Ownership concentration, agency conflicts, and dividend policy in Japan

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Abstract

We examine the dividend policy of Japanese firms and find that dividend payout is negatively related to ownership concentration. This result contradicts the argument that dividends are substitute for shareholder monitoring, but supports the assumption that controlling shareholders extract private benefits at the expense of minority shareholders. Consistent with their lower payout, firms with dominant shareholders are less likely to increase dividends when profitability increases and more likely to omit dividends when investment opportunities improve. On the other hand, they are more likely to increase dividend when debt is high and less likely to omit dividends when debt increases, which is tantamount to a wealth transfer from debtholders. Overall, ownership concentration appears to play a critical role in corporate decisions, mainly due to the way it intensifies the agency conflicts between majority and minority shareholders.

Keywords: dividend policy, agency conflicts, ownership concentration
JEL Classification: G35

1. Introduction

Agency conflicts play an important role in corporate decisions. In their seminal paper, Jensen and Meckling (1976) show that decision makers may prefer value-decreasing outcomes that are justified only because of wealth transfer from other stakeholders. To give a well-known example, managers may invest in unprofitable projects whose costs are borne by shareholders if doing so enhances their own status and bring them private benefits. Likewise, shareholders may take excessive risk knowing that the downside is assumed by debtholders, while they benefit from the upside.

Agency conflicts can take other forms. Myers and Majluf (1984) argue that firms acting in the interest of current shareholders would rationally pass up profitable investment projects if the benefits are captured by outside investors. Shleifer and Vishny (1997) emphasize the agency conflicts between majority and minority shareholders, prompted by recent evidence that dominant shareholders extract rents at the expense of small shareholders through the tunneling of assets and profits, such as the use of unfair transfer pricing between controlled entities. Johnson et al. (2000) provide various examples of expropriation taking place in developed economies.

Payout policy is one area of corporate decisions that cannot escape the influence of agency conflicts. In fact, Easterbrook (1984) argues that dividends can be either the result or the solution to agency conflicts. Because managers prefer to retain earnings to increase private consumption or reduce the risk on their human capital, low governance standards and poor shareholder protection are likely to result in lower payout. This view is clearly established in the cross-country analysis of La Porta et al. (2000). Conversely, dividend payout can contribute to mitigate agency conflicts. Jensen (1986) advocates to lower the free cash flows available to managers in order to enhance financial discipline. Higher dividends achieve precisely this purpose, thus providing a cost-effective substitute to shareholder monitoring.

Faccio et al. (2001) highlight the importance of agency conflicts between majority and minority shareholders by comparing dividend payouts in Europe and East Asia. Since dominant shareholders can extract private benefits from the cash flows and assets under

their control, their preference goes towards lower dividends. However, the presence of another large shareholder may contain the rent extraction, resulting in higher payouts. Gugler and Yurtoglu (2003) provide further support for the rent extraction hypothesis by showing that the market reaction to dividend announcements depends on the scope for expropriation.

The purpose of this paper is to examine the dividend policy of Japanese firms from an agency perspective. If ownership concentration is consistent with the alignment of interest between management and shareholder, as studies of corporate performance have suggested, there should be a higher dividend payout. However, ownership concentration can also facilitate rent extraction by dominant shareholders, resulting in lower payouts.

Our results support the second hypothesis. Ownership concentration is associated with significantly lower dividend payments in proportion of operating earnings as in proportion of book equity. In effect, the difference between the high concentration and low concentration groups is found to be in the order of 10%.

We investigate the reasons for this difference, focusing on the role of profitability, growth opportunities and changes in leverage in explaining the decision to change dividends. Our analysis uncovers a number of agency conflicts. First, tightly controlled firms (i.e., firms with concentrated ownership) are less likely to increase dividends when profitability increases and when operating profits are negative. This pattern is consistent with their lower payout and the assumption that dominant shareholder extract private benefits from resources under their control. We also find that tightly controlled firms are more likely to omit dividends when investment opportunities improve, which protects the interest of current shareholders. Clearly, this decision reduces the likelihood of requiring further funding that would benefit outside investors, hence preventing the under-investment problem present in Myers and Majluf (1984). Finally, we find that firms with concentrated ownership are more likely to increase dividends when debt levels are high and less likely to omit dividends when debt increases, which is equivalent to a wealth transfer from debtholders to shareholders since it decreases the amount of collateral backing the firm's debt.

Overall, the analysis of the dividend adjustment decision provides some reasons for the lower payout associated with ownership concentration. More importantly, perhaps, the results suggest that as in the case of many corporate decisions, dividend policy is heavily determined by agency conflicts between majority shareholders and other stakeholders. In particular, the emblematic debtholder-shareholder conflict appears to be exacerbated by the presence of dominant players able to coordinate the actions of shareholders.

The rest of the article is structured as follows. Section 2 articulates the hypotheses regarding the relationship between ownership structure and dividend policy. Section 3 is describes the sample and methodology. The empirical results are presented in Section 4. Section 5 concludes.

2. Effects of ownership concentration on dividends

We develop two opposite arguments regarding the effect of ownership concentration on dividend payout. The influence can be either positive or negative depending on whether large shareholders mitigate or intensify agency conflicts.

2.1 Positive relationship

According to Shleifer and Vishny (1986), ownership concentration creates the incentives for large shareholders to monitor the firm's management, which overcomes the free-rider problem associated with dispersed ownership whereby small shareholders have not enough incentives to incur monitoring costs for the benefit of other shareholders. Due to active monitoring from shareholders, managers are better aligned towards the objective of delivering shareholder value; resulting in greater firm performance. Indeed, firms with concentrated ownership have been documented to exhibit higher market values. Demsetz and Lehn (1985) dismiss these analyses for ignoring endogeneity issues. Their critical argument is that unobservable characteristics (e.g., management quality) explain the

positive relationship between ownership and performance. However, using the natural experiment of Czech privatizations, which preclude possible endogeneity and reverse causality problems, Claessens and Djankov (1999) establish that ownership concentration contributes, to a certain degree, to increasing firm value. Because of higher ownership concentration, fewer resources are consumed in low return projects, thus implying that more cash flows can be distributed as dividends.

Easterbrook (1984) argues that the direction of causality is actually opposite. Instead of being the consequence of fewer agency conflicts, high dividend payments can be used for mitigating agency conflicts. In other words, dividends can be substituted for shareholder monitoring. Since they incur most of the monitoring costs, large shareholders have strong incentives to require higher dividend payments in order to reduce their monitoring expenses. As a result, there should be a positive relation between ownership concentration and dividend payout. However, the crux in this argument is that higher payout is intended to address agency conflicts and enhance firm performance rather than the consequence of these objectives.

In addition, the closer alignment with shareholders suggests that managers pay higher dividends, which gives shareholders the option to either cash out or increase their investment by purchasing more shares. In contrast, managers showing contempt for shareholders would keep all the cash and pay nothing, unless compelled by law. Consistent with this interpretation, La Porta et al. (2000) indicate that in countries with better shareholder protection, like the US, firms pay more dividends. This finding is supported by the lower cash holdings of better-governed firms reported in Dittmar et al. (2003). Mitton (2005) documents that emerging market firms with higher corporate governance scores pay higher dividends. In addition, the dividend payout appears to be higher when investment opportunities are low.

The above arguments, and particularly the mitigation of agency conflicts between managers and shareholders, suggest the hypothesis (H1) that ownership concentration is associated with higher dividend payments.

2.1 Negative relationship

The closer alignment of interests between managers and shareholders could also justify a negative effect on dividend payout. In the absence of agency conflicts, shareholders should be confident that the firm's cash flows are properly used. Hence, the higher dividend payout advocated by Easterbrook (1984) does not appear to be essential to discipline management. In fact, several studies suggest that closer alignment of interest between managers and shareholders results in lower dividend payments. For instance, Jensen et al. (1992) show that insider ownership is associated with significantly lower dividend payout among US firms. Farinha (2003) documents a similar negative relationship in the UK. Chen et al. (2005) show that several indicators of governance quality (existence of audit committee and percentage of independent directors) negatively affect dividend payouts in Hong Kong. By aligning more closely the interest of managers and shareholders, shareholder concentration could have the same negative effect on dividend payout.

More significantly, agency theory has recently emphasized the agency conflicts between large and small shareholders. Shleifer and Vishny (1997) argue that large shareholders prefer to generate private benefits of control that are not shared by minority shareholders. Johnson et al. (2000) give several examples of controlling shareholders expropriating minority shareholders of profitable business opportunities. Claessens and Djankov (1999) explain the downward-sloping firm value at high levels of ownership concentration by the risk of expropriation by controlling shareholders. Faccio et al. (2001) underline that, in East Asian corporations, the salient agency problem is the expropriation of outside investors by controlling shareholders. The presence of other large shareholders can contribute to increase the distribution of profits, if decreases the scope of expropriation or it can further decrease payout rates, if there is collusion with the controlling shareholder.

Gugler and Yurtoglu (2003) show that the lower dividend payout of majority-controlled firms in Germany is related to the probability that controlling shareholders extract private benefits at the expense of minority shareholders. Indeed, they find that increases in dividend payments are associated with significantly positive abnormal

returns for firms where rent extraction is most likely given the discrepancy between cash flow rights and control rights. Consistent with Faccio et al. (2001), the presence of a second large shareholder contributes to increase dividend payout. Maury and Pajuste (2002) find a similar negative association between ownership concentration and dividend payments in Finland, as well as evidence supporting the mitigating role of another large shareholder.

Similarly, we can hypothesize (H2) that firms with concentrated ownership are associated with lower dividend payments.

3. Data and methodology

The effect of ownership concentration on dividend levels is analyzed in Section 3.1. The methodology for analyzing the decision to change dividends is outlined in Section 3.2. The sample is described in Section 3.3.

3.1 Payout regressions

We use two proxies to evaluate firms' payout policy. Dividend payout (PAYOUT) is measured by dividends to operating income. Jensen et al. (1992) argue that scaling by operating income ensures a more consistent denominator across firms compared to scaling by net earnings. Dividend yield (DIVEQTY) is proxied by total dividend payments to book value of equity. Scaling by market value of equity provides similar results (not tabulated), perhaps because the average price to book value of equity was very close to one over the sample period.

Although OLS is the commonly reported method for analyzing dividend payments, the fact that the dividend-to-equity ratio is bounded below zero suggests that OLS estimates may be severely biased. Following Barclay et al. (1995), we apply Tobit regressions to the censored dependent variable (DIVEQTY).

Ownership concentration is measured by an approximation of the Herdindahl index, calculated by summing the squared percentage of shares controlled by the five major shareholders. Following Demsetz and Lehn (1985), and Prowse (1992), a logarithmic transformation is applied to the index (LHH). In addition, we use a dummy variable (Q2H) indicating that ownership concentration (LHH) is above the sample median. Our shareholding information covers one cross-section (en of 2002), which can be an issue for some applications (e.g., fixed effects regressions). For our purpose, we need to assume that ownership concentration is stable. Prowse (1992) suggests that this assumption is quite reasonable given the scale of interlocked shareholdings in Japan.

We include six control variables as well as year dummies to account for unobserved economic factors. Firm size (SIZE) is measured by the natural log of total assets. Gugler and Yurtuglu (2003) and Farinha (2003) show that dividend payouts are negatively associated with firm size in Germany and the UK. Fama and French (2002) indicate that large US firms pay a higher proportion of their earnings, because of lower earnings volatility, which is in line with pecking order predictions.

Profitability is measured by return on asset (ROA) representing annual operating profits scaled by total assets. Kato et al. (2002) use operating profits divided by sales. Fama and French (2002) and Jensen et al. (1992) show that profitability has a positive effect on dividend payout. Gul (1999) reports a negative association with dividend payout, but a positive association with dividend yield. To address the nonlinearity at zero implied by the fact that loss firms may still pay dividends, we use a dummy (DLOSS) indicating that ROA is negative.

Growth opportunities are proxied by the market to book value of assets (Q). Current growth is measured by the percentage change in total assets (GROW). Provided growth is persistent, this variable provides another proxy for future growth. Following Farinha (2003), we use 5-year average growth rate in total assets. Using a shorter one-year change in total assets, Fama and French (2002) and Mitton (2005) indicate that growth has a negative impact on dividend payouts. In contrast, Gul (1999) report that growth has little influence on dividend payouts and dividend yields in Japan.

Consistent with Gugler and Yurtuglu (2003), financial leverage (DEBT) is measured by long term plus short term debt over total assets. In Jensen et al. (1992) leverage is restricted to long-term debt over total assets. In both studies, the association with dividend payout is negative. Finally, affiliation with a business group (keiretsu) is captured by a dummy (KD). Following Dewenter and Warther (1998) and others, we use information reported by Industrial Groupings in Japan (1999) and focus on the 6 largest business groups: DKB (Dai-ichi Kangyo), Fuyo (or Fuji), Mitsubishi, Mitsui, Sanwa, and Sumitomo.

3.2 Dividend change regressions

We use logit regressions to analyze separately the decisions to increase, reduce or omit dividends based on a smaller sample of dividend paying firms. These decisions can be jointly modeled with an ordered probit model. This technique is well suited for analyzing discrete dependent variables that possess a natural ordering. Goergen et al. (2005) use this approach to analyze the dividend policy of German firms.

Consider a discrete dependent variable Y taking its values in the set {0, 1, … , N}. Ordered probit models assume the existence of a latent continuous variable Y* given by the equation $Y^* = b'X + e$, where X is a vector of explanatory variables, b is a vector of coefficients with the same dimension, and e is a normally distributed error term. There are N-1 cutoff points $\{\mu_i\}_{i=1,..,N}$ defining a partition of the state-space in N non-overlapping segments such that

$Y = 0$ if $Y^* \leq \mu_1$

$Y = i$ if $\mu_i < Y^* \leq \mu_{i+1}$

$Y = N$ if $\mu_{N-1} < Y^*$

The probabilities attached to the dependent variable are

$Pr(Y = 0) = F(\mu_1 - b'X)$

$Pr(Y = i) = F(\mu_{i+1} - b'X) - F(\mu_i - b'X)$

$Pr(Y = N) = 1 - F(\mu_{N-1} - b'X)$

where F(.) stands for the cumulative standard normal distribution function.

The coefficients (b, μ) are estimated by maximizing the log-likelihood function

$$\log L(b,\mu) = \sum_{k=1}^{K}\sum_{i=1}^{N} \Pr(Y_k = i)\,\mathbf{1}_{\{Y_k = i\}}$$

in which the probabilities are given in the above set of equations; K is the number of observations and the indicator function $\mathbf{1}_{\{Y_k = i\}}$ equals 1 if the realized dependent variable satisfies $Y_k = i$.

To address the problem of insignificant changes in dividends and mitigate measurement errors, we categorize as dividend changes variations in dividend per share greater or less than 5% compared to the previous year's dividend. Accordingly, dividend continuations (no change) are dividend payouts within 5% of the previous year's dividend. Omissions correspond to the specific case where dividends are decreased down to zero.

The dependent variables consist of levels and changes in profitability, growth and leverage. To avoid multi-colinearity problems due to the relation between asset growth and firm size, the latter is dropped from the regressions. To investigate the influence of ownership concentration on the dividend change decision, we inter-act each of the covariates with the Q2H dummy. Lagged payout is also included in the regressions.

3.3 Sample description

Our sample consists of Japanese firms listed on the first and second sections of the Tokyo Stock Exchange. Financial information is from Nikkei NEEDS - Financial Quest database, which provides accounting and stock price information for listed Japanese firms. The period covers April 1995 to March 2002, which represents a period over which the performance of the Japanese economy has been particularly lackluster in comparison to other developed economies. Financial institutions, i.e. banks, securities and insurance companies, are excluded from the sample due to their specific operations. Shareholding information is from Bureau Van Dijk - OSIRIS database, which lists major shareholders

in each firm as of 2002-2003. We use this source because ownership is already aggregated in the NEEDS database (e.g., sum of top 10 shareholders). Firms with missing ownership data are dropped from the sample, which eventually consists of 9214 observations. To analyze dividend changes, we exclude non-paying firms. Due to the loss of one cross-section, the dividend changes sample is further reduced to 6397 observations.

Table 1 provides descriptive statistics for the payout sample. Average dividend payments represent about 14.4% of operating earnings and less than 1% of book equity. Median dividend ratios are slightly lower (around 9.3% of operating earnings and 0.85% of book equity). As a useful point of comparison, Jensen et al. (1992) indicate that average payout is 11.3% in the US, which may be explained by the higher profitability of US firms. Return on assets is about 3.25% with 10.77% of firms exhibiting operating losses. Asset growth is relatively soft, with an average around 1.24% and a median less than 0.7%, consistent with Japan's sluggish growth over the sample period. Likewise, investment opportunities seem limited with an average Q ratio around 1.17 and a median (about 1.04) even closer to one. The average ownership of the top 5 shareholders is just under 33.5%. This figure is comparable to the 32.8% to 33.2 % reported by Prowse (1992) and significantly higher than the mean of 25% given in Demsetz and Lehn (1985) for US firms. Nonetheless, dispersion of ownership concentration in both countries appears to be similar with a standard deviation of about 15%.

4. Results

4.1 Univariate analysis

We begin the analysis by splitting the sample in two groups -- above and below the median level of ownership concentration -- and comparing firms across the two groups. Table 2 reveals that ownership concentration is associated with significant differences in dividend payout and firm performance. Panel A shows that average payout is 2.5% lower and average dividend yield is 0.075% lower for the high concentration group. In Panel B, the difference in median payout is slightly lower, around 1.73% of operating income; but

the difference in median dividend yield is higher, at about 0.12% of book equity. In both cases, the Wilcoxon rank-sum test is statistically highly significant. Hence, there is clear evidence that ownership concentration is negatively related to dividend payout, which supports the hypothesis that dividend payments are influenced by the agency conflicts between majority and minority shareholders.

The two groups present other significant differences in firm characteristics. Large firms are mostly clustered in the low concentration group, consistent with Demsetz and Lehn (1985) and Prowse (1992). The high concentration group is characterized by significantly higher profitability, but a higher proportion of loss-making firms, as well as higher growth rates and lower debt ratios. These characteristics are consistent with the fact that larger firms are generally associated with lower growth rates, lower performance and higher financial leverage. Because these characteristics are strongly correlated with ownership concentration, they may spuriously produce a significant statistical association with dividend payout. For example, if high growth firms pay lower dividends and are associated with a higher ownership concentration, growth could be the actual reason for the negative relationship between ownership concentration and dividend payout.

4.2 Dividend payout regressions

In this section, we examine the effect of ownership concentration on dividend payout controlling for other characteristics that have a known influence on firms' payout policy. Table 3 presents the regression results (OLS for payout, Tobit for dividend yield). In all specifications, the coefficients on the Herfindhal index (LHH) and its associated dummy (Q2H) are significantly negative. The coefficient on Q2H for the dividend payout ratio is less negative than the difference of nearly 2.5% obtained in the univariate analysis. However, the coefficient for dividend yield is more negative (-0.13% against -0.07%). It is interesting to note that OLS regressions for dividend yield (not tabulated) provide qualitatively similar results to the Tobit regressions, despite the significant number of left censored cases (1674 out of 9214).

The result contradicts the hypothesis suggested by Easterbrook (1984) that dividends contribute to discipline management and may be a substitute for shareholder monitoring. In fact, firms with concentrated ownership, which are supposed to be closely monitored, distribute significantly lower dividends. This pattern is more in line with the argument expressed by Shleifer and Vishny (1997) that dominant shareholders prefer to extract private benefits, such as favorable transfer pricing between controlled entities or expropriation of valuable business opportunities, rather than receive dividends that benefit equally majority and minority shareholders. The result is in agreement with Gugler and Yurtoglu (2003) who report that majority controlled firms in Germany pay lower dividends. Maury and Pajuste (2002) find that the cumulated ownership of the three largest shareholders has a negative effect on the dividend payout of Finnish firms. Khan (2006) obtains a similar result with UK firms using a dynamic panel methodology.

Among the control variables, firm size appears to reduce both the dividend payout and the dividend yield. A comparable effect, with a similar order of magnitude, is reported by Gugler and Yurtoglu (2005) regarding German firms. Consistent with Gul (1999), the influence of profitability is positive for dividend yield, but negative for dividend payouts. This could be explained, following Lintner (1956), by the fact that dividends are sticky in the sense that their variations imperfectly follow the variations in the firm's earnings. Firms that are more profitable have higher dividend payments, although the dividends are lower in proportion of (their higher) earnings. Controlling for endogeneity issues, Jensen et al (1992) find that ROA has a positive effect on the dividend payouts of US firms. Taken together, it is more likely that the true impact of profitability is reflected by its (positive) influence on dividend yield. This interpretation is supported by the negative and significant influence of operating losses on the dividend payout and dividend yield.

Both measures of growth opportunities are seen to have a positive effect on dividend payout and dividend yield. The result is in sharp contrast to studies regarding US firms. Fama and French (2002) and Jensen et al. (1992) report negative coefficients for growth proxies. Farinha (2003) also report a negative effect on the dividend payout of UK firms, although the results appear to be sensitive to model specification. On the other hand, Gul (1999) shows that growth opportunities have a positive and significant effect on dividend

yield, but an insignificant effect on dividend payout for Japanese firms. Benito and Young (2003) offer an interesting explanation to this puzzle. Examining a sample of UK firms, they find that non-payers are typically high-growth firms, which have never paid dividends, rather than troubled firms seeking to repair their balance sheet by cutting dividend payments. It is more likely that Japanese firms adjust their dividend policies depending on their financial conditions. Dewenter and Warther (1998) argue that because problems arising from information asymmetry and agency conflicts are less prevalent in Japan, firms could be less reluctant to cut dividends, as they are less anxious of being seen as sending a negative signal to outside investors.

Consistent with Jensen et al. (1992), leverage appears to have a negative effect on dividend payouts. Gugler and Yurtoglu (2003) report a more negative sensitivity of about -0.46 for German firms compared with our result of -0.26 for Japanese firms. The positive coefficient on dividend yield could be due to the lower denominator (equity ratio) among highly leveraged firms. Hence, the influence of debt on dividends is probably best reflected by its (negative) effect on dividend payout. Affiliation to a business group is seen to increase dividends. The result is consistent with the findings of Faccio et al. (2001) that managers of group-affiliated firms in Europe and East Asia must pay higher dividends to offset greater investors' concerns about expropriation. In contrast, Gul (1999) reports no significant difference between affiliated and unaffiliated firms.

Overall, the role of dividends as a monitoring device appears to be contradicted not only by the negative coefficients on the ownership concentration variables, but also by the coefficients on some control variables. Assuming that large firms are more difficult to monitor, shareholders should require higher dividend payments, which is not what our results indicate. Similarly, the higher payout associated with higher growth is inconsistent with the lesser need to discipline management given the more limited free cash flows. On the other hand, the lower payout associated with higher debt is consistent with debt and dividend being substitute mechanisms for imposing greater financial discipline.

4.3 Dividend adjustment decisions

The previous section has highlighted the negative influence of ownership concentration on dividend payouts. In this section, we provide some explanations for that relationship by examining how ownership concentration affects firms' decision to adjust dividends. Table 4 presents the results of the logit and ordered probit regressions. Comparison of pseudo R-squared indicates that dividend increases are better explained than dividend decreases. Dividend omissions appear to be well described in comparison to dividend decreases, which suggest that firms choosing to skip dividends have many characteristics in common, while dividend reductions may be associated with different motives.

Leaving aside the interaction terms involving ownership concentration for the moment, the results indicate that increases in profitability and accelerating growth rates are associated with a higher likelihood of dividend increases. On the other hand, increases in leverage appear to reduce the likelihood of dividend increases. The implications are opposite for dividend omissions. Low profitability and operating losses, increases in leverage and decelerating growth rates increase the likelihood of dividend omissions. The coefficients regarding dividend reductions have generally the same signs as in the case of dividend omissions. However, changes in profitability and growth are the only variables to be statistically significant. DeAngelo et al. (1992), Charitou (2000), and Georgen et al. (2005) show that earnings, changes in earnings, and a dummy for losses explain effectively the decision to cut dividends. However, colinearity between earnings variables causes statistical significance to drop when all the variables are included in the regressions. In our case, the variable representing change in profitability (ROACHG) is the only one that remains significant. The other earnings variables become generally insignificant. The lack of power to identify dividend cuts relative to dividend omissions may be related to the reluctance by Japanese firms to send a signal of financial distress when their business is not deteriorating enough to warrant the more drastic decision to cut dividends to zero.

All coefficients for the ordered probit model have the expected signs. High level and increase in profitability contribute to increase the likelihood of dividend increases, while

the occurrence of operating losses decreases the likelihood of dividend increases. In passing, the negative sign on the loss dummy (DLOSS) is seen to correct the positive sign associated with the likelihood of dividend increases, which was rather counterintuitive. The positive impact of profitability is consistent with Kato et al. (2000) who report that dividend changes are positively related to current and past earnings changes using a specification similar to Benartzi et al. (1997). The positive impact of growth confirms the conclusion from the logit models. The negative influence of debt and change in debt are also consistent with the logit results regarding the decision to increase or omit dividends.

Lagged payout has a negative (positive) influence on the likelihood of dividend increases (decreases and omissions), but this influence is statistically weak. On the other hand, high ownership concentration is associated with a significantly lower propensity to increase dividends, which contributes to explain why tightly controlled firms have lower payouts. In general, most of the interaction terms involving the ownership concentration dummy appear to affect the dividend adjustment decision. Tightly controlled firms are less likely to increase dividends following profitability increases. This pattern is significant in both the logit and ordered probit regressions. The result is consistent with the view that large shareholders prefer to extract private benefits rather than share dividends with minority shareholders. Tightly controlled firms are also less likely to increase dividends when operating income is negative. This result further suggests that dominant shareholders can force the financial commitment of minority shareholders in difficult times when the latter might arguably prefer to reduce their risk and cash out through higher dividend payments.

Accelerating growth is associated with a higher probability of increasing dividends as well as a higher probability of omitting them. These opposite effects neutralize each other in the ordered probit regression. The negative influence of growth suggested by the decision to omit dividends is typical of good corporate governance. For example, Mitton (2005) shows that well-governed firms with fewer investment opportunities pay more dividends in emerging markets. The negative relationship is also predicted by the pecking order model. Myers and Majluf (1984) argue that firms with good investment opportunities should pay lower dividends and build slack to reduce the need for external

funding which is expensive since it may require current shareholders to share the investments' net present value with new shareholders. In some respect, it appears that dominant shareholders are better able to achieve this optimal outcome, thus preventing shareholder value to be lost as in the case of diffused ownership.

Finally, firms with concentrated ownership are more likely to increase dividends when debt is high and less likely to omit dividends when debt increases. Both effects are reflected in attenuated form in the ordered probit regression. The positive influence of debt on dividend changes is inconsistent with the premise that dividends mitigate the agency conflict between managers and shareholders. In that case, high or increasing levels of debt would substitute for shareholder monitoring, hence lessening the need to impose financial discipline through higher dividends. Instead, the result suggests that majority shareholders are more disposed to transfer wealth from debtholders by decreasing the amount of assets available to back their claims, precisely when debt becomes riskier due to high or increasing leverage. As demonstrated in Jensen and Meckling (1976), shareholders-bondholders conflicts can result in significant agency costs. Our results suggest that these conflicts are likely to be exacerbated when large shareholders can orchestrate the expropriation (on behalf of all shareholders).

Altogether, the lower payout of tightly controlled firms found in the previous section can be related to the lower propensity to increase dividends when payout is already high and profitability increases, and when firms experience operating losses. The lower payout can also be explained by the higher propensity to omit dividends when growth opportunities improve. On the other hand, the higher propensity to increase dividends when debt is high and lower propensity to omit dividends when debt is increasing appears to mitigate the negative relationship between ownership concentration and dividend payout. More importantly, this result appears to be perfectly rational and motivated by agency considerations, such as the objective to preserve shareholder value as well as transferring value from other stakeholders, especially minority shareholders and debtholders.

5. Conclusion

The objective of this paper was to analyze the effect of ownership concentration on the dividend policy of Japanese firms. One hypothesis articulated by Easterbrook (1984) and Jensen (1986) is that dividend payments can substitute for shareholder monitoring by removing excess cash under management control, thus imposing greater financial discipline. Given that large shareholders are better positioned to benefit from this disciplinary mechanism, ownership concentration was expected to be associated with higher dividend payments. The alternative hypothesis proposed by Shleifer and Vishny (1997) is that dominant shareholders can extract private benefits from corporate resources under their control. Accordingly, their preference should tilt towards lower dividends, which prevents minority investors from cashing out their fair share of the firm's profits.

Our results provide clear support for the second argument. Consistent with Gugler and Yutoglu (2003), Maury and Pajuste (2002) and Khan (2006), we find that firms with high ownership concentration pay lower dividends both in proportion of operating earnings and in proportion of book value of equity. The decision to adjust dividends points to a number of rational motives for this outcome. To start with, majority controlled firms are less likely to increase dividends when payout is already high and when earnings are increasing, which indicates a stronger preference for retaining resources internally and a lower concern for the interest of outside investors.

Reflecting diligence towards safeguarding the interest of (current) shareholders, firms with concentrated ownership are also more likely to omit dividends when growth opportunities improve, thereby decreasing the need for future funding that may decrease shareholder value to the benefit of new investors as argued by Myers and Majluf (1984). This result underlines, perhaps not so surprisingly, that firms act more closely in the interest of shareholders when the latter are able to express their concerns. Further, the traditional agency conflict between shareholders and debtholders stressed in Jensen and Meckling (1976) is elegantly illustrated through some dividend adjustment decisions. Indeed, firms with dominant shareholders are more likely to increase dividends when debt is already high and less likely to omit dividends when debt is increasing. In both

cases, the decision represents an evident wealth transfer from debtholders whose claims are depreciated in favor of (majority and minority) shareholders.

Taken together, the paper shows that ownership concentration plays a critical role in corporate decisions. Because shareholders interests are better represented in the presence of large shareholders, agency conflicts with other stakeholders are logically intensified. In contrast, firms with diffused ownership are more likely to strike a balance between their various stakeholders, leading in particular to decisions more favorable to creditors.

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Table 1
Descriptive statistics

	Mean	Median	Stdev	Min	Max
PAYOUT	0.1439	0.0929	0.2826	-0.6855	1.9146
DIVEQTY	0.9565	0.8461	0.8125	0.0000	12.7037
ASSET	280.47	66.5680	844.26	1.68	14,300
ROA	0.0325	0.0282	0.0379	-0.1988	0.4877
DLOSS	0.1077	0	0.3100	0	1
Q	1.1760	1.0397	0.6348	0.2361	16.0862
GROW	0.0124	0.0067	0.0649	-0.3091	1.0718
DEBT	0.5705	0.5780	0.2114	0.0019	1.6162
SH5	0.3345	28.7	0.1551	0.0410	0.9990
LHH	5.6953	5.3794	1.2325	2.2246	9.1902

PAYOUT is the ratio of dividends to operating income. DIVEQTY is the ratio of dividends to book equity in percentage. ASSET is total assets in billion yen. ROA is operating return on assets. DLOSS is a dummy equal to one when operating income is negative. Q is the book to market value of assets. GROW is the 5-year average growth rate in total assets. DEBT is total debt divided by total assets. SH5 is the cumulated ownership of the top 5 shareholders. LHH is the log of the Herdindahl index computed by summing the squared percentage of shares controlled by the top 5 shareholders.

Table 2
Comparison by degree of ownership concentration

	High	Low	H - L	Diff. test
Panel A – Mean values				
PAYOUT	0.1314	0.1564	-0.0249	-4.2404 ***
DIVEQTY	0.9192	0.9937	-0.0745	-4.4039 ***
ASSET	186.75	373.90	-187.15	-10.7046 ***
ROA	0.0345	0.0304	0.0041	5.1907 ***
DLOSS	0.1172	0.0982	0.0190	2.9423 ***
Q	1.1932	1.1589	0.0343	2.596 ***
GROW	0.0191	0.0059	0.0132	9.8299 ***
DEBT	0.5617	0.5792	-0.0175	-3.9696 ***
Panel B – Median values				
PAYOUT	0.0852	0.1025	-0.0173	-8.096 ***
DIVEQTY	0.7862	0.9135	-0.1273	-7.84 ***
ASSET	50.07	89.28	-39.21	-23.502 ***
ROA	0.0291	0.0274	0.0017	3.800 ***
Q	1.038	1.0423	-0.0043	-0.713
GROW	0.0101	0.0035	0.0066	7.988 ***
DEBT	0.5696	0.5905	-0.0209	-3.936 ***

PAYOUT is the ratio of dividends to operating income. DIVEQTY is the ratio of dividends to book equity in percentage. ASSET is total assets in billion yen. ROA is operating return on assets. DLOSS is a dummy equal to one when operating income is negative. Q is the book to market value of assets. GROW is the 5-year average growth rate in total assets. DEBT is total debt divided by total assets. Firms are split in two groups according to their degree of ownership concentration proxied by the Herdindahl index LHH.

Table 3
Influence of ownership concentration on dividend payout

	Dividend payout PAYOUT		Dividend yield DIVEQTY	
Q2H	-0.0149 ***		-0.1301 ***	
	(-2.76)		(-6.61)	
LHH		-0.0063 ***		-0.0581 ***
		(-3.07)		(-7.24)
SIZE	-0.0116 ***	-0.0116 ***	-0.0040	-0.0048
	(-5.66)	(-5.66)	(-0.53)	(-0.64)
ROA	-3.5768 ***	-3.5746 ***	7.0408 ***	7.0653 ***
	(-21.64)	(-21.66)	(19.04)	(19.11)
DLOSS	-0.5367 ***	-0.5368 ***	-0.5706 ***	-0.5718 ***
	(-36.47)	(-36.49)	(-13.95)	(-13.99)
Q	0.0200 ***	0.0200 ***	-0.0140	-0.0139
	(3.62)	(3.62)	(-0.83)	(-0.83)
GROW	0.1134 **	0.1122 **	1.4267 ***	1.4227 ***
	(2.48)	(2.45)	(8.80)	(8.79)
DEBT	-0.2683 ***	-0.2685 ***	0.2867 ***	0.2867 ***
	(-16.09)	(-16.09)	(5.61)	(5.61)
KD	0.0154 ***	0.0161 ***	0.0609 ***	0.0675 ***
	(2.68)	(2.80)	(2.91)	(3.21)
N observations	9214	9214	9214	9214
left-censored			1674	1674
F (LR)	113.75 ***	113.54 ***	1727.64 ***	1736.41 ***
R2 (pseudo R2)	0.2454	0.2455	0.0713	0.0716

PAYOUT is the ratio of dividends to operating income. DIVEQTY is the ratio of dividends to book equity in percentage. SIZE is the log of total assets. ROA is the ratio of operating profits to total assets. DLOSS is a dummy equal to 1 if ROA < 0. Q is the market to book value of assets. GROW is the 5-year average growth rate in total assets. DEBT is total debt over total assets. KD indicates that the firm is affiliated with a business group. LHH is the Herfindhal index of ownership concentration. Q2H is dummy equal to 1 if LHH is above the median. All regressions include year dummies no reported. Likelihood ratio (LR) and pseudo R2 are for Tobit regressions. ***, **, * indicate significance at the 1%, 5% and 10% levels.

Table 4
Influence of ownership concentration on the decision to adjust dividends

	Logit models for dividend			Ordered probit
	increases	decreases	omissions	
PAYOUT_1	-0.0350	0.1372	0.0725	-0.0428
	(-0.21)	(0.84)	(0.28)	(-0.65)
Q2H × PAYOUT_1	-0.7474 ***	0.1407	-0.2741	-0.1138
	(-2.81)	(0.62)	(-0.78)	(-1.23)
ROA	19.0381 ***	0.0194	-39.5652 ***	6.8103 ***
	(11.98)	(0.01)	(-5.40)	(9.18)
ROACHG	24.9472 ***	-13.7467 ***	-6.1859	10.8393 ***
	(8.08)	(-5.46)	(-1.22)	(9.86)
DLOSS	1.0286 ***	-0.0015	1.1360 ***	-0.4264 ***
	(3.85)	(-0.01)	(3.58)	(-4.79)
Q2H × ROA	-1.3117	-0.9002	9.5901	-0.1849
	(-0.77)	(-0.45)	(1.01)	(-0.23)
Q2H × ROACHG	-9.4315 **	-0.5478	4.9977	-2.4424 *
	(-2.38)	(-0.17)	(0.77)	(-1.72)
Q2H × DLOSS	-0.8964 **	-0.3677	0.5976	-0.0489
	(-2.31)	(-1.30)	(1.41)	(-0.41)
QCHG	0.0988	-0.1468	-1.2520 ***	0.0715
	(0.79)	(-0.92)	(-2.83)	(1.20)
GROWCHG	12.0076 ***	-3.0927 *	-10.2679 ***	5.4728 ***
	(6.84)	(-1.78)	(-3.13)	(7.60)
Q2H × QCHG	0.3610 **	-0.0480	1.3105 ***	0.0603
	(2.33)	(-0.26)	(2.85)	(0.87)
Q2H × GROWCHG	-0.7973	-0.7461	4.1860	-0.5559
	(-0.35)	(-0.33)	(1.02)	(-0.59)
DEBT	-0.2887	-0.1651	5.4931 ***	-0.4744 ***
	(-1.39)	(-0.79)	(11.15)	(-5.59)
DEBTCHG	-10.3018 ***	-1.2553	24.2680 ***	-5.7231 ***
	(-7.19)	(-0.95)	(9.24)	(-9.79)
Q2H × DEBT	0.7682 ***	0.0746	0.0222	0.1539 **
	(4.23)	(0.41)	(0.06)	(2.07)
Q2H × DEBTCHG	0.7737	1.4383	-13.8826 ***	1.4469 *
	(0.40)	(0.79)	(-3.98)	(1.83)
LR	1035.26 ***	211.29 ***	1163.48 ***	1719.73 ***
pseudo R2	0.1555	0.0369	0.4417	0.1218
N observations	6397	6397	6397	6397

PAYOUT_1 is the lagged dividend payout ratio. ROA is the ratio of operating profits to total assets. ROACHG is the change in ROA. DLOSS is a dummy equal to 1 if ROA < 0. QCHG is the change in market to book value of assets. GROWCHG is the change in the average growth rate in total assets. DEBT is the ratio of total debt to total assets. DEBTCHG is the change in DEBT. Q2H is dummy equal to 1 if LHH is above the median. All regressions include unreported year dummies. ***, **, * indicate significance at the 1%, 5% and 10% levels.