



Gains from mergers and acquisitions in Japan



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ARTICLE INFO

Article history:

Received 8 December 2016

Received in revised form 26 January 2017

Accepted 1 February 2017

Available online 3 February 2017

JEL Classification:

G34

G31

ABSTRACT

This study focuses on the dynamics of the market for corporate control in Japan. We evaluate the short-term wealth effects of mergers and acquisitions that take place between January 2000 and December 2014, from the perspectives of shareholders of both the acquiring and the acquired firms. We find that the shareholders of acquiring firms experience no significant wealth effects, but the acquired firms' shareholders reap significant benefits. Given the recency of the data used in this study, we conclude that Japan's market for corporate control has become more competitive and now behaves like those of the United States and other Western nations. We also study the abnormal returns earned by acquiring shareholders over the sixty months following the event and find no discernible pattern of long-term gains. Finally, analyzing the longer-term effects of mergers on the acquiring firm's environmental, social, and governance performance, we find no discernible improvements on any of these fronts.

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1. Introduction

Often referred to as the science of valuation, the discipline of finance has usually focused on the valuation consequences of mergers and acquisitions. The questions investigated, both theoretical and at the practical level, have typically centered around the nature of the gains (or losses) associated with these activities and the motivations of the decision makers. Broadly speaking, the question of valuation can be carried out from the perspective of stakeholders at large: shareholders, creditors, managers, employees, consumers, the society, and the environment. Within such an approach, a Pareto-optimal outcome of a merger or an acquisition would enhance the wealth position of at least one group of its stakeholders without harming any of the others. However, given that the current paradigm of finance maintains that the sole responsibility of the firm is to its shareholders (and that only to maximize the value of their claims on the firm's assets), the literature has almost exclusively emphasized analyzing the consequences of mergers and acquisitions from the perspectives of the shareholders involved.

This study evaluates the consequences of mergers and acquisitions within Japanese markets from three different perspectives: in the short term from the perspective of all shareholders involved; in the longer term from the perspective of acquiring shareholders; and in the longer term from a societal and environmental perspective. We analyze the wealth effects, on both the acquiring and the acquired firms, of mergers and acquisitions that take place during the first 15 years of the twenty-first century. In particular, we are interested in the role played by the acquiring firm's commitment to corporate social responsibility. We then

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¹ The support provided by the Development Bank of Japan as a Shimomura Fellow is gratefully acknowledged.

² Research support provided by the Douglas MacKay Chair is gratefully acknowledged.

look into whether these corporate events create value for the acquiring firm's shareholders over the long term. Finally, we ask how these events affect the longer-term environmental, social, and governance performance of the acquiring firm.

Section 2 further motivates the paper and provides a brief overview of the extant work on the valuation consequences of mergers and acquisitions. Section 3 describes the data and the methods used. Our results are presented and discussed in Section 4, and our conclusions in Section 5.

2. Extant research and hypotheses

The bulk of the research dealing with the valuation consequences of mergers and acquisitions has taken place over the last five decades, in the aftermath of Fama and colleagues' (1969) introduction of the event-study method. A flurry of research papers on the short-term wealth effects of mergers and acquisitions has included the works of Dodd and Ruback (1977), Franks, Broyles, and Hecht (1977), Bradley (1980), Asquith (1983), Eckbo (1983), Dennis and McConnell (1986), Bradley, Desai, and Kim (1988), Franks, Harris, and Mayer (1988), Eckbo and Langohr (1989), Servaes (1991), Walker (2000), Mulherin and Boone (2000), Andrade, Mitchell, and Stafford (2001), Graham, Lemmon, and Wolf (2002), Bae, Kang, and Kim (2002), Moeller, Schlingemann, and Stulz (2005), Ang and Cheng (2006), Alexandridis, Petmezas, and Travlos (2010), and Erel, Liao, and Weisbach (2012).

These studies unanimously conclude that shareholders of target firms experience significantly positive returns on the day of, and the day after, the announcement of these corporate restructuring events. For example, Eckbo (1983) finds significant positive cumulative abnormal returns (CARs) of 6% in the United States, and Eckbo and Langohr (1989) report finding CARs of 16% for acquisitions in the French markets. Evaluating transnational mergers and acquisitions in the Pacific Basin, Desai, Dukas, and Fatemi (1996) also report significant abnormal returns to the target shareholders. Focusing on the deal's tenor, Servaes (1991) finds that these abnormal returns are higher for hostile bids (32%) than they are for friendly bids (22%). And, expanding the window within which these abnormal returns are measured to two weeks, Bradley et al. (1988) find that the target shareholders earn CARs as high as 45%. On the other hand, these studies also find, almost unanimously, that the abnormal returns realized by the acquiring firms are statistically indistinguishable from zero. For example, Asquith (1983) reports that the shareholders of the acquiring firm earn only a small return (of around 0.2%), whereas Andrade et al. (2001) find that such returns are negative, albeit insignificantly so. Moreover, as Dennis and McConnell (1986) report, these negligible returns cannot be attributed to anticipation of the transaction, as the one-month run-up in the acquirer's share price is also negligible.

Finally, and again as measured by abnormal returns around the announcement date, these findings also indicate that in the short term mergers and acquisitions increase the combined value of the acquiring and acquired firms. For example, Bradley et al. (1988) report that an equally weighted portfolio of acquirers and targets earns a 7% abnormal return—not surprisingly, given that the target shareholders gain and the acquirers do not lose. The longer-term effects are reported to be somewhat different. Indeed, while not unanimous, most such evidence indicates that long-term abnormal returns are at best insignificant. For example, Ang and Cheng (2006) report that the abnormal returns for the 36 months following the event are insignificantly negative for cash acquisitions and significantly negative for stock transactions. In sum, the available empirical evidence indicates that, other than the short-term wealth gains accruing to the shareholders of acquired firms, mergers and acquisitions do not create any significant longer-term shareholder benefits. We expect to find similar results in our analysis of the consequences of Japanese firms' mergers and acquisitions.

More recently, a number of studies have investigated the impact of mergers and acquisitions on other stakeholders. For example, Aktas, deBodt, and Cousin (2011) find that acquirers' gains are a positive function of targets' corporate social responsibility (CSR) performance. Deng, Kang, and Low (2013) find that firms with high CSR scores earn higher announcement returns, produce better operating performance after the merger, and perform better when judged according to the value-weighted portfolio of the acquirer and the target. Equally importantly, they find that high-CSR firms generate positive long-term returns for their shareholders. However, to the best of our knowledge, there are no studies of the effects of mergers and acquisitions on the welfare of other stakeholders. This study explores in that direction: specifically, we study the postmerger pattern of changes in the firm's social, environmental, and governance performance. A priori, it is not clear what this pattern would be. ESG performance would improve if the postmerger firm finds it essential to its long-term interest to improve its relationship with these other stakeholders, or if increased visibility and scrutiny make it harder for the firm to externalize its costs. On the other hand, ESG performance could deteriorate if enhanced power makes it easier to externalize costs, or allows the firm to extract more concessions from its other stakeholders (such as regulatory agencies, labor unions, or communities).

2.1. Evidence from Japanese mergers and acquisitions

Japanese mergers and acquisitions have also been extensively examined, by Kang, Shivdasani, and Yamada (2000), Schaik and Steenbeek (2004), Kakuda and Takeda (2006), Hanamura, Inoue, and Suzuki (2011), Mehrotra, van Schaik, Spronk, and Steenbeek (2011), Nogata, Uchida, and Goto (2011), Yeh (2013), and Higgins (2013). Specific details aside, the general conclusion that can be drawn from these studies is that the market for corporate control may behave differently in Japan than it does in the United States and other Western countries.

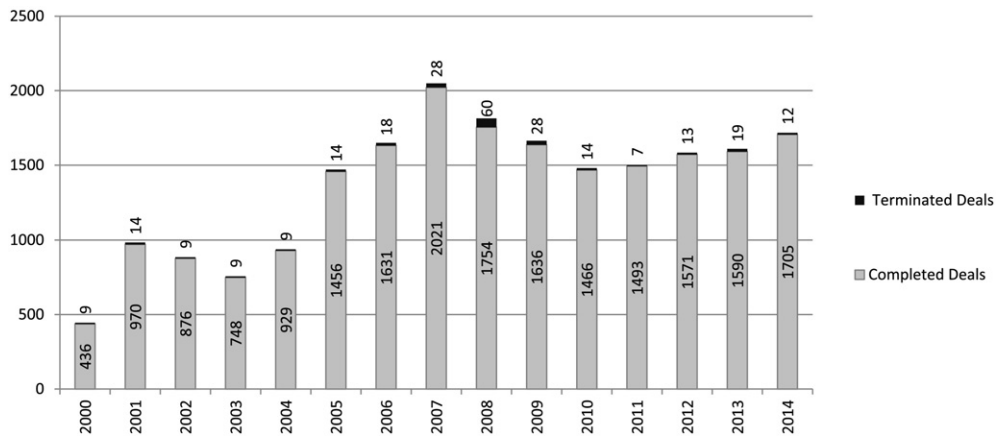


Fig. 1. The frequency of mergers and acquisitions involving a publicly held Japanese firm either as an acquirer or as a target between 2000 and 2014.

Examining the reaction of stock prices of firms involved in domestic Japanese mergers and acquisitions between 1993 and 1997, Kang et al. (2000) find that cumulative abnormal returns for acquiring firms are significantly positive.³ Schaik and Steenbeek (2004) analyze mergers of nonfinancial Japanese firms that took place between 1993 and 2003 and find that bidders realize a positive abnormal return around the announcement date. Unlike Kang and colleagues, they do not find an association between announcement returns and the strength of bidders' relationship with banks. Therefore, given that the time period of their analysis starts when that of Kang and colleagues ends, they argue that their results may indicate that Japan's market for corporate control has evolved so as to diminish the importance of the main bank.

Inoue and Kato (2006) examine mergers and acquisitions that took place between 1990 and 2002 and find that such announcements tend to increase stock prices for both targets and acquiring firms, but more for target firms. Kakuda and Takeda (2006) obtain similar results for 2002–2003, as do Hanamura et al. (2011) for 2000–2007. Inoue and Kato (2006) attribute the difference between Japanese and U.S. markets in the wealth effects of these transactions to the friendly nature of such transactions in Japan and their hostile nature in the United States.

Yeh (2013) examines the market's reaction to the adoption of antitakeover measures by 130 Japanese firms between 2005 and 2007 and finds significant negative wealth effects. However, he finds that, in contrast to findings for the U.S. market, these measures affect neither the managerial behavior nor the postadoption performance of the firm.

Employing data for 1998–2007, Nogata et al. (2011) compare stock price reactions of regulated nonfinancial firms involved in mergers and acquisitions with those of banks and unregulated firms. They find that while unregulated firms and banks experience a significant rise in share price, regulated firms do not. They also find that unregulated firms with stricter governance structures experience a more favorable response.

Mehrotra et al. (2011) focus on 91 mergers of Japanese firms during 1998–2003 and find that mergers in Japan, unlike those in the United States, tend to be countercyclical. They also find that in a significant portion of these mergers a main bank is the common link between the target and the bidder and that, when that is the case, these mergers do not create wealth for the shareholders. Both the acquiring and the target firm experience positive returns before the announcement, but these gains are reversed after the announcement. Ushijima and Schaede (2014) investigate trades between Japanese firms or their wholly or partially owned subsidiaries during 1996–2010 and find that selling a subsidiary generates positive abnormal returns for the buyer but negligible returns for the seller. And when the subsidiary being sold is in the seller's core business, the seller experiences significantly negative returns.

Higgins (2013) finds that acquirers involved in mergers during 1990–2004 do not gain from their acquisitions, and that acquirers with stronger bank ties lose more than do firms with weak bank ties. However, these findings contrast with those of Kang et al. (2000), Schaik and Steenbeek (2004), Inoue and Kato (2006), Kakuda and Takeda (2006), Hanamura et al. (2011), and Nogata et al. (2011) with regard to the wealth effect on acquiring firms.

3. Data, methods, and sample characteristics

The primary sources of data used in this study are Thomson One Banker for details of mergers and acquisitions, Thomson Reuters Asset4 for environmental, social, and governance (ESG) data, and Datastream for company data and returns analysis. To select our sample, we search Thomson One Banker for announcements of all mergers and acquisitions involving a Japanese firm either as the bidder or as a target starting in January 2000 and ending in December 2014. Using the announcement date from Thomson One Banker as the event date, we use Eventus to calculate abnormal returns and cumulative abnormal returns.

³ However, they also report that acquirers experience a significantly negative wealth effect when the acquisition is undertaken for rescue purposes.

Table 1

The frequency of mergers and acquisitions by Japanese acquirers of publicly traded targets with deal values of \$100 million or more, and the means and medians of transaction values for the years 2000–2014.

Year	Numbers of deals announced	Numbers of deals terminated	Mean transaction value (millions of dollars)	Median transaction value (millions of dollars)
2000	50	1	\$1378	\$343
2001	46	1	\$683	\$343
2002	64	0	\$513	\$261
2003	84	1	\$498	\$273
2004	50	2	\$1406	\$256
2005	95	4	\$1353	\$400
2006	83	6	\$829	\$321
2007	76	4	\$449	\$267
2008	75	3	\$794	\$299
2009	68	3	\$781	\$233
2010	48	1	\$888	\$249
2011	56	0	\$831	\$227
2012	64	1	\$919	\$288
2013	52	2	\$688	\$228
2014	47	1	\$778	\$262

We use the value-weighted index as the proxy for market return but also perform robustness checks using the equally weighted index.

Our initial sample is chosen to provide us with a basic understanding of the volume of M&A transactions involving at least one Japanese firm (see Fig. 1). With 2049 deals, the year 2007 witnessed the largest number of M&A activities involving a Japanese firm as one of the parties. However, the global financial crisis slowed down these transactions, with the volume dropping to 1480 deals in 2010. Since then, M&A activity has regained momentum and reached 1717 deals in 2014. Fig. 1 also shows the numbers of terminated (or withdrawn) deals for each of the 15 years covered. The largest number of terminations (60) occurred during the depth of the financial crisis in 2008. The year 2011 witnessed the fewest terminated deals, both in absolute numbers and as a fraction of announced deals.

Working with this population of deals, we next impose the dual requirements that (1) both the acquiring and the acquired firm be publicly traded, and (2) the total value of the announced deal be at least \$100 million. The resulting sample contains 958 transactions. Table 1 reports the distribution of these deals over the 15-year period covered. The Japanese market for corporate control had its banner year in 2005, when 95 transactions each worth more than \$100 million were announced. The largest number of withdrawn deals took place in 2006, with six cancelled transactions. Table 1 also reports the mean and median value of the transactions for each of the 15 years covered. While the annual median values are fairly stable (and fall within a fairly narrow range of \$228 to \$400 million), the mean values are larger and more spread out (falling in the \$449–\$1406 million range).

Beyond these 958 deals, each worth \$100 million or more, in which both parties are publicly traded, the 2000–2014 period also witnessed 430 deals in which the target firm was not publicly traded. Table 2 provides the summary statistics for these deals. Among them, 2012 and 2013 have been the two most active years, with 50 acquisitions each year. As would be expected, these transactions have smaller mean and median values than acquisitions of publicly traded firms. As with the public-public transactions, the annual median values are more stable (ranging between \$153m and \$260m) than the mean values (ranging between \$243m and \$535m). However, because of the relative absence of very-large-value outliers, mean and median values of public-private transactions are much closer to each other.

To arrive at our final sample of deals, we next impose the set of additional requirements that (1) the acquirer hold fewer than 50% of the target shares before the announcement and that it secure majority control as a result of the deal; (2) the deal be completed (not cancelled or withdrawn at a later date); and (3) the acquirer's ESG ratings be available in Asset4's database. ASSET4 reports ESG ratings for more than 4600 firms worldwide. Using more than 750 individual data points and more than 250 key performance indicators (KPIs), it classifies these data into "categories" within each of four major "pillars": corporate governance and economic, environmental, and social performance. The corporate governance pillar consists of five categories: board functions, board structure, compensation policy, shareholders policy, and vision-and-strategy. The second pillar, economic, has three categories: performance, client loyalty and shareholder loyalty. The environmental pillar comprises emission reduction, product innovation, and reduction of resource usage. The last pillar, social, is made up of seven categories: community, diversity, employment quality, health-and-safety, human rights, product responsibility, and training-and-development. Using the data underlying these categories, ASSET4 develops performance indicator scores that are then normalized and adjusted (for skewness and the differential between the mean and the median) and fitted to a bell curve to derive ratings between 0 and 100 for each company. The resulting percentage is therefore a relative measure of performance, z-scored and normalized to distinguish values and position the score between 0 and 100%.⁴ Each firm is ranked separately on its corporate-governance, economic, environmental, and social performance, as well as on its overall ESG performance.

⁴ More specifically, each firm's performance is calculated first as the average value of its indicators. These averages are then used to calculate the average and the standard deviation of all company averages. The standard deviations are then used to center everything around zero.

Table 2

The frequency of mergers and acquisitions by Japanese acquirers of unlisted targets with deal values of \$100 million or more, and the means and medians of transaction values for the years 2000–2014.

Year	Numbers of deals announced	Mean transaction value (millions of dollars)	Median transaction value (millions of dollars)
2000	27	445	241
2001	9	535	276
2002	11	321	217
2003	21	352	190
2004	19	543	236
2005	33	444	229
2006	27	243	160
2007	38	433	191
2008	31	268	189
2009	26	378	260
2010	25	242	155
2011	37	330	201
2012	50	349	153
2013	50	243	213
2014	26	461	211

The corporate-governance assessment is designed to indicate how well board members and executives act in the interests of long-term shareholders; it captures a company's incentives and checks and balances. The economic pillar is designed to measure the firm's capacity to generate sustainable growth and a high return on investment as well as efficient use of resources; it captures overall financial health and ability to generate long-term shareholder value. The environmental pillar is designed to assess a firm's impact on living and nonliving natural systems, including air, land, water, and the complete ecosystem; it captures environmental risk avoidance and responsible use of natural resources. The social pillar is designed to assess the firm's capacity to generate trust and loyalty with its workforce, customers, and society at large; it captures reputation, support, and license to operate. Each of these four pillar scores (again, z-scored and normalized to position the score between zero and 100%) is equally weighted in the total ESG score.

After we impose the above three additional constraints, our final sample consists of 243 transactions. Table 3 reports the summary statistics for this sample. About six-tenths of these transactions are all-share deals, three-tenths all-cash, and the remaining tenth hybrids. Conglomerate-type mergers make up about 23% of the transactions, and about 60% are horizontal. At \$1.07 billion, the mean transaction value for our sample is about three times its median value and about ten times the book value of assets acquired. The average premium paid for the control of these target firms is 20.4% (the premium paid is measured as the offer price compared to the target's share price four weeks before the announcement of the deal). These targets appear to be highly levered, as their average debt-to-equity ratio (total debt divided by book value of equity) is 1.66. Measured by the average equally weighted ESG ranking, the typical acquirer has a z-score of 48—not much different than the average firm surveyed by ASSET4. The same can be said about the economic ranking, where the average score is 51. At an average of 56, the acquirers' social ranking is slightly above the midpoint, and their environmental ranking is higher yet, averaging 65. However, at an average of 14, their corporate governance ranking is far below the global midpoint. Combined, these rankings paint a picture of these Japanese acquirers as socially and environmentally responsible firms that have relatively weak corporate governance structures but manage to produce average economic and overall performance.

The summary statistics in Table 3 also break down these mergers by year. The largest number of transactions for any single year comes from 2006, with a total of 28. However, the largest total dollar value comes from 2007. The year 2002 has the fewest deals (seven); 2010, the smallest total dollar value. As in our initial sample of 958 deals (see Table 1), the final sample's annual median values are smaller and fairly stable (within the \$146 to \$575 million range), but the mean values are larger and more spread out (in the \$209–\$2453 million range). Interestingly, the premium incorporated into the offer price (relative to target's share price four weeks before) varies from a low of 1.06% in 2001 to a high of 54% in 2010. Targets' debt-to-equity ratios also vary widely, between a low of 0.45 in 2014 and a high of 3.78 in 2002. The acquirers' ESG rankings vary across years, but like the overall averages, the annual averages generally show high social and environmental performance and poor corporate governance but average economic and overall performance.

4. Empirical results

Starting with the intermediate sample of 958 M&A announcements of Japanese firms acquiring publicly traded Japanese firms, we evaluate the wealth effect of these events by computing the abnormal returns realized by the shareholders of the acquiring firms. Panel A of Table 4 shows that acquiring shareholders earn significantly positive abnormal returns at the announcement of these transactions⁵: 0.44% on the day of announcement and 1.13% the following day.⁶ Panel B shows that shareholders of target

⁵ The requirement that complete returns data be available reduces our number of usable events to 708 acquisitions involving traded target firms and 28 nontraded targets.

⁶ Once the event window is widened to 11 days, starting five days before and ending five days after the announcement, we observe that shareholders of acquiring firms experience negative abnormal returns at $t + 3$ and $t + 4$. However, the 11-day cumulative abnormal return is still significant at 1.46%.

Table 3

Summary statistics for mergers and acquisitions, between January 2000 and December 2014, made by Japanese acquirers of Japanese publicly traded targets with deal values of \$100 million or more where the acquirer holds less than 50% of the target shares before the announcement and secures majority control as a result of the deal.

Year	Number of transactions	Number of all-cash deals	Number of all-shares deals	Number of conglomerate deals	Number of horizontal deals	Mean transaction value	Median transaction value	Average target book value	Offer premium relative to share price four weeks earlier	TARGET'S LEVERAGE RATIO	Equal-weighted ESG ranking	Corporate governance ranking	Economic ranking	Environmental ranking	Social ranking
2000	22	0	20	4	18	2107	575	30,429	8.33%	1.06	54	17	49	75	65
2001	15	1	10	3	9	910	497	25,684	1.36%	3.07	49	16	65	55	61
2002	7	0	4	1	4	314	234	1460	2.26%	3.78	45	20	46	59	49
2003	14	4	8	0	11	403	178	2428	14.81%	2.11	51	12	55	68	61
2004	14	3	8	7	5	1015	184	6059	15.69%	0.66	38	13	40	53	48
2005	27	8	14	8	12	2453	550	32,252	15.80%	1.90	36	10	38	52	46
2006	28	14	13	9	13	580	349	2366	14.49%	1.99	50	13	53	69	58
2007	18	9	9	4	9	576	186	2886	15.11%	1.63	53	17	58	64	59
2008	15	6	9	6	9	1037	270	6546	21.36%	3.21	38	11	41	57	51
2009	17	7	10	4	11	1439	371	20,189	27.43%	1.33	59	18	60	78	64
2010	9	6	3	3	5	237	160	932	54.07%	1.01	58	9	70	79	64
2011	15	7	8	3	9	1579	208	4395	30.05%	0.92	43	10	51	67	53
2012	19	6	13	1	16	547	269	2594	53.03%	1.26	42	17	46	57	50
2013	11	4	7	0	8	209	146	2852	16.52%	0.58	68	12	76	91	70
2014	12	4	7	2	7	464	262	4730	15.75%	0.45	56	15	56	76	59
All	243	79	143	55	146	1066	290	11,675	20.40%	1.66	49	14	54	67	57

Table 4

Abnormal returns associated with the announcements of Japanese mergers and acquisitions to the acquiring and target firm shareholders and the abnormal returns experienced by shareholders at the announcement of withdrawal or termination of such deals during 2000–2014.

	Day	N	Mean abnormal return (%)	Positive: negative	Patel Z	Generalized sign Z
A. Announcement-date returns to acquiring firms; listed targets	−1	708	0.07	365:356	1.12	1.39
	0	708	0.44	404:317	5.65***	4.3***
	+1	708	1.13	407:314	16.12***	4.52***
B. Announcement-date returns to target firms; listed targets	−1	708	0.38	349:359	4.41***	1.12
	0	708	3.01	435:273	36.79***	7.59***
	+1	708	3.08	432:276	46.26***	7.37***
C. Withdrawal-date returns to acquiring firms; listed targets	−1	28	−0.04	17:13	0.48	0.62
	0	28	−0.01	17:13	−3.55***	0.62
	+1	28	−0.05	14:16	0.55	−0.48
D. Withdrawal-date returns to target firms; listed targets	−1	28	−0.01	14:14	0.22	−0.14
	0	28	−0.34	12:16	−1.63	−0.9
	+1	28	−2.88	9:19	−5.99***	−2.03*
E. Announcement-date returns to acquiring firms: unlisted targets	−1	424	0.23	210:214	3.69***	1.24
	0	424	0.67	212:212	5.57***	1.43
	+1	424	0.50	212:212	5.32***	1.43

Panels A–D report the results for acquisitions involving listed targets. Panel E reports the results for acquisitions of unlisted firms. Day zero is the date on which a public announcement is made. All abnormal returns are calculated using the equally weighted index and market adjusted returns. *, **, and *** denote statistical significance at the 0.05, 0.01, and 0.001 levels respectively using a generic one-tailed test.

firms also realize abnormal returns: more than 3% on both the announcement date and the following day. These results are in line with the findings of Kang et al. (2000), Schaik and Steenbeek (2004), Inoue and Kato (2006), Kakuda and Takeda (2006), Hanamura et al. (2011), and Nogata et al. (2011). However, it appears that the magnitude of the gains for mergers of the first decade-and-a-half of the twenty-first century, when compared to those reported in these earlier studies, is somewhat different: smaller gains for acquiring-firm shareholders and larger ones for target-firm shareholders. This may signal that Japan's market for corporate control may be losing some of its unique attributes and that its dynamics may be converging with those of the U.S. markets.

Analyzing the wealth effects of the withdrawal of M&A offers or the termination of proposed deals, we find that both the (would-have-been) acquiring-firm shareholders and the target shareholders experience a reversal of their earlier gains. As Panel C of Table 4 shows, shareholders of acquiring firms experience a small but statistically significant negative abnormal return on the day of offer withdrawal/termination. Further, as results reported in Panel D indicate, target shareholders realize significant negative abnormal returns on the day after the announcement of withdrawal or termination.

We next analyze the wealth effects of announcements of acquisitions of nonlisted Japanese firms by publicly traded acquirers (i.e., the deals included in Table 2). Results are reported in Panel E of Table 4. These acquisitions lead to significant gains for the acquiring-firm shareholders—gains as large as those from acquiring a publicly traded firm. In contrast, Faccio, McConnell, and Stolin (2006) find that acquirers of nonlisted firms earn significantly higher abnormal returns than do acquirers of publicly traded firms. Here, again, the difference in results can be attributed to the evolution of Japanese market for corporate control. Not surprisingly, greater competition among acquirers for assets complementary to their own reduces the windfall to successful bidders, regardless of whether the bidder is publicly traded or not.

4.1. Detailed analysis

To analyze the short-term and longer-term wealth effects of mergers and acquisitions as well as their social, environmental, and governance effects, we concentrate on the 243 transactions of Table 4.⁷ The short-term wealth effects are summarized in Tables 5 and 6, with the former reporting the abnormal returns realized by the acquiring shareholders and the latter those by the shareholders of target firms. Shareholders of acquiring firms—whether all acquiring firms (Panel A) or only nonfinancial acquirers (Panel B)—experience significantly positive abnormal returns on the day of and the day following the deal's announcement. The cumulative abnormal returns over the three-day window of $t - 1$ to $t + 1$ are significantly positive, again whether financial firms are included or not. However, in both the total sample and the nonfinancial subsample, a reversal of fortunes takes place two days after the announcement, with shareholders experiencing negative returns that erase these cumulative gains. When analyzed over the five-day window of $t - 2$ to $t + 2$, the cumulative abnormal returns are indistinguishable from zero. Therefore, it can be concluded that mergers in Japan are not consequential events for the shareholders of acquiring firms, who experience no significant wealth effects, positive or negative. Whereas earlier researchers (e.g., Kang et al., 2000; Schaik & Steenbeek, 2004; Inoue and Kato, 2006; Kakuda & Takeda, 2006; Hanamura et al., 2011; and Nogata et al., 2011) agreed that the shareholders of Japanese acquirers experienced significant abnormal returns, but the present study uses more recent data, it appears that the comparative advantage of bidding firms has started to disappear as Japan's market for corporate control has

⁷ Note, however, that requiring complete data on all items reduces the actual number of transactions to a total of 165.

Table 5

Abnormal returns to the shareholders of acquiring firms associated with the announcements of mergers and acquisitions during 2000–2014.

Day	Mean abnormal return (%)	Positive:negative	Patel Z	Generalized sign Z
A. All acquiring firms (N = 165)				
-5	0.10	77:88	-0.116	-0.565
-4	0.15	82:83	2.193	0.353
-3	0.11	83:82	0.081	-0.106
-2	-0.23	75:90	-0.980	-0.871
-1	-0.03	77:88	-0.152	-0.565
0	0.61	94:71	3.588***	1.731*
+1	0.97	88:77	5.423***	0.812
+2	-0.53	64:101	-2.952**	-2.707**
+3	-0.16	71:94	-0.432	-1.330
+4	-0.60	66:99	-4.062***	-2.905*
+5	-0.06	81:84	1.218	-0.259
Cumulative (-1,+1)	1.55	95:60	5.114***	2.649**
Cumulative (-5,+5)	0.33	84:81	1.148	0.812
B. Nonfinancial acquiring firms (N = 141)				
-5	0.02	62:79	-0.258	-0.844
-4	-0.01	66:75	1.249	-0.186
-3	0.10	64:77	-0.144	-0.679
-2	-0.17	65:76	-0.462	-0.515
-1	-0.12	67:81	-0.670	-0.679
0	0.64	75:66	3.712***	1.295
+1	1.08	77:64	5.703***	0.637
+2	-0.68	65:76	-3.544***	-2.818***
+3	-0.08	69:72	0.003	-1.008
+4	-0.54	62:79	-3.722***	-1.502
+5	-0.06	71:70	1.341	-0.021
Cumulative (-1,+1)	1.60	81:60	5.049***	2.282*
Cumulative (-5,+5)	0.190	78:63	0.968	0.966

Day zero is the date on which a public announcement is made. All abnormal returns are calculated using the equally weighted index and market adjusted returns. *, **, and *** denote statistical significance at the 0.05, 0.01, and 0.001 levels respectively using a generic one-tailed test.

evolved to become more competitive. In this respect, today's Japanese market for corporate control behaves exactly like the U.S. and other Western markets.

Results reported in Table 6 clearly establish that the shareholders of target firms—whether all acquired firms (Panel A) or the subsample of nonfinancial firms (Panel B)—earn significantly positive abnormal returns on both the day of and the day after the deal's announcement. The three-day ($t - 1, t + 1$) cumulative abnormal returns to target shareholders register at 8.09% for all acquired firms and 9.07% for the nonfinancial subsample, both highly significant. The magnitude of these abnormal cumulative returns is even larger, 12.0% for all acquired firms and 13.95% for nonfinancials, when we widen the event window to the 11-day period of $t - 5$ to $t + 5$. We note, however, that the ratios of positive-to-negative abnormal returns suggest that a reversal of fortunes may begin on the second day after the event. Although this indication of a reversal is supported by the Patel Z-statistics, the average abnormal returns for all three days retain their positive signs. Therefore, we conclude that unlike acquiring shareholders, acquired firms' shareholders reap significant benefits from these restructuring events.

4.2. Determinants of abnormal returns

Which firm-specific or deal-specific variables explain the variations in the magnitude of abnormal returns experienced by the acquiring shareholders? To answer this question, we look in particular at the acquiring firm's commitment to ESG factors. Our null hypothesis is that firms with greater commitment to ESG factors are positioned to appeal to a broader set of stakeholders and can, therefore, secure a more favorable set of merger terms, with larger abnormal returns. We use the acquiring firm's equally weighted ESG score, as compiled and reported by Asset4, to proxy this commitment.

Additionally, given that the existing literature has identified a number of company and deal-specific factors as determinants of abnormal returns, we include the following set of control factors: the acquiring firm's size (proxied by the natural log of the firm's total assets); the acquiring firm's debt ratio (proxied by the ratio of book value of total debt divided by the sum of market value of equity and book value of debt); the acquiring firm's Tobin's q (proxied by the ratio of the firm's excess market value, i.e., market value one week before the deal's announcement, net of its book value divided by its book value); the target's debt ratio (proxied by the ratio of book value of total debt divided by the sum of market value of equity and book value of debt); the target's size (proxied by the natural log of its total assets), and the merger's relative size (proxied by target's size divided by acquirer's size). We also include three dummy variables: the first assumes a value of 1 if the acquisition is an all-cash deal, the second

Table 6

Abnormal returns to the shareholders of target firms associated with the announcements of mergers and acquisitions during 2000–2014.

Day	Mean abnormal return (%)	Positive:negative	Patel Z	Generalized sign Z
A. All target firms (N = 165)				
-5	-0.04	80:85	0.388	-0.022
-4	0.19	83:82	2.030	0.445
-3	0.13	86:79	1.341	0.912
-2	0.15	77:88	2.236	-0.490
-1	0.28	84:81	0.829	0.601
0	3.12	105:60	23.799***	3.872***
+1	5.10	111:54	44.908***	4.806***
+2	2.15	75:90	15.97***	-0.801
+3	0.82	76:89	7.568***	-0.645
+4	0.40	73:92	4.825***	1.113
+5	-0.28	72:93	-0.594	-1.268
Cumulative	8.09	127:38	38.379***	7.620***
(-1,+1)				
Cumulative	12.02	125:40	31.146***	6.208***
(-5,+5)				
B. Nonfinancial target firms (N = 141)				
-5	0.08	69:72	0.996	0.072
-4	-0.02	69:72	0.839	0.072
-3	0.15	74:67	1.326	0.915
-2	0.10	62:79	2.366	-1.107
-1	0.13	67:74	0.270	-0.265
0	3.57	95:46	25.848***	4.453***
+1	5.57	94:47	47.553***	4.285***
+2	2.49	62:79	17.388***	-1.107
+3	1.01	65:76	8.202***	-0.602
+4	0.54	63:78	5.148***	-0.939
+5	-0.25	62:79	-0.465	-1.107
Cumulative	9.07	110:31	41.009***	7.222***
(-1,+1)				
Cumulative	13.95	109:32	31.837***	7.418***
(-5,+5)				

Day zero is the date on which a public announcement is made. All abnormal returns are calculated using the equally weighted index and market adjusted returns. *, **, and *** denote statistical significance at the 0.05, 0.01, and 0.001 levels respectively using a generic one-tailed test.

signifies whether the merger is an all-share deal, and the third indicates whether the merger is a conglomerate-type acquisition. Finally, we also include year and industry fixed effects.

Results, as reported in Table 7, indicate that although the coefficient estimate of the ESG score has the expected sign, it is not statistically significant. Both larger acquiring firm size and larger target size decrease the acquiring firm's abnormal returns.

Table 7

Regression of acquiring firm cumulative abnormal returns on explanatory variables.

Variable	Parameter estimate	Standard error	t-Statistic
Constant	0.11331	0.09934	1.14
Acquirer's ESG score	0.00009	0.00019	0.46
Acquirer's size	-0.00694	0.00609	-1.14
Acquirer's debt ratio	3.24289	3.60644	0.9
Acquirer's Tobin's q	0.00004	0.00004	1.15
Target's debt ratio	-0.02946	0.02446	-1.2
Target's size	-0.00520	0.00583	-0.89
Relative size of the acquisition	0.07284	0.03248	2.24
All-cash deal dummy	-0.01878	0.01861	-1.01
All-share deal dummy	0.00388	0.01667	0.23
Diversifying merger dummy	0.00028	0.01217	0.02
Industry fixed effects	Yes		
Year fixed effects	Yes		

The abnormal returns are those accruing to the shareholders of acquiring firms over the three-day window of $t - 1$ to $t + 1$. The explanatory variables consist of the acquiring firm's equally weighted ESG score as reported by Asset4; the acquiring firm's size, proxied by the natural log of the firm's total assets; the acquiring firm's debt ratio, proxied by the ratio of book value of total debt divided by the sum of market value of equity and book value of debt; the acquiring firm's Tobin's q, proxied by the ratio of the firm's excess market value (market value one week before the deal's announcement) net of its book value divided by its book value; the target's debt ratio, proxied by the ratio of book value of total debt divided by the sum of market value of equity and book value of debt; the target's size, proxied by the natural log of its total assets; the relative size of the acquisition, proxied by target's size divided by acquirer's size; a dummy variable assuming a value of 1 if the acquisition is an all-cash deal; a dummy variable signifying whether it is an all-share deal; and a dummy variable indicating whether it is a conglomerate-type acquisition. Year and industry fixed effects are also included.

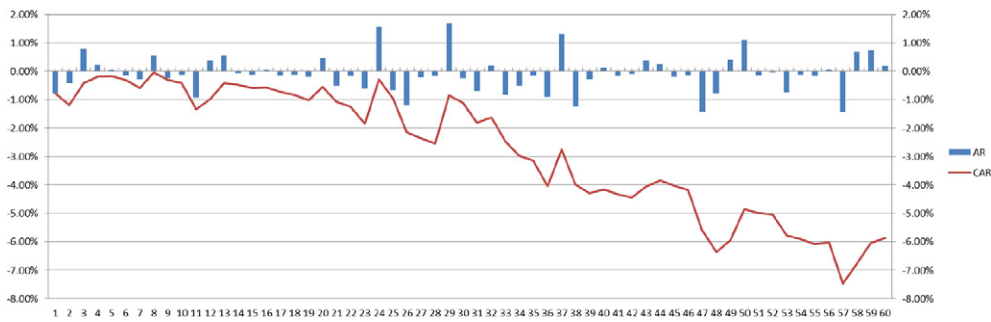


Fig. 2. Average abnormal returns and cumulative abnormal returns experienced by the shareholders of acquiring firms over the 60 months following the merger. Results correspond to returns on an event-based portfolio consisting of the shares of all acquiring firms in which $t = 0$ is defined as the merger date. Abnormal returns are calculated using the equally weighted index and market adjusted returns. The horizontal axis records the number of months after the merger, and the vertical axis records the returns.



Fig. 3. Economic performance of Japanese acquiring firms during the five years after the merger. Performance is measured by adjusting each firm's Asset4 score by the industry average that excludes the firm.

However, neither of the estimated coefficients is statistically significant. The same holds true for the target's degree of financial leverage and the dummy variable for all-cash deals. The estimated coefficients for all remaining variables are positive; however, the estimated slope is statistically significant only for the deal's relative size, indicating that the larger the target relative to the acquiring firm, the larger the payoffs to the shareholders of the acquiring firm. With an R-square of 78%, the model has a highly significant explanatory value. However, most of the variation is attributable to calendar year and industry effects.

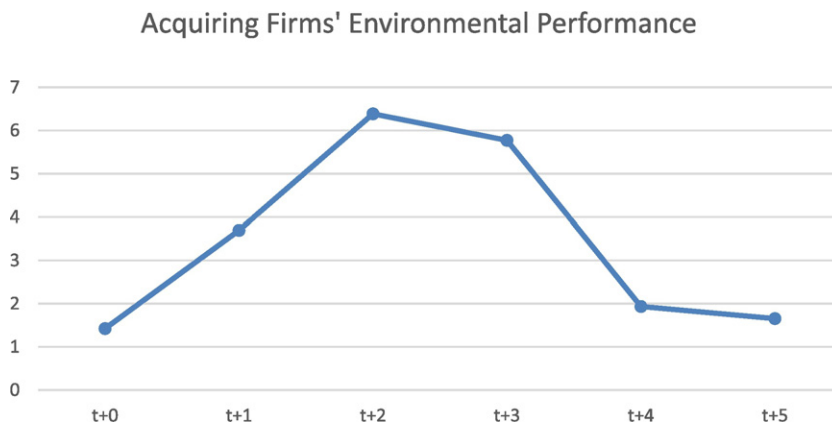


Fig. 4. Environmental performance of Japanese acquiring firms during the five years after the merger. Performance is measured by adjusting each firm's Asset4 score by the industry average that excludes the firm.

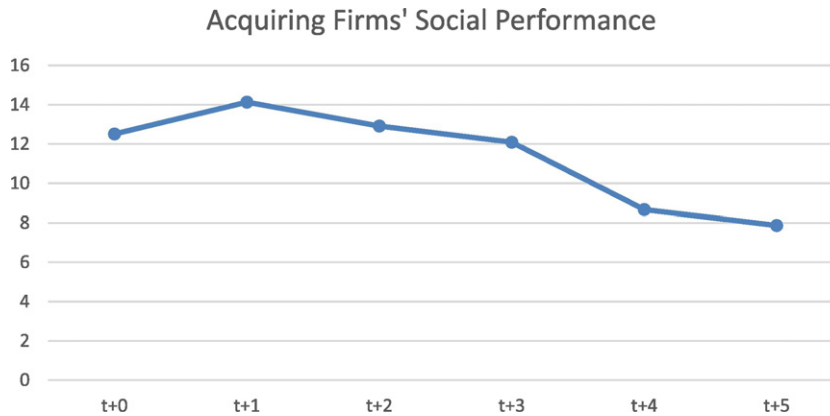


Fig. 5. Social performance of Japanese acquiring firms during the five years after the merger. Performance is measured by adjusting each firm's Asset4 score by the industry average that excludes the firm.

4.3. Longer-term shareholders' benefits

Fig. 2 illustrates the monthly abnormal returns earned by the shareholders of acquiring firms for the five years after the merger. Statistically, these mergers seem to be inconsequential. However, the continuous pattern of decreases in the CAR may warrant a different conclusion respecting their economic significance. As Fig. 2 shows, monthly abnormal returns fluctuate considerably, but there is no significant wealth creation or destruction. Cumulative abnormal returns drift consistently in negative territory, approaching a 6% loss by the end of the five-year window. Evidently, Japanese mergers and acquisitions since 2000 have not produced significant long-term benefits for the surviving firm's shareholders.

4.4. Longer-term effects on other stakeholders

Finally, we ask how these restructuring events affect the positions of other stakeholders. Ideally, we would want to directly measure the impact of M&As on the wealth and welfare of the firm's employees, suppliers, and customers; the broader communities that it resides within and benefits from; and the natural ecosystem that it relies upon. For the present we lack such data (though we envision that they may be available in the future). In the meantime, we proxy these effects with the surviving firm's ESG scores on economic, environmental, social, and governance factors over the five-year period that follows the restructuring. We form an event-based portfolio for which $t = 0$ is the year in which the merger takes place, and evaluate the pattern of changes in the firm's performance from $t = 0$ through $t = 5$. To account for changes that are industry wide and unrelated to the event, we use industry-adjusted scores by subtracting the average score for all firms operating in the same industry from the firm's raw score. Results are reported in Figs. 3 through 7. Fig. 3 charts the pattern of changes in the surviving firms' industry-adjusted economic performance for each of the five postmerger years. Figs. 4–6 depict the sequence of changes in the firms' performance on the environmental, social, and governance fronts, and Fig. 7 maps out overall performance as measured by the equally weighted composite of the four factors.

The typical acquiring firm's economic performance (Fig. 3) shows signs of improvement during the first three years after the merger. However, performance deteriorates during the fourth and fifth years, washing away these gains. A similar pattern is

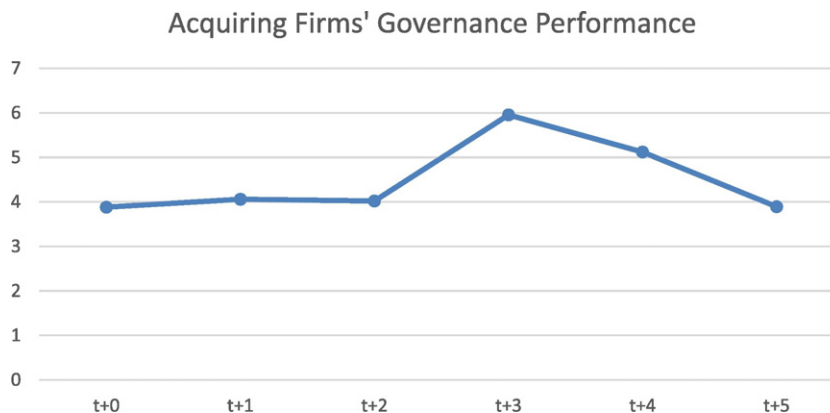


Fig. 6. Governance performance of Japanese acquiring firms during the five years after the merger. Performance is measured by adjusting each firm's Asset4 score by the industry average that excludes the firm.

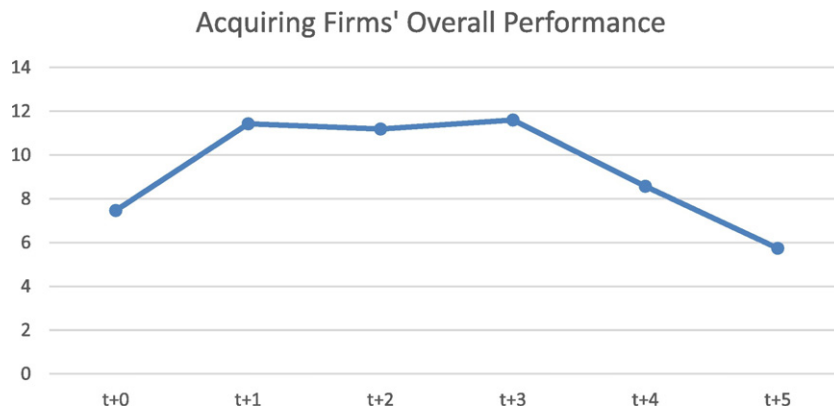


Fig. 7. Overall performance of Japanese acquiring firms during the five years after the merger. Performance is measured by adjusting each firm's Asset4 score by the industry average that excludes the firm.

observed with regard to environmental performance (Fig. 4), with improvements during the first two years and an erosion of those gains during the subsequent three years. The firm's performance on the social front (Fig. 5) is somewhat different: a slight improvement is observed only during the first of the postmerger years, with deterioration starting in the second year and continuing into the fifth year, so that the fifth-year performance is noticeably inferior to the firm's social performance at the time of the merger. With regard to governance (Fig. 6), there are no changes for the first two years, a slight improvement during the third year, and a reversal of that gain during years four and five. On total ESG score (Fig. 7), these firms improve during the first year, exhibit flat performance for the next two years, and perform poorly in years four and five. However, although a casual examination of the graph indicate that, compared to the time of the merger, ESG performance has worsened the t-statistics indicate that these firms show no significant change on any of the four pillars of performance (economic, $t = -0.038$, environmental, $t = 1.46$, social, $t = -0.69$, or governance $t = 0.89$). The same is true with regard to the equally weighted average of the four pillars ($t = -0.38$). Therefore, given our earlier results that these M&As also fail to produce long-term shareholder value, the absence of improvements in ESG performance leads us to conclude that the executives involved are the only beneficiaries of these transactions.

5. Conclusions

Unlike researchers using data from earlier periods, we find that the shareholders of Japanese acquiring firms do not experience any significant wealth effects, though the acquired firms' shareholders earn significant positive abnormal returns. We conclude that Japan's market for corporate control has become more competitive and more like those of Western nations. We also find that the shareholders of the surviving firm experience no significant abnormal long-term benefits during the five years after the merger. The paper's most significant contribution to the literature is a pioneering analysis of the longer-term effects of mergers on the firm's environmental, social, and governance performance; and again, we find no discernible improvements on any of these fronts over the five years after the merger. Therefore, we forward the argument that one possible reason for these restructuring decisions is that in the process of combining its operations with another firm the acquiring firm increases its size and its power base—and thus improves its bargaining position vis-à-vis other stakeholders such as regulatory agencies, labor unions, or communities. Under such conditions, mergers do not necessarily lead to improvements in the surviving firm's environmental, social, and governance performance. Indeed, the improved bargaining position of the surviving firm may be one factor motivating the so-called “activist” investors (those seeking to enhance shareholder returns) who nudge the firm to increase its scale and extract rents otherwise inaccessible. The best expected outcome under such a scenario would be no improvements in the firm's performance on ESG factors. This is precisely what our findings point to.

Acknowledgements

Ali Fatemi gratefully acknowledges support provided by the Development Bank of Japan through a Shimomura Fellowship. Iraj Fooladi gratefully acknowledges research support provided by the Douglas MacKay Chair.

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