interests. Also, a same main bank that is concerned with its own interests will not coordinate mergers between two failing companies. In summary, if the main bank has a role in mergers in Japan, we can only find this in periods of economic recession and when the merging companies have the same main bank.

As mentioned above, in our research we pay special attention to the specific macro-economic conditions, such as the business cycle and changes in the regulatory structure, as they can influence the type of mergers that companies initiate. We look into the following sub-periods: (i) the period 1982-1989 ("1980s"), (ii) the period 1990-1996 ("Early 90s"), and (iii) the period 1997-2003 ("Late 90s"). The 1980s is characterized by an average annual GNP growth of 5.5% and companies made a lot of investments in machinery and real estate. The investments led to increasing prices in the stock market and of land prices in the late 1980s. The stock market bubble burst at the end of 1989 and the land prices bubble in 1991. During the second period, Early 90s, economic growth slowed down considerably and GNP-growth dropped to an annual average of 1.5%. A lot of companies faced financial difficulties and a lot of banks coped with non-performing loans. The third period, Late 90s, is typified by the aggravation of the financial difficulties and various amendments to laws related to M&A and ownership, such as the lifting of the ban on pure holding companies. In 1997 the severity of the non-performing loan problems of Japanese financial institutions became evident with

bankruptcies of the Hokkaido Takushoku Bank and Yamaichi Securities Company, and the Long-Term Credit Bank of Japan and Nippon Credit Bank in respectively 1998 and 1999. Consolidated accounting and reporting requirement of investments at market value put pressure on companies to sell shareholdings in companies and banks. Miyajima and Fumiaki (2005) indicate that selling of bank shares was the result of high risk (non-performing loan problems) and low return. The unwinding of shares by companies, combined with the banking crisis in 1997, subsequently resulted in banks selling their shareholdings in companies (Scher 2001; Miyajima and Fumiaki 2005).

Second, we investigate the influence of the main bank. Previous research argues that the main bank relationships have started to weaken in recent years. The length of our sample period allows a good examination of whether and how the main bank's influence on merger activity changed in recent years. In particular, we focus on the influence of the main bank when the merging companies have the same main bank.

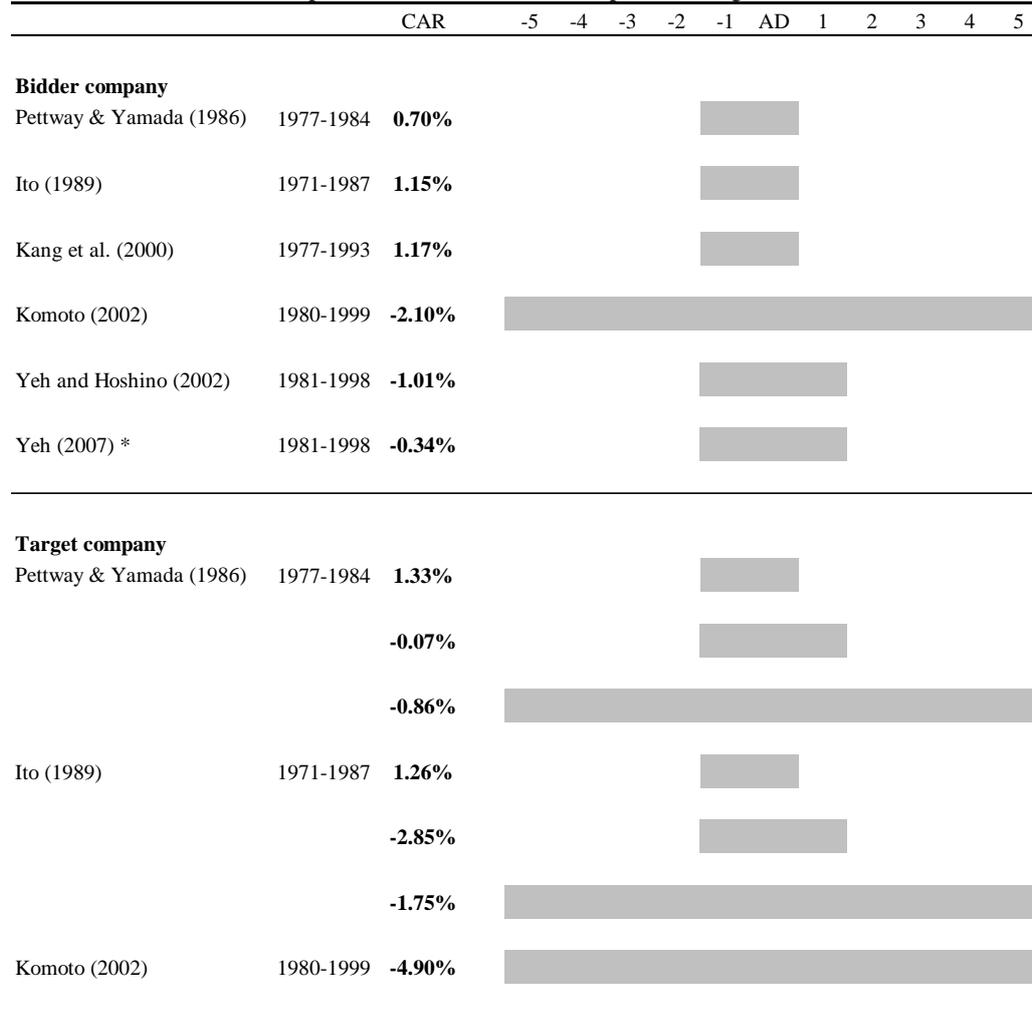
Third, we investigate the influence of financial distress on shareholder wealth and the role of the main bank.

2 Previous research

Previous research on Japanese domestic mergers shows that bidder companies have a positive stock price effect up to the announcement date of the merger, but this effect turns negative thereafter. Similar results are found for target companies, the abnormal returns before the announcement date are only slightly more positive than bidder companies.

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FIGURE 1 CAR results of previous event studies on Japanese mergers



* Sample includes 109 mergers and 36 tender offers.

Pettway and Yamada (1986) examine the period 1977 to 1984 and find, for their 16 observations, positive returns for the bidder companies around the announcement date. The abnormal return at [-1] is significant at 0.6% and the Cumulative Abnormal Return (CAR) for the 2-day period [-1,0] is positive at 0.70%, but insignificant. Ito (1989) investigates 31 mergers between listed companies in the period 1971 to 1987, covering the period of Pettway and Yamada. He finds a significantly positive CAR of 1.15% for [-1,0]. Although insignificant, the CAR becomes negative when the period around the announcement date is expanded. This negative abnormal return for the expanded period is confirmed by Komoto (2002) who examines mergers in the period 1980 to 1999. In his sample of 88 mergers between industrial companies, he finds a negative CAR of -2.1% for the period [-5,+5]. Yeh and Hoshino (2002) investigate 89 mergers in the period 1981-98 and find a significant negative CAR of -1.01% for the period [-1, 1]. Yeh (2007) looks into 109 mergers and 36 tender offers during the years from 1981 to 1998. For the period [-1, 1] he finds a insignificant negative CAR of -0.34%,

and for the period $[-10, 1]$ a significant positive CAR of 1.44%. Kang et al. (2000) investigate bidder returns over the period 1977 to 1993. They confirm the positive cumulative abnormal return for the period $[-1, 0]$ found in previous research with a CAR at 1.17%

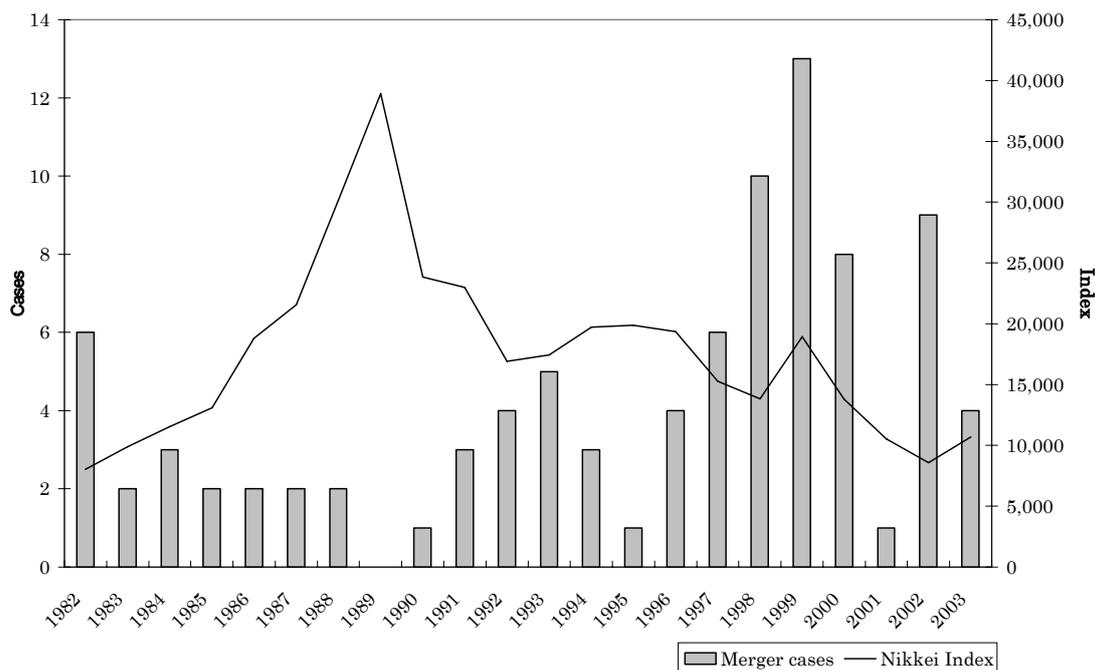
For target companies Pettway and Yamada (1986) find a significant positive abnormal return of 1.57% at $[-1]$ and a significant negative abnormal return of -1.4% at $[+1]$. The resulting CARs for the periods $[-1, 0]$ and $[-1, +1]$ are respectively positive at 1.33% and negative at -0.07%. The CAR for the longer interval $[-5, +5]$ results in a negative CAR of -0.86%. Ito (1989) finds similar results for the 31 target companies in his sample; the CAR for $[-1, 0]$ is positive at 1.26%, but turns negative for the periods $[-1, +1]$ and $[-5, +5]$ at -2.85% and -1.75% respectively. Komoto (2002) finds a negative cumulative abnormal return of -4.9% for the period $[-5, +5]$.

3 Data

We look into domestic mergers between non-financial companies in the 22-year period from 1 January 1982 until 31 December 2003. Our sample consists of bidder and target companies listed on either the First Section or Second Section of the Tokyo Stock Exchange (TSE). To obtain our data-set we first collect information on all companies that were delisted from TSE during the sample period. Next, we investigate whether the delisted companies were engaged in a merger by examining all press articles related to mergers in the period 1982 to 2003. The press articles are from the *Nihon Keizai Shimbun* (Japan Economic Journal), *Nikkei Sangyo Shimbun* (Industrial Journal), *Nikkei Ryutuu Shimbun* (Distribution Journal), and *Nikkei Kinyuu Shimbun* (Finance Journal). If the company was engaged in a merger, we collect the initial public Announcement Date (AD) and the Effective Date (ED) of the merger from the press articles. The AD is defined as the day that the merger announcement appears in the press for the first time. We next looked for the accounting data and stock price data of the merging companies.

Our final sample contains 91 separate mergers over the period 1982-2003. Figure 2 shows the distribution of mergers over the sampling period. Two characteristics are evident, half of all merger transactions occur between 1998 and 2003 and the mergers occur counter-cyclical to the stock market. This appears to indicate that in Japan, rather than shareholders, fixed claimants such as creditors and employees are most important in mergers.

FIGURE 2 Mergers activity in Japan from 1981 through 2003



Notes

- On the left vertical axis the number of mergers is given and on the right vertical axis the Nikkei Index is plotted, measured at year-end value.
- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by investigating all press articles related to mergers in the period 1982 to 2003.

As explained above, we pay special attention to three sub-periods in the sample period. Table 1 shows that 19 mergers of the total sample occur in the 1980s, 21 mergers in the early 90s, and 51 mergers in the late 90s.

We examine the main bank defined as a bank that is a company’s most important lender and belongs to the company’s largest 5 shareholders, as indicated in the publication *keiretsu no kenkyu* for the year of the announcement. Table 1 shows that target companies with a main bank amount to 67% of all mergers, and bidder companies with a main bank to 65%. In 31% of the merger cases the target and bidder company have the same main bank. Mergers in which the merging companies have a main bank are concentrated in the early 90s with 95% for bidder companies and 76% for target companies. In this period more than half of all mergers is between companies with the same main bank. In the periods 1980s and late 90s the percentage of target companies with a main bank slightly exceeds bidder companies. Mergers involving companies with the same main bank are at 29% in the 1980s and 22% in the late 90s. The financial difficulties after the bubble period appear to have stimulated main banks to arrange mergers between related companies. This is confirmed by the percentage of mergers between companies that belonged to the same keiretsu. Same keiretsu mergers were only 26%

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of all mergers in the 1980s, but reached 58% in the 1990s.

Based on the Nikkei Needs industry classification we investigate whether the mergers are intra- or inter-industry mergers. In the 1980s most inter-industry mergers take place with 37% (7 out of the 19 merger cases). The percentage decreased to 24% in early 90s and 10% in late 90s. This indicates that whereas the mergers in the 1980s were motivated by product extension or speculation, the 1990s are primarily aimed at increasing efficiency and cutting costs.

TABLE 1 Characteristics by period

	All	1980s	1990s	Early 90s	Late 90s
Number of mergers	91	19	72	21	51
Bidder main bank	65%	53%	68%	95%	57%
Target main bank	67%	58%	72%	76%	67%
Same main bank	31%	29%	31%	52%	22%
Same keiretsu	52%	26%	58%	62%	57%
Inter-industry	19%	37%	14%	24%	10%
Bidder distressed	35%	58%	29%	33%	27%
Target distressed	51%	63%	47%	67%	39%
Both distressed	27%	47%	22%	29%	20%

Notes

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by examining all press articles related to mergers in the period 1982 to 2003.
- A main bank is defined as a bank that is a company's most important lender and belongs to the company's largest 5 shareholders, as indicated in *keiretsu no kenkyu* for the year of the announcement.
- We define companies as being in financial distress when interest expense exceeds operating income; the interest coverage ratio is lower than 1, in (i) the last fiscal year prior to the merger, or (ii) in two of the four years before the merger.
- Based on the listing on the TSE we determine whether it is an inter-industry or intra-industry merger.

We define financial distress following Hoshi, Kashap and Scharfstein (1990) and select companies that experience a cash-flow crisis: companies are in financial distress when interest expenses exceed operating income, the interest coverage ratio is lower than 1, in (i) the last fiscal year prior to the merger, or (ii) in two of the four years before the merger. Mergers involving a distressed bidder are most frequent in the 1980s with 58%. Mergers with a distressed target are at the same level in the 1980s and early 90s with respectively 63% and 67% of the cases. Mergers involving two distressed companies are most frequent in the 1980s at 47%. Overall, one third of the mergers involves a distressed bidder and in half of all merger cases a distressed target is involved. The percentage of mergers involving two distressed companies is highest in the 1980s and lowest in the late 90s.

Table 2 combines our findings on financial distress of the merging companies and the presence of a same main bank by period. The table shows that in the 1980s, the main bank

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was primarily involved in mergers between strong companies (67%), whereas mergers without a same main bank were for 62% between two weak companies. Most interesting in this period is that whereas in not same main bank mergers two weak companies were combined as an attempt to survive, the same main bank did not engage in these activities as it would not secure its interests as creditor.

In the Early 90s we find that in same main bank mergers, the mergers were predominantly (45%) between a strong bidder company and weak target company. With the merger, the main bank tried to secure its own interests at the weak target company. The merging companies in not same main bank were both weak in 40% of the cases and, similar to the 1980s appear to be an attempt to improve profitability by combining two failing companies.

TABLE 2 Classification of merging companies by financial health

		ALL		Same Main Bank		Not Same MB	
		Strong Bidder	Weak Bidder	Strong Bidder	Weak Bidder	Strong Bidder	Weak Bidder
ALL	Strong Target	42%	8%	43%	11%	41%	6%
	Weak Target	23%	27%	29%	18%	21%	32%
1980s	Strong Target	26%	11%	67%	17%	8%	8%
	Weak Target	16%	47%	0%	17%	23%	62%
Early 90s	Strong Target	29%	5%	27%	9%	30%	0%
	Weak Target	38%	29%	45%	18%	30%	40%
Late 90s	Strong Target	53%	8%	45%	9%	55%	8%
	Weak Target	20%	20%	27%	18%	18%	20%

Note

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by examining all press articles related to mergers in the period 1982 to 2003.
- A main bank is defined as a bank that is a company's most important lender and belongs to the company's largest 5 shareholders, as indicated in *keiretsu no kenkyu* for the year of the announcement.
- We define companies as being in financial distress when interest expense exceeds operating income; the interest coverage ratio is lower than 1 in (i) the last fiscal year prior to the merger, or (ii) in two of the four years before the merger.
- A strong company is not in financial distress, a weak company is in financial distress.

In the Late 90s we see a strategy of the main bank that is slightly different from the Early 90s; mergers between a strong bidder and weak target are at 27% and between two strong companies at 45%. Regarding the strong company mergers we assume that the increasing amount of banks' non-performing loans have encouraged the same main banks to arrange mergers of strong(er) companies to prevent more financial problems. Similar to the preceding periods, the main bank is not involved in mergers contrary to its own interests.

4 Descriptive statistics

Table 3 shows descriptive statistics of the companies in the sample. Target companies have assets at a mean of 151 billion yen and median of 51 billion yen. The mean and median of bidders' total assets are considerably higher at 690 billion yen and 199 billion yen. The merging companies were largest in size during the early 90s. The means of total assets are 1,079 billion yen for the bidder companies and 208 billion yen for target companies. The size of the target company relative to the bidder company, on the other hand, is highest in the late 1990s with a mean of 41.7%. This confirms our findings on intra-industry mergers in this period as being aimed at cutting cost. The diversification mergers in the 1980s, on the other hand, were predominantly with small targets.

TABLE 3 Descriptive statistics of sample (in million yen)

Variable	Target		Bidder			
	Mean	Median	Mean	Median		
Total Assets						
All	91	151,609	51,448	690,302	199,709	
1980s	19	141,863	15,895	473,691	122,176	
Early 90s	21	208,165	114,680	1,078,900	701,222	
Late 90s	51	131,952	55,933	610,989	152,572	
Total Assets Target / Total Assets Bidder						
All	91				0.343	
1980s	19				0.138	
Early 90s	21				0.278	
Late 90s	51				0.417	
Main Bank Loans / Debt						
All	63	0.073	0.030	59	0.045	0.011
1980s	11	0.088	0.054	10	0.131	0.042
Early 90s	16	0.047	0.028	20	0.022	0.006
Late 90s	36	0.080	0.026	29	0.031	0.010
Main Bank Shareholding (ownership %)						
All	63	4.3	4.7	59	4.3	4.5
1980s	11	6.0	4.8	10	5.3	5.1
Early 90s	16	4.5	4.8	20	3.8	4.0
Late 90s	36	3.7	4.3	29	4.2	4.5
Common Financial Institution Shareholders (Ownership %)						
All	69	9.8	7.8		10.7	10.0
1980s	15	11.6	8.9		12.9	13.9
Early 90s	20	11.8	10.3		11.8	11.7
Late 90s	34	7.8	7.1		9.0	7.8
Bidder ownership of Target (Ownership %)						
All	41	31.1	32.7			
1980s	12	31.8	32.7			
Early 90s	9	28.2	28.4			
Late 90s	20	31.9	31.4			
Common Corporate Shareholder (Ownership %)						
All	28	24.9	24.9		24.0	21.5
1980s	4	17.4	20.1		19.0	11.9
Early 90s	5	11.1	4.8		16.6	3.5
Late 90s	19	30.1	28.6		27.1	22.5
Large Corporate Shareholder (Ownership %)						
All	27	22.8	18.6	25	26.6	22.7
1980s	4	19.8	17.8	4	21.9	19.6
Early 90s	7	19.4	18.2	3	30.4	28.4
Late 90s	16	25.0	18.9	18	27.0	22.3

Notes

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by investigating all press articles related to mergers in the period 1982 to 2003.
- Accounting data is derived from the Nikkei Needs Tapes.

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- Data on shareholders of the bidder and target companies is retrieved from the publication *keiretsu no kenkyu*.
- A main bank is defined as a bank that is a company's most important lender and belongs to the company's largest 5 shareholders, as indicated in *keiretsu no kenkyu* for the year of the announcement.

For target and bidder companies with a main bank we measure leverage as main bank loans divided by total debt and find means at respectively 7.3% and 4.5%. These main bank loan ratios are for both target companies and bidder companies highest in the 1980s. The increasing stock market and growing economy resulted in a lot of corporate investments partly financed by loans from the main bank. The ratio of bidder companies exceeds that of target companies in the 1980s, but in the other periods the ratio of targets is more than double that of bidder companies, increasing their bankruptcy costs. In late 90s the target companies' mean is 8% compared to 3.1% for bidder companies. The main bank shareholdings are also highest in the 1980s with 6.0% in target companies and 5.3% in bidder companies. In the 1990s the ownership percentages of main banks are between 4% and 5% for the merging companies.

We define common financial shareholders as financial institutions that have share ownership in both the target company and the bidder company. Regarding the influence of common financial shareholders, target companies have the highest shareholding ratio of 11.8% in early 90s, and bidder companies in the 1980s at 12.9%. We can see a strong decline in the late 90s when the unwinding of stable shareholdings started.

Mergers in which the bidder owns shares of the target is at 63% of all mergers in the 1980s, but falls to 40% of all mergers in the late 90s. Bidder companies have an average ownership of 31.1% in target companies, and this ratio is stable over the entire sample period.

The percentage of merger cases involving a common corporate shareholder increases from 21% in the 1980s to 37% in the late 90s. The average ownership percentage of the common corporate shareholder was 30.1% for targets and 27.1% for bidders in the late 90s. A large corporate shareholder is a large shareholder with ownership exceeding 10% in only one of the merging companies. A large corporate shareholder in a target company does not belong to the top ten shareholders of a bidder company, and vice versa. Target companies have a large corporate shareholder in 27 merger cases at an average shareholding of 22.8%, and bidder companies in 25 mergers at 26.6%. In the 1980s both the number of mergers involving a corporate shareholder and the ownership percentage is lowest.

Table 4 shows the return on assets of the bidder and target companies for the entire period and by sub-period. The ROA of all bidder companies and target companies falls slightly in the

three years prior to the merger. After the merger the new company shows an increase in its ROA in the third year. The table also shows the ROA for the three sub-periods and we find strong differences between the profitability of the merged companies.

In the 1980s the ROA of bidder companies is high and falling slightly before the merger. It increases from 6.5% in year -3 to 7.3% in the year -2, but then falls to 5.5% in the year prior to the merger. The ROA of the target declines strongly from 4.8% in the year -3 to 1.7% in the year -1, but remains positive. The ROA in the year following the merger is lower than that of the bidder companies. It increases the following year but thereafter it falls. The sample of 19 mergers in this period consists for 47% of mergers between companies that are both in financial distress and for 29% of mergers in which both have the same main bank. The merger does not result in higher profitability after the merger for the new company.

In the early 1990s the bidder companies' ROA falls slightly from 3.5% in year -3 to 2.8% in the year -1. The ROA of target companies is very low and turns negative in the year prior to the merger at -0.06%. The new company shows a ROA of 2.2% that increases slightly the following years. In the early 1990s we see that bidder companies have a reasonable profitability but that target companies' profitability declines and turns negative in the year prior to the merger. In 52% of the mergers the companies have the same main bank, in 29% both companies are in financial distress and in 67% of the mergers the target company is in financial distress. The mergers are clearly motivated by a rescue of the bad performing target company. The merger results in lower profitability for bidder companies in the year of the merger, but profitability increases thereafter.

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TABLE 4 ROA data of bidders and targets

ROA	n		-3	-2	-1	0	1	2	3
All	Bidder	91 Mean	0.042	0.042	0.036	0.032	0.030	0.029	0.034
		Median	0.035	0.034	0.032	0.028	0.030	0.028	0.035
	Target	Mean	0.024	0.018	0.015				
		Median	0.026	0.020	0.017				
1980s	Bidder	19 Mean	0.065	0.073	0.055	0.039	0.042	0.036	0.034
		Median	0.054	0.055	0.052	0.046	0.044	0.053	0.045
	Target	Mean	0.048	0.035	0.017				
		Median	0.049	0.030	0.013				
Early 90s	Bidder	21 Mean	0.035	0.032	0.028	0.022	0.024	0.026	0.027
		Median	0.036	0.034	0.032	0.024	0.030	0.023	0.027
	Target	Mean	0.012	0.004	-0.006				
		Median	0.026	0.012	0.010				
Late 90s	Bidder	51 Mean	0.036	0.035	0.033	0.033	0.027	0.027	0.038
		Median	0.031	0.031	0.026	0.028	0.020	0.022	0.036
	Target	Mean	0.020	0.018	0.024				
		Median	0.023	0.019	0.022				

Notes

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by investigating all press articles related to mergers in the period 1982 to 2003.
- ROA is calculated as operating profit divided by total assets.
- The accounting data is retrieved from the Nikkei Needs Tapes.

In the late 1990s, the ROA of the bidders remains relatively stable and target companies show the highest ROA in the year prior to the merger (highest of the three years before the merger and compared to the preceding two periods). This leads the new company to have a ROA of 3.3% in the year of the merger, similar to the bidder companies' ROA in the year before the merger. The following two years the ROA is at a lower level of 2.7%, but it increases to 3.8% in the third year after the merger. In the late 1990s both the target and bidder companies have good profitability and the profitability after the merger increases the third year. Mergers involving companies with the same main bank or between companies in financial distress are low at about 20% of all mergers.

5 Results

Abnormal returns are computed using the event-study methodology, following Dodd and Warner (1983). Our test period starts 50 days prior to the announcement date and stops 50 days after. We calculate abnormal returns in three ways. First, compared to normal returns that are determined by calculating betas using daily return data over the 200 trading days preceding the test period, using the TOPIX index as our benchmark. Second, similar as above but the betas are at a weighted average. Third, we calculate abnormal returns as raw returns.

We get similar results for each method of calculation and the calculations below are based on the third method. The daily abnormal return is compounded over various time intervals to get the cumulative average abnormal return (CAR). We use standard t-statistics to test the hypothesis that the average CARs are equal to zero. Table 5 shows several windows of abnormal price returns around the announcement date.

We find that the stock price of the target company starts to rise as early as fifty days before the announcement. The total increase (adjusted for the market) from day -50 to day 0 is 10.9%, of which approximately half occurs in the five days preceding the announcement of the merger (4.7%). By the end of day +5, the gain for target firms is down to 4.5% (cumulative gain from day -50 to day +5). By the end of day +50, target shares recover somewhat to show an average cumulative gain of 5.6%. In contrast to the U.S. evidence, we find that bidder firms in Japan enjoy positive gains in the period leading up to the announcement of the merger. The bidder companies' CAR from day -50 to day 0 is 3.9%. Immediately after the merger announcement, the bidder share price falls (as was the case with the target). The cumulative return from day -50 to day +5 is 1.9% for the bidder, identical to that of the target firm during the same interval. There appears to be no recovery in bidder share prices in the following days – the cumulative bidder return from day +5 to day +50 is insignificant. Based on the data of all companies we are unable to explain the loss in target share value immediately following the merger announcement – cancelled mergers are very rare, in fact, non-existent in our sample.

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TABLE 5 CARs for Japanese targets and bidders in 1982-2003

	All Companies (n = 91)			
	Target CAR		Bidder CAR	
	Mean	Median	Mean	Median
[-50, 0]	0.109	0.098	0.039	0.014
	0.000	0.001	0.034	0.098
[-5, 0]	0.047	0.031	0.018	0.016
	0.000	0.001	0.023	0.044
[-2, 0]	0.024	0.008	0.011	0.006
	0.031	0.036	0.074	0.058
[-1, 0]	0.014	0.002	0.004	0.002
	0.145	0.115	0.515	0.554
[-1, +1]	-0.010	0.000	-0.012	-0.012
	0.466	0.446	0.110	0.087
[0, +2]	-0.037	-0.041	-0.013	-0.011
	0.039	0.010	0.084	0.033
[0, +5]	-0.064	-0.066	-0.020	-0.022
	0.003	0.001	0.031	0.020
[0, +50]	-0.046	-0.031	-0.017	-0.019
	0.063	0.058	0.315	0.194
[-2, +2]	-0.020	-0.007	-0.006	-0.006
	0.260	0.153	0.503	0.293
[-5, +5]	-0.024	-0.034	-0.006	-0.007
	0.264	0.286	0.566	0.432
[-50, +50]	0.056	0.081	0.019	-0.009
	0.074	0.122	0.406	0.786

Notes

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by investigating all press articles related to mergers in the period 1982 to 2003.
- The initial announcement date, i.e. the first day on which the information related to the announcement was public before the end of the trading day, is defined as the day that the merger announcement appears in the press for the first time. The press articles from the *Nihon Keizai Shimbun* (Japan Economic Journal), *Nikkei Sangyo Shimbun* (Industrial Journal), *Nikkei Ryutuu Shimbun* (Distribution Journal), and *Nikkei Kinyuu Shimbun* (Finance Journal) are investigated.

Next we examine how characteristics of the merging companies influence the abnormal returns for the period [-1,+1] (table 6 and table 7). We measure total bank loan leverage as total loans divided by total assets and find that bidder companies with a ratio above the median have a mean CAR at -2.4% and a median CAR at -1.6%, both significant at the 0.05 level. These CARs are not significantly different from companies with leverage below the median, and the other CARs related to leverage are all insignificantly different from zero. Ownership of a bidder company in the target, and by a common shareholder in the target and the bidder company does not have an important influence over CARs. Presence of a large corporate shareholder and being member of the same keiretsu has a minor negative influence on the bidder's abnormal returns; the median CAR of bidder companies with a large corporate shareholder is significantly negative and distinguishable from the median of companies that do not have a large corporate shareholder. Inter-industry mergers are significantly negative for target companies. The mean is negative at -6.8% and the median at -4.7%, both

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distinguishable from the insignificant CARs of target companies in intra-industry mergers.

TABLE 6 CAR [-1, +1] for Japanese bidders and targets categorized by characteristics of the merging companies

		Target CAR [-1,+1]				Bidder CAR [-1,+1]			
		Mean	Median	t-test	Wilcoxon	Mean	Median	t-test	Wilcoxon
All	91	-0.010	0.000			-0.012	-0.012		
		0.466	0.446			0.110	0.087		
Total bank loan ratio above sample median	46	-0.017	0.000	0.483		-0.024	-0.016	1.606	
		0.259	0.368	0.630		0.035	0.033	0.112	
Total bank loan ratio below sample median	45	-0.003	0.000		0.373	0.000	0.000		1.353
		0.888	0.803		0.709	0.998	0.804		0.176
Bidder and target have common shareholder	28	0.010	0.003	0.971		-0.007	0.001	0.536	
		0.691	0.747	0.334		0.637	0.542	0.595	
Bidder and target do not have common shareholder	63	-0.019	-0.001		0.989	-0.014	-0.013		0.557
		0.255	0.249		0.323	0.101	0.077		0.577
Common shareholder over 20%	16	0.006	0.009	0.534		0.010	0.012	1.359	
		0.819	0.755	0.594		0.481	0.423	0.178	
No common shareholder over 20%	75	-0.014	0.000		0.751	-0.017	-0.014		1.632
		0.397	0.340		0.453	0.054	0.021		0.103
Large corporate shareholder in target or bidder	27	0.021	0.000	1.481		-0.017	-0.022	0.404	
		0.241	0.294	0.142		0.324	0.047	0.688	
No large corporate shareholder in target or bidder	64	-0.023	-0.001		1.499	-0.010	0.002		1.738
		0.200	0.134		0.134	0.216	0.549		0.082
Member of same keiretsu	47	-0.026	0.000	1.196		-0.018	-0.015	0.816	
		0.156	0.296	0.235		0.085	0.214	0.417	
Not member of same keiretsu	44	0.007	0.000		0.647	-0.006	-0.011		0.171
		0.743	0.940		0.517	0.604	0.259		0.864
Intra-industry merger	74	0.003	0.001	2.035		-0.011	-0.011	0.308	
		0.842	0.739	0.045		0.204	0.156	0.759	
Inter-industry merger	17	-0.068	-0.047		2.449	-0.017	-0.018		0.270
		0.018	0.011		0.014	0.283	0.394		0.787

Notes

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by examining all press articles related to mergers in the period 1982 to 2003.
- The initial announcement date, i.e. the first day on which the information related to the announcement was public before the end of the trading day, is defined as the day that the merger announcement appears in the press for the first time. The press articles from the *Nihon Keizai Shimbun* (Japan Economic Journal), *Nikkei Sangyo Shimbun* (Industrial Journal), *Nikkei Ryutu Shimbun* (Distribution Journal), and *Nikkei Kinyuu Shimbun* (Finance Journal) are investigated.
- “Common shareholders” are shareholders that have share ownership in both the target company and the bidder company. A “large shareholder” has ownership in either the target or the bidder company. Based on the listing on the TSE we determine whether it is an inter-industry or intra-industry merger.

Table 7 indicates that target companies’ CAR is not significantly different from zero in any of the sub-periods. The returns of the target companies in the periods are not distinguishable from each other as well. The bidder CAR has a mean of -3.1% and median of -3.9% in the early 90s, which are significant at a 0.01 level. In the other two periods the bidder returns are not significantly different from zero. In the comparison of early 90s with late 90s only the median is distinguishable at a 0.05 level. These results indicate that when we examine the total sample, we cannot find significant differences between the sub-periods. We will next turn to the influence of financial distress.

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TABLE 7 CAR [-1, +1] for Japanese bidders and targets by period

Examination by period	n	Target CAR [-1,+1]				Bidder CAR [-1,+1]			
		Mean	Median	t-test	Wilcoxon	Mean	Median	t-test	Wilcoxon
1980s	19	-0.046	-0.004			-0.016	0.003		
Early 90s (1990-1996)	21	0.161	0.207			0.266	0.457		
		-0.022	0.000			-0.031	-0.039		
Late 90s (1997-2003)	51	0.271	0.486			0.000	0.001		
		0.008	0.000			-0.003	0.000		
Comparison 1980s - Early 90s		0.682	0.796			0.809	0.921		
				0.646	0.826			1.027	1.273
Comparison Early 90s- Late 90s				0.522	0.409			0.311	0.203
				0.909	0.830			1.468	2.416
Comparison 1980s - Late 90s				0.367	0.407			0.147	0.016
				1.426	1.347			0.604	0.806
				0.158	0.178			0.548	0.421

Notes

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by examining all press articles related to mergers in the period 1982 to 2003.
- The initial announcement date, i.e. the first day on which the information related to the announcement was public before the end of the trading day, is defined as the day that the merger announcement appears in the press for the first time. The press articles from the *Nihon Keizai Shimbun* (Japan Economic Journal), *Nikkei Sangyo Shimbun* (Industrial Journal), *Nikkei Ryutuu Shimbun* (Distribution Journal), and *Nikkei Kinyuu Shimbun* (Finance Journal) are investigated.

5-1 Financial distress

Table 8 shows the results of our tests to examine the influence of financial distress of the merging companies. We look into the influence of financial distress of target and bidder companies individually and when both are in financial distress. We describe the effect of the three types of financial distress on CAR. We first look into the CAR of target companies and then turn to the CAR of bidder companies.

Target CAR - The table shows that the financial condition of the target and/or the bidder company does not have any significant influence over the CARs of target companies. The CAR for target companies is not significantly different from zero when target companies are in financial distress or not. A similar pattern is visible in case the bidder company is in financial distress, or both companies are in financial distress.

Bidder CAR - The abnormal returns of bidder companies are significantly negative for all merger cases in which a company in financial distress is involved. In mergers in which the target or both companies are in financial distress the mean and median CAR is -3.0% and -2.9% respectively. In merger cases involving a target in financial distress, the means and the medians of the returns are distinguishable from mergers with targets not in financial distress at a 0.05 level. In case the bidder company itself is in financial distress, the mean is -2.4% and the median is -2.5%. Mergers not involving companies in financial distress result in means and medians of bidder returns that are not significantly different from zero.

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TABLE 8 CAR [-1, +1] for Japanese bidders and targets categorized by financial distress

		Target CAR [-1,+1]				Bidder CAR [-1,+1]			
		Mean	Median	t-test	Wilcoxon	Mean	Median	t-test	Wilcoxon
Target in distress	46	-0.018	-0.001	0.593		-0.030	-0.029	2.474	
		0.299	0.296	0.555		0.002	0.001	0.015	
Target not in distress	45	-0.002	0.000		0.635	0.006	0.009		3.401
		0.934	0.990		0.525	0.589	0.245		0.001
Bidder in distress	32	-0.023	-0.001	0.693		-0.024	-0.025	1.206	
		0.309	0.332	0.490		0.033	0.060	0.231	
Bidder not in distress	59	-0.003	0.000		0.748	-0.005	0.000		1.425
		0.863	0.890		0.454	0.583	0.496		0.154
Target and bidder in distress	25	-0.009	0.000	0.029		-0.030	-0.029	1.482	
		0.729	0.809	0.977		0.016	0.021	0.142	
Target and bidder not in distress	66	-0.010	0.000		0.049	-0.005	0.000		1.872
		0.524	0.520		0.961	0.569	0.591		0.061

Notes

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by examining all press articles related to mergers in the period 1982 to 2003.
- The initial announcement date, i.e. the first day on which the information related to the announcement was public before the end of the trading day, is defined as the day that the merger announcement appears in the press for the first time. The press articles from the *Nihon Keizai Shimbun* (Japan Economic Journal), *Nikkei Sangyo Shimbun* (Industrial Journal), *Nikkei Ryutu Shimbun* (Distribution Journal), and *Nikkei Kinyuu Shimbun* (Finance Journal) are investigated.
- A company is qualified as being in financial distress when interest expense exceeds its operating income in the last fiscal year prior to the merger, or in two of the four years prior to the merger.

A significant negative impact on the returns of bidder companies is thus found in mergers involving a target in financial distress. To examine these results in more detail, we conduct various tests for groups of target and bidder companies according to merger cases with a target in financial distress. For these cases we investigate the influence on abnormal returns of the target and bidder companies. We perform tests on the following characteristics, of which we discuss only those with significant results below: (i) target with a main bank, (ii) bidder with a main bank, (iii) merging companies with the same main bank, (iv) distressed bidder, (v) both merging companies distressed, (vi) industry related merger, (vii) keiretsu related, (viii) total debt/total assets ratio, (ix) corporate common shareholder, and (x) sub-periods.

For the 46 mergers involving a target company in financial distress we only find significant differences for the factors (i) bidders with a main bank and (ii) intra- and inter-industry mergers.

Bidders with main bank - Our sample consists of 29 bidder companies with a main bank that merge with a target company in financial distress¹. The mean abnormal return of a distressed target company is significantly negative at -4.1% when the bidder company is affiliated with a main bank. In mergers with a bidder company not affiliated with a main bank the mean is not significantly different from zero. The means of the abnormal returns of target

¹ The bidder companies with a main bank were distributed in the three sub-periods as follows: 1980s in 4 mergers (of 12), early 90s in 14 mergers (of 14), and in late 90s 11 mergers (of 20).

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companies that merge with main bank bidders and non-main bank bidders are distinguishable at a 0.1 level.

The bidder companies with a main bank that merge with a target company in financial distress have a significantly negative mean abnormal return at -4.3%. The mean and median of the abnormal return of bidder companies without a main bank is not significantly different from zero. The means of the abnormal returns of main bank bidders and non-main bank bidders merging a target in financial distress are distinguishable at a 0.1 level.

TABLE 9 Target in financial distress

		Target CAR [-1,+1]				Bidder CAR [-1,+1]			
		Mean	Median	t-test	Wilcoxon	Mean	Median	t-test	Wilcoxon
Bidder with mb	29	-0.041	-0.010	1.734		-0.043	-0.032	1.911	
		0.046	0.442	0.090		0.000	0.008	0.063	
Bidder without mb	17	0.020	0.009		1.593	-0.007	-0.018		1.274
		0.534	0.804		0.111	0.676	0.332		0.203
Intra-industry	35	0.004	0.000	2.419		-0.029	-0.028	0.229	
		0.826	0.597	0.020		0.011	0.017	0.820	
Inter-industry	11	-0.089	-0.065		2.369	-0.034	-0.043		0.155
		0.030	0.065		0.018	0.118	0.227		0.877

Notes

- The sample consists of 91 mergers between Japanese bidder and target companies listed on the Tokyo Stock Exchange for which the announcement date of the merger is between 1 January 1982 and 31 December 2003.
- Information on all companies that were delisted from TSE during the sample period was collected. Next, it was investigated whether the delisted companies were engaged in a merger by examining all press articles related to mergers in the period 1982 to 2003.
- The initial announcement date, i.e. the first day on which the information related to the announcement was public before the end of the trading day, is defined as the day that the merger announcement appears in the press for the first time. The press articles from the *Nihon Keizai Shimbun* (Japan Economic Journal), *Nikkei Sangyo Shimbun* (Industrial Journal), *Nikkei Ryutuu Shimbun* (Distribution Journal), and *Nikkei Kinyuu Shimbun* (Finance Journal) are investigated.
- A main bank is defined as a bank that is a company's most important lender and belongs to the company's largest 5 shareholders, as indicated in *keiretsu no kenkyu* for the year of the announcement.
- Based on the listing on the TSE we determine whether it is an inter-industry or intra-industry merger.

Intra- and inter-industry mergers - Mergers involving targets in financial distress are intra-industry in 35 cases and inter-industry in 11. In inter-industry merger cases the returns of target companies are significantly negative at a mean of -8.9% and median of -6.5%. The cumulative abnormal returns in intra-industry mergers are not significantly different from zero, but the returns are distinguishable from inter-industry mergers at a 0.05 level.

Bidder companies show a significantly negative return for intra-industry mergers with targets in financial distress at a mean of -2.9% and a median of -2.8%. Inter-industry mergers do not have a significant effect on bidders' abnormal returns, and are not distinguishable from returns in intra-industry mergers.

6 Conclusions

The market for corporate control in Japan behaves very different from that in the U.S. Using a sample of 91 mergers in the period 1982-2003 we document several distinctive features of

this market in Japan. First, we show that in stark contrast to the pro-cyclical U.S. merger waves, mergers in Japan tend to be counter-cyclical, both with respect to the general economy as well as with respect to stock market valuations. Second, and again in contrast to the U.S. experience, we find that a significant fraction of Japanese mergers are orchestrated by the main banks; in such cases, a striking pattern emerges. When the main bank is the same for the bidder and target company, its involvement does not create shareholder wealth. The performance of at least one of the merging companies is strong, indicating that the same main bank is primarily motivated to protect its own interests as creditor. This was especially evident in the period after the stock price bubble burst and the same main bank arranged mergers of weak borrowers with a financially strong buyer. In the entire period the same main bank's involvement in mergers between two weak companies is low.

Other distinctive features of Japanese mergers are the positive pre-announcement returns accruing to both bidders and targets, with bidders capturing approximately half the gains that accrue to target firms. We also find differential shareholder wealth effects in the bubble period (1982-1989), the early 1990s, and the post-financial regulation regime (1997-2003). Overall our results point to a market for corporate control that is distinctly less shareholder-centered than that in the U.S. and one where creditors play an important, perhaps dominant, role.

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