Estimating Private Benefits of Control from Stock Price Changes Around the Announcement of Tender Offer Bid (TOB)

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Abstract

This research analyzes 262 cases of tender offer bid (TOB) in which the acquired companies were expected to remain listed after the deals, from among TOB deals conducted between 1990 and 2011, and estimates the value of private benefits of control in Japan based on the premiums paid relative to the post-deal stock prices.

The research finds that the estimated value of private benefits gained through TOB deals in Japan has been positive (the average value was 12.7% and the median value was 7.7%, with both figures being statistically significant at a 1% level) since the prohibition of a partial tender offer beyond 66.7% of outstanding shares was introduced in December 2006, although the average private benefits during the whole of the 1990–2011 period were not statistically significant.

Regarding factors that affect the estimated value of private benefits gained through TOB deals, the research finds the following: (1) The acquiring company’s high share ownership ratio before the TOB deal has positive effects, (2) A high share ownership ratio resulting from the TOB deal has negative effects, (3) The presence of a block holder has negative effects, (4) When the acquired company is reporting financial losses, it has negative effects, (5) There is a negative correlation between the cash flow improvement effect achieved under the management of the acquiring company (new management team) and the estimated value of private benefits. It was also confirmed (6) that when the stock price immediately before the announcement of the TOB deal was lower than the peak price during the one-year period prior to the announcement, the estimated value of private benefits tended to be high and (7) that the value of private benefits has been relatively high since the prohibition of a partial tender offer beyond 66.7% in December 2006.

Keywords: tender offer bid (TOB), control premium, private benefits

JEL Classification: G34, G38

I. Introduction

The Japanese market for corporate control has undergone remarkable growth since the
1990s. While the domestic market for corporate control was rather inactive before 1990 (Kester, 1991), the number of mergers and acquisitions (M&As) with a Japanese target grew from 257 in 1989 to a maximum of 2,020 in 2007 and 1,558 in 2014.\(^1\) This research employs abundant data on transactions in the market for corporate control to estimate the value of private benefits of control that an acquirer pays to obtain control of a target company.

Japan adopted a mandatory bid rule (MBR) in 1990, requiring a tender offer bid (TOB) if the bidder wants to assume control of a publicly listed company. When an acquirer assumes control of a public company through a tender offer, we observe the control premium, which is the difference between the fixed offer price of a TOB and the market price of target’s shares before the announcement of the TOB. The premium is paid to encourage minority shareholders to tender their shares to the bidder, rather than to sell them in the market, or to stick to them without tendering. This research focuses on the control premium and tries to estimate the size of private benefits of control in Japan from the premium.

The paper follows an approach suggested by Barclay and Holderness (1989) in examining the control premium paid in acquisitions of blocks of shares. They consider that the premium that an acquirer is willing to pay has two different sources of economic benefits: (1) cash flow benefits, which accrue to all shareholders, and (2) private benefits such as below-market transfer prices between the target company and the acquiring block holder, which accrue only to the acquirer. In order to split the two economic benefits of the control premium paid to transfer the controlling block of shares, Barclay and Holderness (1989) propose comparing the price that an acquirer pays to transfer the controlling block with (1) the pre-offer-announcement share price, and (2) the post-transfer-of-control share price. As we describe in more detail below, the difference between the price paid for the transfer and the post-transfer-of-control share price (“post-transfer price premium”) can be regarded as an estimate of private benefits of control for an acquirer. We focus on the estimate of private benefits in this research. Our sample includes 262 TOBs without being followed by the squeeze-out that occurred in Japan between 1990 and 2011. The target company of these tender offers was expected to remain publicly listed after the completion of the tender offer. We analyze the post-transfer price premium of these TOBs and estimate the level of private benefits of control in Japan. We also examine the changes in post-transfer price premium over the two decades. Our research contributes to the understanding of the Japanese market for corporate control, its development and the price of corporate control.

II. Existing Research on Control Premium

II–1. Theories on Economic Sources of Control Premium

What is the economic logic behind paying a control premium? Finance theory suggests that the value of shares of a company is equal to the sum of the present value of cash flows

\(^1\) According to Recof M&A Database.
that they will generate in the future. What, then, is the economic justification for paying the premium to acquire the control of a company in this context? Theoretically, academics consider that there is an additional value over that of minority shareholders by an acquirer assuming control of a target firm. There are two major sources of value from acquiring the control of a firm. First is the benefit from improving the management of a target firm to increase the future cash flow that the target generates. We call this benefit “cash flow improvement” hereafter. Second is the benefit of draining cash flow out of the target firm to the acquirer or a private entity controlled solely by the acquirer. This benefit is called the “private benefit of control” hereafter.

The former benefit of cash flow improvement of a target through better management was first suggested by Grossman and Hart (1980). They built a model where an acquirer with the potential to improve the management of a target may have to pay a premium equal to the present value of the improvement of value of the target under the acquirer’s management to “free-riding” infinitesimal shareholders if the acquirer starts purchasing shares from scratch. Shleifer and Vishny (1986) change the assumption of Grossman and Hart (1980) and show that an acquirer may not have to pay all the value improvement to the target’s shareholders if he owns blocks before launching a takeover. The two theories differ in whether there remains any value to an acquirer from improving the target’s management, but they agree that the increase in the value of a target through better management is an important economic source for paying a control premium.

The second source of paying a control premium, private benefits of control, is more controversial. This is related to the issue of agency problem with conflicting interests between an acquirer, or the new management, and minority shareholders of a target. When there are minority shareholders of a target firm, it is beneficial for an acquirer to drain out the cash flow of the target to the acquirer. While the acquirer obtains 100 percent of the drained cash flow, the loss of value of the target is partially born by minority shareholders. Therefore, despite paying a premium in addition to the value of the target, an acquirer has the potential to recover the paid premium later once he assumes control of the target. The draining out of the cash flow may take any of various forms, such as manipulating the transfer price of a transaction between the target and the acquirer, or the acquirer forcing the target firm to pay bills for his perks, such as a private jet or a pleasure boat.

Of the two sources of benefit of corporate control, the first benefit of cash flow improvement of a target firm is distributed not only to an acquirer but also to minority shareholders in proportion to their percentage of shareholdings. In contrast, the private benefit of control is only attributable to an acquirer, and possibly at the cost of remaining minority shareholders, as it is mainly through draining the cash flow out of a target firm that the acquirer benefits. Obviously, if the degree of extracting the cash flow of a target is too much, legal procedures may be taken by minority shareholders of the target to indemnify their losses, but generally speaking, a controlling shareholder (an acquirer) has a certain degree of discretion, or residual controlling rights, to benefit privately from the cash flow of a target.
II–2. *Empirical Methodologies to Separate Two Sources of Control Premium*

As explained above, the existing theoretical research suggests that there are two different benefits of corporate control. How, then, can the actual control premium that is paid in an M&A transaction be attributed to the two sources of control premium? Can we distinguish empirically the cash-flow improvement of a target from the private benefit using the actual control premium data? Here, there are various empirical works mainly about the U.S. M&A market.

To begin with, the existing research examines the level of the total control premium that reflects both cash-flow improvement and private benefits. Here, the research calculates the control premium as the difference between the price that an acquirer pays to transfer a control block of a target and the market share price of the target before the announcement of the transaction. In many cases, the research uses the target’s share price 20 to 40 trading days prior to the announcement as the pre-offer share price to remove the effect of pre-offer run-up of share prices due to the information leak (Jarrell and Poulsen, 1989, Schwert, 1996). In this paper, we call the premium calculated this way the “pre-offer price premium.” For example, Bradley (1980) examines 161 tender offers in the U.S. and reports that the average pre-offer price premium paid by an acquirer was 49 percent of the pre-transaction share prices of a target.

The next step is to split the total control premium into the portion of cash-flow improvement and that of private benefit. Previous research proposes to use the share price of a target after the transfer of control is completed, and calculate the premium that an acquirer pays for the transaction and the post-transfer share price. We call this premium the “post-transfer price premium” hereafter.

In illustrating the logic of the above methodologies, we show a typical price movement of a target during a tender offer in Figure 1. The vertical axis in the graph shows share prices of a target and the horizontal axis shows the days before and after an announcement of a tender offer. Three important milestone dates in a tender offer are the announcement date of the tender offer, the starting date of the actual tender offer, and the final date (deadline) of the tender offer. In analyzing the control premium, the starting date of a tender offer is not very important as the information that a tender offer is in place is reflected in the target’s share prices at the time of the announcement of the tender offer. The price of the target’s shares should be little changed on the day when the actual tender offer starts. In many cases, the share price of the target stays near the offer price during the tender offer period, as one can make an arbitrage by purchasing the target’s shares in the market and tendering them to the acquirer. After the final date of the tender offer period, the target’s share price often goes down to reflect the expected value of the target under the control of the acquirer (new owner), provided the tender offer is successfully completed. The difference between the offer price and the post-tender offer share price, i.e., post-transfer price premium, is the amount that the acquirer paid to obtain the control of the target in addition to the cash flow improve-
ment that the acquirer could bring about. This additional amount should reflect the value of private benefits of control that the acquirer expects from the target. Obviously, in order to regard the post-transfer price premium as an estimate of private benefits of control, one has to assume market efficiency in a sense that the share price of the target after the tender offer period is over should reflect correctly the value of the target under the control of the acquirer.

Bradley (1980) calculates the post-transfer price premium of 161 tender offers in the U.S. to conclude that the portion of private benefits that an acquirer pays is on average one-fourth (13 percent) of the total premium (49 percent). Other research extends the methodology to estimate the level of private benefits for the transfer of the controlling block shareholding that did not use the tender offer procedure. For example, Barclay and Holderness (1989) estimate the private benefit in the U.S. as 20 percent over the target’s share price before the transaction, and Dyck and Zingales (2004) analyze block trades in 39 countries including Japan and estimate the average private benefit of all sample countries as 14 percent.

The purpose of this research is to estimate the level of private benefits in Japan implied from the tender offer price and share prices of a target. The above research by Dyck and Zingales (2004) analyzes 21 block trades in Japan and calculates the average block trade premium (total premium that includes cash flow improvement and private benefits) as minus 4 percent, although the figure is statistically insignificant. Their result suggests that there is minor (or possibly negative) private benefit of control in Japan. Kruse et al. (2010) use the data on tender offers in Japan to report that the average pre-offer price premium is 28.1 percent, which is lower than the level that is reported in the U.S. or the U.K.
(2010), however, contains a sample of tender offers that are followed by squeeze-out procedure, which may result in the downward bias of the estimate of the post-transfer price premium. When a tender offer is followed by a squeeze-out, those minority shareholders that do not tender their shares are forced to sell their shares to the bidder in return for cash or for shares of an acquirer (depending on the decision of the acquirer). The price at which they are forced to sell is usually the same as the tender offer price. This means that when a tender offer is followed by squeeze-out, there remains an opportunity to purchase the target’s shares in the market and sell them at a price (usually) equal to the offer price of the tender offer. Therefore, the share price of the target should remain near the level of the offer price even after the offer period expires, resulting in the calculation of the post-transfer premium as almost zero. This is the reason why this research excludes tender offers that are followed by squeeze-out and focuses on those tender offers where the target’s shares are expected to remain listed on the stock exchange after the completion of the tender offer.

III. Data and Descriptive Statistics

III–1. Sample and Data Sources

We collected a sample of tender offers for exchange listed target companies using M&A Database compiled by Recof Data Company. In addition to the data included in the Database, such as offer prices and the number of shares to be acquired, we manually collect more details of a tender offer, such as whether there is a pre-tender offer agreement with certain block holders to tender their shares, from various reports submitted to the stock exchange and the regulators. There are 612 tender offers between 1990 and 2011. As we show the description of our sample in Table 1, the number of tender offers increased throughout the 2000s and peaked at nearly 100 per year in 2007. The subsequent global financial crisis reduced the number of deals, but there still occur about 50 tender offers per year, a number much greater than that in the 1990s.

In Table 1, we also show the time series distribution of 262 tender offers that are not followed by a squeeze-out procedure, which form the main focus of our research, as well as how much proportion of shares of a target an acquirer owns before and after the tender offer. As we see from Table 1, the median post-transfer ownership of a target before 1999 was about 50 percent. This suggests that the purpose of a tender offer used to be to acquire a little more than the majority of the target. The squeeze-out procedure did not exist before late 1999, when the regulation was introduced to allow an acquirer to forcefully squeeze-out minority shareholders that do not tender their shares, but the use of the squeeze-out procedure, as well as the proportion of ownership of the target after the tender offer, only gradually increased.

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Squeeze outs permit acquirers to purchase minority stakes without shareholder consent once a certain ownership threshold has been reached.
A major change occurred in 2007, when the government introduced the restriction on the partial tender offer in December 2006. Before the restriction was imposed, an acquirer of a partial tender offer could set a limit on the number of shares that an acquirer would be willing to purchase at whatever proportion of the target’s shares the acquirer wanted. If there were more shares tendered than the limit, the bidder could only purchase the pre-specified number of shares on a pro-rata basis, and return the remaining tendered shares. The 2006 restriction prohibited a bidder from setting a purchasing limit above two-thirds (66.6 percent) of the target’s exiting shares (a limit equal to or below 66.6 percent is still allowed). Beyond 66.6 percent, an acquirer must purchase all shares that are tendered by shareholders. The
regulation resulted in the reduction of partial tender offers that are not followed by squeeze-out where the target is expected to remain listed on the exchange. It is generally the case in a non-partial (“any-or-all”) tender offer that a bidder should announce his intention to squeeze-out the remaining shareholders after the tender offer is completed. The regulatory change results in a significant increase in the median post-transfer proportion of target shares after 2007.

III–2. Descriptive Statistics of Tender Offer Premium

As we mentioned in Section II, the objective of this research is to analyze the premium of a tender offer focusing on the estimation of private benefit of control in Japan using the post-transfer price premium. We use the share price of a target firm two trading days after the final date of tender offer period to calculate the post-transfer price premium. This is because an acquirer releases a report about the result of her tender offer, in which the number of shares tendered and that of shares actually purchased are reported. The market learns from the report whether the tender offer and the transfer of corporate control has been successfully completed or not, and prices the target’s shares accordingly to reflect the cash flow under the control of the new management.

In this research, we also calculate the value of cash flow improvement as described before in Figure 1. We use the market price of the target’s shares 41 trading days prior to the announcement of a tender offer to calculate the pre-offer price premium, from which we estimate the cash flow improvement as the change in share price between the pre-announcement date and the post-tender offer date. The choice of 41 trading days prior to the announcement is in line with previous research such as Betton and Eckbo (2000). We have tested the robustness of our results to the choice of the pre-offer date by using the share price of the target 21 trading days and one trading day prior to the tender offer announcement, but the conclusion from the results below is not affected.

Table 2 shows the outline of the level of pre-offer and post-transfer price premium. The left half of the table reports the average and the median of premiums for 612 tender offers including those followed by squeeze-out, and the right half of the table shows the figures for 262 tender offers that exclude those with squeeze-out. The pre-offer price premium, which practitioners often refer to as “control premium” is about 30 percent for the 612 tender offers. We notice that the level of premium was lower and often negative before 1998, when squeeze-out procedures were introduced. There was a gradual increase in the level of pre-offer price premium since 1998, but as in Table 1, the pace of increase accelerated after 2007. The average pre-offer price premium increased from about 20 percent before 2007 to more than 40 percent afterwards. A similar trend is observable for the pre-offer premium of 262 tender offers without squeeze-out, but the average pre-offer price premium is only around 20 percent, even in 2011.

About the post-transfer price premium, the average and the median for the entire sample are 4.8 percent and 2.7 percent, respectively, and are statistically not significantly different
from zero. The average and the median for the 262 tender offers without squeeze out are 1.4 percent and 2.3 percent, respectively, and neither is significant. The results are in line with the finding of Dyck and Zingales (2004), who report a negative premium for the block trades in Japan.

One thing to note about the post-transfer premium is that the average and the median for the 262 tender offer turns significantly positive after 2007. Although not reported in Table 2, the average and the median post-transfer premium of the 262 tender offers for the period after 2007 are 12.7 percent and 7.7 percent, respectively, and they are statistically significant at the 1 percent level of significance. In contrast, the average and the median for the entire 612 tender offers for the same period are not significant. This confirms that including tender offers followed by squeeze-out results in the downward bias of the estimation of post-transfer price premium, and the suggested private benefits.

In this section, we presented the univariate statistics about the level of pre-offer and post-transfer price premium. We have confirmed that the level of pre-offer premiums is lower than that in the U.S. or the UK, and that the post-transfer price premium is not significantly different from zero, suggesting that the private benefits of control are not valued much in

<table>
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<th>Year</th>
<th># of TOBs</th>
<th>Pre-Offer Price Premium</th>
<th>Post-Transfer Price Premium</th>
<th># of TOBs</th>
<th>Pre-Offer Price Premium</th>
<th>Post-Transfer Price Premium</th>
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<tr>
<td></td>
<td></td>
<td>Average</td>
<td>Median</td>
<td>Average</td>
<td>Median</td>
<td>Average</td>
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<td>1990-1995</td>
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<tr>
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<td>29.0%</td>
<td>4.8%</td>
<td>2.7%</td>
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IV. Multivariate Analyses of Post-transfer Price Premium

As we have shown by Table 2 in the previous chapter, the value of private benefits of control suggested from the post-transfer price premium in Japan has been small, but in the recent years it seems to be increasing. We have also explained that it is important to exclude tender offers followed by squeeze-out to avoid the downward bias of the estimated private benefits. As we only presented univariate descriptive statistics in the previous section, we need to understand the interacting impact of multiple factors that may affect the level of private benefits. For this purpose, we conduct multivariate analyses of post-transfer price premium using multiple regressions below.

First, we will describe the explanatory variables to be included in our analyses to follow. We also explain how each variable may affect the post-transfer price premium and predict the sign of its regression coefficient.

1. **Pre-Offer Proportion of Shares Owned by Acquirer**: When an acquirer already owns a target’s shares and increases its ownership proportion through a tender offer, the degree of cash flow improvement may be limited. This implies that the acquirer must put more value on the private benefits to pay the same level of total control premium. We expect the sign of the coefficient to be positive.

2. **Post-Transfer Proportion of Shares to be Owned by Acquirer**: When an acquirer intends to own large proportion of shares of a target, the loss of cash flow of the target from extracting private benefits has a larger impact on the value of the acquirer’s shareholdings, offsetting the private benefit from controlling the target. Therefore, we expect the coefficient to be negative.

3. **Dummy Variable for Existence of Block Sellers**: This dummy variable takes the value of one when a tender offer announcement informs that there are block holders of a target that are willing to tender their shares, and zero otherwise. Large block holders understand that they cannot sell their shares in the market without negatively affecting share prices, so that they might accept an offer price below market price. The existence of a block seller, therefore, tends to lower the total control premium, but this should not be correlated with the level of cash flow improvement of the target. As a result, the existence of block sellers reduces the estimate of private benefits, which is the difference between the total premium and the cash flow improvement. We expect the coefficient to be negative.

4. **Dummy Variable for Individual Block Sellers**: When block holders are individuals, such as the founding owner, current managers or their family members, this dummy variable takes the value of one, and zero otherwise. Individual block holders
tend to sell their shares for succession or inheritance, and possibly be more urgent, accepting a lower offer price than corporate block holders. We expect the coefficient to be negative.

5. Dummy Variable for Target Running Deficits: This dummy variable takes the value of one when a target firm is recording an operating loss or after-tax loss within two years prior to the announcement of a tender offer, and zero otherwise. Target shareholders might accept a lower offer price, and so the estimate of private benefits should be lower. We expect the coefficient to be negative.

6. Estimated Cash Flow Improvement: As we explained in Section II-2, we estimate the value of cash flow improvement under the new management as the difference between the post-transfer and pre-offer share price of a target. The value of estimated cash flow improvement is calculated as (post-transfer share price of a target) / (pre-offer share price of a target) - 1. Since we do not expect a correlation between the cash flow improvement and private benefit of control, the coefficient should be zero.

7. Ratio of Offer Price to 52-Week High of Target’s Share Price before Tender Offer: We include a variable that shows the ratio of the tender offer price to the 52 week high of the target’s share price before the offer. Baker et al. (2012) find that the tender offer premium is biased toward the 52 week-high of target shares. Following their methodology, we obtain the 52 week high of target share price for the period up to 41 trading days prior to the tender offer announcement, and divide it by target’s share price on 41 trading days prior to the announcement. If an acquirer has to increase the offer price (and total control premium) for the 52-week high factor, it should result in an increase of the estimated private benefits, because such price factor should have little correlation with the cash flow improvement of the target. We expect the coefficient to be positive.

8. Dummy Variable for Period after October 1999: The squeeze-out was introduced by the new legislation in October 1999. This dummy variable takes the value of one if a tender offer took place after October 1999, and zero otherwise. Since we exclude tender offers followed by squeeze-out, we should not see any changes in the estimate of private benefit after October 1999. We expect the coefficient to be zero.

9. Dummy Variable for Period after December 2006: This dummy variable takes the value of one if a tender offer took place after December 2006, and zero otherwise. In December 2006, regulations on a tender offer were revised under the Securities and Exchange Act (now renamed Financial Instruments and Exchange Act). The regulatory revision has prohibited a bidder from setting a purchasing limit above two-thirds (66.6 percent) of the target’s exiting shares. Beyond 66.6 percent, an acquirer must purchase all shares that are tendered by shareholders. The revision also contains a stricter application of the mandatory bid rules, and requires the disclosure of additional details regarding the determination of the offer price and an
opinion on fairness by a third-party valuation expert. Since we exclude tender offers followed by squeeze-out, the main effect of the regulatory revision is that we do not find tender offers beyond 66.6 percent of post-transfer ownership of an acquirer after December 2006. We are not sure about the consequence of the change in the composition of our sample, so we do not have an explicit expectation about the sign of the coefficient.

10. Log of Market Capitalization of Target: This is a controlling variable for the difference in size of a target of different tender offers. We do not have any expectation about the sign of the coefficient.

Some or all of these explanatory variables are included in multiple OLS regressions to analyze the factors that affect the estimate of private benefits. In Table 3, we report four regression models with different sets of explanatory variables.

In models (1) and (2), we run regressions without including estimated cash flow improvement. The results show that the block seller dummy and the dummy for target running deficits are both strongly negatively correlated with post-transfer price premium. Both coefficients are significantly negative at the 1 percent level of confidence. We confirm that the existence of block sellers or the target running deficits reduces the total premium, resulting in a lower level of estimated private benefits. Contrary to our expectation, the dummy variable for individual block sellers is not significant. There is no evidence that individual block sellers value the private benefit of control differently from corporate block holders. We also see that the post-transfer proportion of shares owned by an acquirer is not significant. We confirm that the post-transfer proportion of shares owned by an acquirer is weakly significantly negative at the 10 percent significance level. This suggests that an acquirer does not value private benefits less when they plan to own a large proportion of the target’s shares after a tender offer is completed.

One important thing to notice is that the coefficient for the post-December 2006 dummy is +0.142 and significantly positive at the 1 percent level. This is an important result because the regulatory revision resulted in the increase of estimated private benefits by 14 percent. We confirm that the characteristic of acquirers after December 2006 shifted toward those who find higher private benefits to control a target, and are willing to pay a higher total premium. We will elaborate more on this finding in the next section.

Next in models (3) and (4), we include the estimated value of cash flow improvement as one of the explanatory variables. Contrary to our expectation, we find that the coefficient is significantly negative at the five percent level. The result means that there is a negative correlation between cash flow improvement and the private benefit of control. One possible interpretation of the finding is that there is a certain threshold level of the total premium (e.g., 30 percent) that an acquirer must pay to transfer control successfully, and those transactions that do not meet the threshold may not occur. If the value of cash flow improvement is lower, only an acquirer that values the private benefits higher to achieve the threshold can launch a tender offer. We see that all variables that are significant in models (1) and (2) remain significant in models (3) and (4).
Finally, we report that ratio of the offer price to the 52-Week high of a target’s share price before a tender offer is positively correlated with the post-transfer price premium. The result suggests that an acquirer who values private benefits higher can conduct a tender offer when the target’s share price before the announcement is relatively lower than the 52 week high of the target’s share prices. We have more thoughts on this finding in the next section.

V. Summary and Conclusion

This research has analyzed the 262 tender offers without subsequent squeeze-out between 1990 and 2011 to understand how an acquirer values the private benefit gained from controlling a target firm. We present a summary of the findings in Table 4.
First, the average estimate of the private benefit, or the post-transfer price premium, is not significantly different from zero when we include the whole sample. The average, however, becomes significantly positive after the regulatory change in December 2006.

After analyzing multiple factors that may affect private benefits, we report that post-transfer proportion of shares that an acquirer intends to assume after a tender offer affects the estimate of private benefit negatively. We also find that when there are block sellers or when a target firm is running deficits, a target’s estimated private benefits for an acquirer become smaller. Since private benefits of control imply the ability of an acquirer to drain cash flow from a target at the cost of the target’s minority shareholders, these results are in line with our prior expectation.

It is interesting that there is a negative correlation between the value of cash flow improvement and that of private benefits. This implies that the two values are somehow complimentary, and that when the expected cash flow improvement of a target is small, only an acquirer that finds a private benefit of control of the target is willing to assume its control.

There are two remaining factors that affect the estimate of the private benefit that require more careful consideration: (1) that the ratio of offer price to the 52-week high of the target’s share price before the tender offer affects the estimate negatively, and (2) that the regulatory change in December 2006 to prohibit partial tender offers beyond 66.7 percent resulted in an increase of the estimate of private benefits. It is not obvious why these factors affect the estimate of private benefit in such ways.

First, the ratio of the offer price to the 52-week high of the target’s share price before a tender offer may serve as a proxy for the misevaluation of target’s shares. It may be that the post-transfer market price is still undervalued, in which case, the estimated private benefits look larger, but the target’s share price will increase eventually and the cash flow benefit will turn out to be more than the market’s estimate at the time when a tender offer ended. Anoth-

<table>
<thead>
<tr>
<th>Variable/Factor</th>
<th>Effect (Regression Coefficient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of All Samples</td>
<td>0</td>
</tr>
<tr>
<td>Pre-Offer Shareholding</td>
<td>0 (+ for Model (4) only)</td>
</tr>
<tr>
<td>Post-Transfer Shareholding</td>
<td>–</td>
</tr>
<tr>
<td>Block Seller</td>
<td>– –</td>
</tr>
<tr>
<td>Individual Block Seller</td>
<td>0</td>
</tr>
<tr>
<td>Target Firm Running Deficits</td>
<td>– –</td>
</tr>
<tr>
<td>Estimated Cash Flow Improvement</td>
<td>– –</td>
</tr>
<tr>
<td>52-Week High of Target’s Share Price before Tender Offer</td>
<td>++</td>
</tr>
<tr>
<td>Period after October 1999</td>
<td>0</td>
</tr>
<tr>
<td>Period after December 2006</td>
<td>++</td>
</tr>
</tbody>
</table>

Note: ++ and + denote significantly positive at the 5% and 10% level, respectively. 0 denotes not significant. – – and – denote significantly negative at the 5% and 10% level, respectively.
er possibility is that the target’s share is correctly priced, but only an acquirer expecting a larger private benefit will assume control of the target, in which case there will be no subsequent increase of the target’s share price. We need longer time series data on target shares to judge which of the above scenarios is more plausible.

The second factor of the increase of the estimate of private benefits after the regulatory change in December 2006 also requires further analysis. There are several possible explanations. One possibility is that only a tender offer that expects higher cash flow improvement occurs after December 2006. If the increase in the total control premium after December 2006 has little relation to the extent to which the target’s cash flow can be improved, the private benefit of control must compensate for the increase in the total control premium. In this case, only an acquirer who values private benefits more launches a tender offer after December 2006. Such acquirer may or may not (by hubris) correctly estimate the value of his private benefits. In the latter scenario of hubris, the market may notice it and, for a publicly listed acquirer, the share price may react negatively to the announcement of the tender offer. In the former case, there should not be such negative reaction of the acquirer’s shares. In our sample, there are 182 publicly listed acquirers out of 262 tender offers. An analysis of the acquirer’s share price especially for tender offers after December 2006 is the next scope of our research. Since previous research such as Kang et al. (2000) has reported that Japanese acquirers tend to receive a positive share price reaction at the time of an M&A announcement, it is important to verify whether the result still holds for tender offers after December 2006 that pay a much larger total premium than before.

References


