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The Role of Corporate Governance in Japanese Unlisted Companies*

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Highlights

- We explore the effects of corporate governance in Japanese unlisted companies.
- The ownership structure has a significant influence on the performance.
- The impact depends on company's performance.
- The biased governance works positively for companies with good performance.
- It works negatively for companies with poor performance.

Abstract

The purpose of this paper is to examine the effects of corporate governance on the performance of Japanese unlisted companies from 1997 to 2002, when the problem of non-performing loans became serious. Using data of unlisted companies, we examine to what extent the ownership structure has a significant impact on firm's performance. When estimating the determinants of Tobin's q , we find that the ownership structure has a significant influence on the performance of each unlisted company. However, the impact was totally different between companies with good performance and bad performance. In particular, the increase in the shareholding ratio of a specific individual or a parent company worked

positively for companies with good performance, but it worked negatively for companies with poor performance. The results suggest that the distorted governance structure in unlisted companies, which had worked well during the bubble economy, may have significantly restricted their recovery under prolonged recession in Japan.

Key words: corporate governance, unlisted companies, Tobin's q

JEL Numbers: G32, G34, M11

1. Introduction

After the burst of the speculative bubble in the early 1990s, corporate performance stagnated substantially in the Japanese economy. One of the major reasons for the stagnation was the deterioration of macro fundamentals. In the 1990s, profits of Japanese companies declined because of the decline in asset prices, the Asian crisis, slowdown in growth of Total Factor Productivity (TFP), etc. Accumulated non-performing loans also resulted in sluggish bank lending, which had considerable negative effects on the borrowing companies, especially on small and medium-sized companies. However, even in unfavorable winds of the external environment, there were both winners and losers. Some companies could successfully get out of the crisis situation (“winners”), but others could not (“losers”). The differences in governance structure sometimes determined who was a winner and who was a loser.¹

The purpose of this paper is to examine what determined the performance of Japanese unlisted companies focusing on the governance structure (stock ownership structure) from 1997 to 2002, when the financial crisis occurred in the Japanese economy, and the problem of non-performing loans became serious. In general, there are many small and medium-sized unlisted companies that have potential capacity for growth; on the other hand, many of them have special ownership structures compared with listed companies. Because of no liquidity of outstanding shares, it is extremely rare for general investors to become shareholders of the unlisted companies. Ownership structures of the unlisted companies have many features that are not observed in listed companies. They include extremely high shareholding ratios of specific individuals or a parent companies, or a high percentage of employee stock ownership. When using the data of listed companies, it is not possible to analyze the impact of such extremely biased ownership structures on the company’s performance because of their dispersed ownership structures². Therefore to compare the impact of decentralized and

¹ Shleifer and Vishny (1997) defined corporate governance as “the ways in which the suppliers of finance to corporations assure themselves of getting a return on their investment.” The notion of corporate governance was broadened even more by Tirole (2001), who defined it as “design of institutions that induce or force management to internalize the welfare of stakeholders.”

² Investigating the stock ownership structure of the top 20 listed companies in 27 OECD countries, La Porta, Lopez-De-Silanes, and Shleifer (1999) showed that Japan is among the countries where ownership and management are

centralized stock ownership structures on corporate performance, it is indispensable to use the data of unlisted companies.

In general, there are both good and bad aspects when the control of a company is concentrated on specific individual shareholders or a parent company. A good aspect is that various agency costs associated with the adjustment between stakeholders can be small. For example, it is not easy for owners to monitor the actions of managers in companies where the separation between ownership and management has advanced. In such companies, performance is likely to slowdown when managers take actions against the interests of the owners. However, in companies where the ownership is concentrated, it is difficult for the management to take such actions. To the extent that the ownership is concentrated, interest conflicts rarely deteriorate corporate performance because management decision-making can be carried out speedily.

On the other hand, a bad aspect is that carrying out self-righteous management may have a harmful effect reflecting the intentions of a specific owner. In companies where the ownership is concentrated, external monitoring is difficult, especially when the major shareholders are often executives. Therefore, even if management is going towards a bad direction, it is not easy to correct it by an external disciplinary action. This harmful effect is likely to be more severe for unlisted companies, which have almost no obligation to disclose corporate information to the outside.

In this paper, using data of unlisted companies with equity capital of 100 million yen or more, we examine to what extent the ownership structure of unlisted companies will have a significant impact on Tobin's q (present discounted value of operating profit). In literature, a number of studies examined the influence of Japanese corporate governance on performance. For example Lichtenberg and Pushner (1994) analyzed the impact of the shareholding ratio of financial institutions and internal management. Morck, Nakamura, and Shivdasani (2000) analyzed the governance structure by the main bank. Tanaka (2014) explored the relationship

separated; after the UK, Japan is high at the rate of companies that do not have major shareholders of 20% or more, and even regarding the ratio of companies that do not have major shareholders of more than 10%, Japan is high after the UK, the US and Australia.

between corporate governance mechanisms and the cost of public debt financing.³ However, because of limited data availability, there are only limited number of studies that analyzed small and medium-sized unlisted companies in Japan. In particular, very few previous studies evaluated the effects of their governance structure on corporate performance.

From the analysis of this paper, we confirm the following results. First, when estimating the determinants of Tobin's q of unlisted companies, we find that the ownership structure has a significant influence on the performance of each unlisted company, even if we control for the effects of standard financial variables. However, the impact was totally different between companies with good performance and bad performance. In particular, the increase in the shareholding ratio of a specific individual shareholders or a parent company worked positively for companies with good performance, but it worked negatively for companies with poor performance. The results suggest that the distorted governance structure in Japanese unlisted companies, which traditionally worked well, may have significantly restricted their recovery under prolonged recession.

In recent years, how to strengthen the corporate governance of Japanese companies is one important policy issue. For example, in the 2014 revision of the "Japan Revitalization Strategy", the Japanese government pointed out that in order to strengthen the "earning power" of Japanese companies, especially medium and long-term profitability, it is important to change management's mindset by strengthening corporate governance. It also suggested that pushing Japanese companies forward an aggressive management judgment, they would overcome global competition achieving the global level of ROEs. However, the majority of the discussions so far have been targeted at listed companies, and discussions on corporate governance of unlisted companies have been very limited. Establishing a mechanism to make transparent, fair, prompt and bold decisions based on the position of shareholders and other stakeholders is important not only for listed companies but also for unlisted companies. The

³ More recently Hasegawa, Kim, and Yasuda (2017) investigated the adoption of stock option plans and their effects on firm performance. Ikeda, Inoue, and Watanabe (2018) investigated whether managers who are subject to weak monitoring from the shareholders avoid making difficult decisions. Miyajima, Ogawa, and Saito (2018) examined the turnover of top executive in Japanese firms throughout the period 1990–2013. Motta and Uchida (2018) explored whether institutional ownership in 2005 is positively related to the probability of subsequent improvements in environment ratings for Japanese firms.

discussion in this paper is the first step analysis for a full-scale consideration of governance of unlisted companies.

The structure of this paper is as follows. Section 2 presents the theoretical hypotheses discussed in this paper. Section 3 explains the basic estimation model and the data used, and Section 4 explains the shareholder information and the distribution situation of the unlisted companies. Section 5 shows our main estimation results using the firm-level data. Section 6 examines the impact on indicators other than Tobin's q , and Section 7 examines the impact of governance taking into consideration indirect ownership. In Section 8, we check the robustness of the results based on alternative classification of company groups. Finally, in Section 9, we summarize our main results and discuss the remaining agendas.

2. Corporate governance by several economic agents

The purpose of this paper is to examine how the governance structure affected the performance of unlisted companies from 1997 to 2002. To examine whether corporate governance had a significant influence on the performance of unlisted companies, the following analysis focuses on the shareholding ratio of six economic agents, (1) parent company, (2) individual shareholders, (3) financial institutions (especially the main bank), (4) foreign capital, (5) employee stock ownership, and (6) the government or government agencies.

(1) Governance by a parent company

In general, Japanese companies often form a group of companies with networks of subsidiaries and affiliates. We can observe such relationships among listed companies. But it is more prominent that a listed company owns the majority of the shares of unlisted companies as a parent company and convert them into subsidiaries. The parent company gives several types of competences to subsidiaries and permits autonomous management, while it also conducts various monitoring activities, through controlling and taking disciplinary actions against the management of subsidiaries. When the performance of subsidiaries deteriorates, the parent company often gets involved in various efforts to improve the performance of the subsidiaries, through dispatching executives and replacing the president or representative director (see, for example, Aoki (1984)).

However, to the extent that the parent company gains its profits from the trade with the subsidiary, the interests of minority shareholders of the subsidiary may be disregarded. The parent company may overturn subsidiary's decisions that are inconvenient for it. In addition, if the performance of the parent company deteriorates, the parent company may consider passing the loss to the subsidiary company. If the deteriorated performance of the subsidiary increases its burden substantially, the parent company may stop supporting the subsidiary. To the extent that subsidiaries depend heavily on transactions with the parent company, the "hold-up problem" makes them difficult to receive other alternative supports. Thus if the parent company stops its support, there is a high likelihood of further performance deterioration of its subsidiaries. As a result, the strong governance by a parent company has not only desirable but also undesirable aspects for subsidiaries.

(2) Governance by individual shareholders

Individual shareholders have an incentive to put pressure on the management for improving efficiency so as to maximize the value of the company. However, when a group of individual shareholders is dispersed in small numbers, the incentive for monitoring is small because each shareholder has only a small influence on management. In contrast, large individual shareholders have a great incentive to conduct various monitoring, control, and disciplinary activities. They may make an effort to participate in management and increase corporate value on their own. When the performance of the company deteriorates, they often get involved in various initiatives to improve performance, such as replacing the president and representative directors. In literature, analyzing the data of large manufacturing companies in Japan, Lichtenberg and Pushner (1994) showed that more largely individual shareholders get involved in management, more positively they influence on corporate performance.

However, large individual shareholders do not always have positive influence on corporate performance. Certain major shareholders may overturn decisions taken by senior managers and push for decisions based on their own interests. This is particularly true when a major shareholder is the owner of multiple companies. Also, if the large shareholders

themselves are executives, they may sacrifice corporate value to raise their own reputation or seek shortsighted profits which are not desirable from medium- to long-term perspectives.⁴

This happens because it is difficult for other shareholders to check and take disciplinary measures regarding the actions of certain large shareholders. Consequently, concentrating the ownership on specific individual shareholders are likely to have an undesirable aspect in terms of making improvements when the company's performance has deteriorated. In literature, Ofek (1993) analyzed listed companies in the US and showed that, even when corporate performance deteriorates, a restructuring is less likely to be carried out for companies where large individual shareholders get involved in management.

(3) Governance by financial institutions

Financial institutions, such as the main bank, may keep close business relations with borrowing companies and conduct monitoring of the management, not only by lending money, but also by dispatching executives and holding shares. Even though its role changed substantially in the 1990s and the 2000s (see, for example, Hoshi, Koibuchi, and Schaede, 2018), companies with more shareholding by financial institutions, especially by the main bank, are still likely to be more disciplined in management. In previous studies which analyzed listed companies in Japan, Kaplan and Minton (1994) showed that when the company's performance declined, the main bank and group companies dispatched executives and, in many cases, changed the company's top management. Also, Kang and Shivdasani (1995, 1997) showed that companies that have a main bank relationship are likely to replace the top management, to downsize their assets, and to fire their employees when corporate earnings deteriorated.

However, in Japan, the shares possessed by a bank are limited to within 5% of the total shares, so that a bank can have limited influence on management as shareholders. Morck, Nakamura, and Shivdasani (2000), which analyzed Japanese listed companies, showed that the impact of increasing shareholding ratio of financial institutions on Tobin's q was negative

⁴ Arikawa and Mitsusada (2011) showed that adoption of poison pills reveals the manager's preference for entrenchment. In particular, they found that a CEO with longer tenure was more likely to adopt a poison pill when the performance of the firm was poor.

in companies where their shareholding ratio was low, but was positive in companies where their shareholding ratio was high. In unlisted companies, since stocks are not traded on the open market, financial institutions as institutional investors have very few shares. Thus, it is not clear whether the shareholding ratio of financial institutions such as the main bank improves the performance of the unlisted company or not.

(4) Foreign capital

When companies are partly or wholly owned by foreign capital, they may exhibit a different performance because they can use various overseas company-specific assets. Also, foreign-affiliated companies may carry out a bold restructuring and change the business model dramatically, without facing on constraints by various domestic stakeholders.⁵ Hamao and Matos (2018) discussed how U.S.-style activist investors are responsible for the “import” of corporate governance mechanisms from the U.S. into the Japanese market.

On the other hand, foreign-affiliated companies may not be able to utilize the good aspects which traditional Japanese companies had. Foreign-affiliated companies are also more likely to withdraw from the Japanese market than non-foreign-affiliated companies. Thus, an increase in the shareholding ratio of foreign owners may make the management myopic and may not be desirable to enhance corporate performance from long-run perspectives.

(5) Employee stock ownership

A major characteristic of Japanese companies is that their employees sometimes play an important role as a stakeholder.⁶ Under the Japanese labor system, a lifetime employment system was traditionally established, and implicit long-term contracts prevailed between shareholders, the management and employees. Great portion of the management teams consists of people who were internally promoted (or dispatched from the parent company).

⁵ Fukuda and Koibuchi (2006) showed that foreign affiliated lenders carried out a bold restructuring of their borrowers during the banking crisis.

⁶ According to the “Survey on the State of Employee Stock Ownership” conducted by the Japanese Stock Exchanges Conference, nearly 50% of employees hold the shares of their company in Japan

Thus it may incentivize the formation of company-specific skills and willingness to work. Under the environment, the existence of employee stock ownership can be a unique governance structure which may discipline Japanese companies.

For employees, holding stock of their company is not desirable in terms of diversifying their income risk. However, employees' stock ownership may improve the performance of companies because the employees support corporate value as a stakeholder. In Japan, companies, which aim at maximizing per worker distribution of profit, are sometimes called "employee managed company". "Employee managed companies" are likely to conflict with the interests of shareholders. But they are also likely to increase employees' incentives to work hard for the company. The beneficial effects are especially important for unlisted companies where M&A, etc. are more difficult. The role of employee stock ownership is more notably observed in Japanese unlisted companies.

(6) The government and government agencies

Unlisted corporations are not necessarily privately owned enterprises. A corporation funded by a local public entity, such as the so-called third sector, and government agencies are such corporations. Even among small and medium-sized companies, there are many cases where many of the shares are owned by the central government, local governments, or related sectors.

Unlike the private sector, the government or its related sectors do not need to maximize their profits. Thus, as a shareholder, they do not necessarily have an incentive to put pressure on managerial efficiency to maximize corporate value. However, a company funded by the government has an advantage in reducing its financing costs, because the debt is regarded as a de facto government guaranteed debt. The effect of the shareholding ratio of the government or government agencies on the performance of the company will differ depending on which aspect is greater.

3. Basic model

(1) Estimated Equation

Based on the theoretical hypotheses discussed in the previous section, the following sections examine whether the corporate governance had an additional effect on Tobin's q of Japanese unlisted companies. Tobin's q is a widely used corporate performance measure in literature. In the estimation, we use the financial data and shareholder information of each unlisted company, including industrial dummies and year dummies. Specifically, we estimate the following equation by unbalanced panel data.

$$(1) \quad Q_{i,t} = \alpha \Pi_{i,t-1} + \beta D_{i,t-1} + \gamma Corp_{i,t-1} + \delta Dummy_{i,t-1} + \varepsilon Ind_{i,t-1} + \phi Main_{i,t-1} \\ + \eta Bank_{i,t-1} + \varphi Foreign_{i,t-1} + \kappa Emp_{i,t-1} + \rho Gov_{i,t-1},$$

where $Q_{i,t}$ = Tobin's q, $\Pi_{i,t-1}$ = operating profit ratio, $D_{i,t-1}$ = debt/total asset ratio at the end of the term, $Corp_{i,t-1}$ = the largest corporate shareholding ratio, $Dummy_{i,t-1}$ = 100% corporate shareholding dummy, $Ind_{i,t-1}$ = the largest individual shareholding ratio, $Main_{i,t-1}$ = the main bank shareholding ratio, $Bank_{i,t-1}$ = shareholding ratio of the other financial institutions, $Foreign_{i,t-1}$ = foreign shareholding ratio, $Emp_{i,t-1}$ = employee shareholding ratio, and $Gov_{i,t-1}$ = the government or government agency shareholding ratio. The subscript i represents the company index, and the subscript t represents the period (accounting year).

The above equation includes profit rate and debt ratio as explanatory variables to control the effects of fundamental variables. Since the profit rate is closely related to the future corporate performance, $\Pi_{i,t-1}$ is expected to have a significant positive influence. On the other hand, the increase in debt/total asset ratio may reflect the deterioration of corporate performance. If the debt is excessive, the debt-overhang problem would lower growth potential through restricting activities of large borrowers. Therefore, except for companies with strong performance, $D_{i,t-1}$ is expected to have a significant negative influence.

The seven explanatory variables of $Corp_{i,t-1}$, $Dummy_{i,t-1}$, $Ind_{i,t-1}$, $Bank_{i,t-1}$, $Foreign_{i,t-1}$, $Emp_{i,t-1}$, and $Gov_{i,t-1}$ are the key variables in our analysis. Each of them reflects the corporate governance structure discussed in the previous section. As we discussed in the previous section, there are both good and bad aspects in the influence of each governance variable on the performance of a company. Therefore, depending on which effect is stronger, the effect of each governance variable can be positive or negative.

Regarding the corporate and individual shareholding ratios, we define the holding ratio of the largest corporate shareholder and that of the largest individual shareholder as “the largest corporate shareholding ratio” and “the largest individual shareholding ratio” respectively. However, since some corporations have a corporate shareholding ratio of 100%, we distinguish its influence by adding the dummy variable $Dummy_{i,t-1}$ which becomes 1 when the largest corporate shareholding ratio is 100%, and 0 otherwise. The corporate shareholding ratio is the shareholding ratio of a domestic corporation excluding financial institutions. In contrast, the financial institution shareholding ratio is the shareholding ratio of financial institutions excluding securities companies. In order to distinguish the influence of the main bank and the other financial institutions, we added the main bank shareholding ratio ($Main_{i,t-1}$) and the shareholding ratio of the other financial institutions ($Bank_{i,t-1}$) as explanatory variables separately.

(2) Selection of financial variables

Similarly to Fukuda, Kasuya and Akashi (2009) and Fukuda, Kasuya and Nakajima (2006), the following analyzes use the data of unlisted companies with equity capital of 100 million yen or more. We use the data only when it was available for at least five consecutive years from the database of “Tokyo Shoko Research (TSR)”. Unlisted companies with equity capital of 100 million yen or more are medium-sized companies which are unlikely to have the sources of external funds other than bank borrowings. Unlike listed companies, they have almost no disclosure obligation, so that they tend to face little pressure from minority shareholders.

In the following, we have removed the companies from our sample when they are (1) banks and the insurance industry, (2) electricity and water services, (3) railway, (4) educational institutions, and (5) research institutes. We have also removed the companies from our sample when one of the followings is zero in the data: short-term and long-term borrowings, sales, operating profit, interest expense, and liquid assets.

In the analysis, we regress Tobin’s q on financial data and shareholding ratio information of each non-listed company. To avoid simultaneous bias, lagged value was used for each explanatory variable except for industry dummies and year dummies. The sample period is from 1997 to 2002. However, because there are companies for which the full-year sample was

not available, the data is a non-balanced panel. When the settlement data can be obtained twice a year, we used that with longer months. When calculating the market value of capital stock and Tobin's q , we carried out the perpetual inventory method using the data dating back to 1984 as long as the data before 1997 was available for each company.

We calculated Tobin's q through dividing the present discounted value of the future profits by the reacquisition price of tangible fixed assets (excluding land). However, the present discounted value of future profits of each unlisted company cannot be directly observed or measured. Therefore, we estimate a series of future profits (after-tax profits) of each company by using the Abel-Blanchard method (Abel and Blanchard (1986)), and calculated the present discounted value of the forecasted future profits of each company. As the baseline series, the estimation of the future profit stream was calculated by estimating the AR model for the first difference of after-tax profit. As the reference series, we calculated a series of future profits assuming that after-tax profit follows a random walk process⁷. However, for both series, companies with negative average after-tax profit were excluded from the sample. In addition, the reacquisition price of tangible fixed assets (excluding land) was calculated by converting the book value series after 1985 into the market value series using the perpetual inventory method of Hayashi-Inoue (1991).

The "profit rate" is obtained through dividing operating profit by capital stock with fair market valuation. The "debt/total asset ratio" is the total borrowing outstanding divided by the total assets. However, for the total assets, only the tangible fixed assets is re-evaluated with market value.

To exclude outliers, we did not include the companies in our sample when the absolute value of their Tobin's q ($Q_{i,t}$) or operating profit ratio ($II_{i,t-1}$) exceeds 20 and when their debt/total asset ratio exceeds 20. We also excluded the companies from our sample when their major shareholder's holding ratio is unknown. Based on the above sample selections, the number of companies used for the analysis is 1,589 companies in the baseline series and 1,785 companies in the reference series.

Table 1 shows basic statistics of each financial variable for the sampled companies. As can be seen from the table, each financial variable varies significantly from company to

⁷ A similar assumption was used in Blanchard, Rhee, and Summers (1990) and others.

company. In particular, the standard deviation of Tobin's q is still large despite being after excluding outliers. However, the average value of Tobin's q is about 1.9 to 2.0, and the median value is about 1.4. These values are larger than Tobin's q of listed companies that have been reported in previous studies. But taking into account the potential growth rate of medium sized companies to be high, these are roughly reasonable values.

4. Shareholder information

(1) Data sources

One of the main purposes of this paper is to verify whether the performance of unlisted companies is affected not only by their own financial variables but also by the governance structure. In the analysis, we focus on the shareholding ratios of six economic agents: (1) domestic corporations (excluding financial institutions), (2) individuals, (3) financial institutions (excluding securities companies), especially the main bank, (4) foreign capital, (5) employees, and (6) the government or government agencies. We examine whether these governance factors have had a significant impact on the performance of unlisted companies. Theoretically, a reverse causality, in which the company performance affects its governance structure, is also conceivable. However, the governance structure is far more stable throughout time than the indicators of company performance such as Tobin's q and the profit rate. In addition, in the estimate, all of the shareholding ratios used for explanatory variables are those of the previous fiscal year. Therefore, although weak reverse causality may exist even in our estimate, the simultaneity bias would be, if any, very small.

Information on shareholders of each unlisted company in each accounting year from 1996 to 2001 was collected mostly from each issue of "CD Eyes" of "Tokyo Choko Research". But some of the missing data were supplemented by "Company Quarterly Report: Unlisted Companies Version" of Toyo Keizai Inc. Each issue of "CD Eyes" lists a maximum of up to eight large shareholders. The unlisted companies for which we can identify the major shareholding ratio were less than half of the unlisted companies in "CD Eyes." However, we can still obtain the data of 1,589 companies in the baseline series and 1,785 companies in the reference series, even when excluding companies for which the shareholding ratio of each major shareholder was unknown.

In unlisted companies, there are many companies that have highly concentrated ownership structures. For the majority of them, the number of large shareholders was 5 or less, and one major shareholder owns nearly a quarter of the total. In addition, in unlisted companies, executives tend to be the major shareholders. Companies in which executives are major shareholders are those in which there is no separation between ownership and management. In the unlisted companies that we analyzed, 88.4% of the individual largest shareholders were executives. Therefore, the influence of having an executive as a major shareholder can be grasped almost as the influence of the largest individual shareholder.

The “main bank” in each fiscal year was defined as the first listed bank among the banks listed in each issue of “CD Eyes.” This definition cannot measure the strength of the relationship with the main bank. It also implies that all companies have a main bank, except for those that no bank was listed in CD Eyes”. This could be our limitation due to the data availability.

(2) Distribution of the ownership ratios

Figure 1 shows histograms which depict distributions of the holding ratios of (a) the largest shareholder, (b) domestic corporations, (c) (domestic) individuals, and (d) financial institutions (excluding securities companies) in the sampled unlisted companies. For comparison, Figure 1 also shows those of listed companies on the first and second section of the Stock Exchange (in principle, all non-financial institutions) by using the corporate finance database of the Development Bank of Japan⁸.

A noteworthy feature that one can see from the histogram in Figure 1 is that the degree of concentration for a particular shareholder is much higher in the unlisted companies than in the listed companies. For example, looking at the distribution of the shareholding ratio of the largest shareholder, the ratio is less than 10% in most of the listed companies. Companies with more than 60% holding ratio do not exist at all on the first section of the Stock Exchange and very few even on the second section. In contrast, in the unlisted companies, the ratio is more than 10% for the majority of the companies. There are many unlisted companies with more

⁸ However, we should note that the distribution of the shareholding ratio was calculated based on the holding ratio of major shareholders for non-listed companies but on all shareholder’s holding ratio for listed companies.

than 60% holding ratio. About 20% of unlisted companies have a 100% shareholding ratio for the largest shareholder.

Concentration of ownership by a specific shareholder in an unlisted company is most clearly observed in the distribution of the shareholding ratio of the corporation. About a third of the unlisted companies are wholly owned subsidiaries with a corporate shareholding ratio of 100%, and in about another one-third are those for which the corporate shareholding ratio (the total shareholding ratio of corporate major shareholders) is over 40%. On the other hand, in the listed companies, although only limited number of companies have a corporate shareholding ratio (total shareholding ratio of all corporate shareholders) of less than 10%, very few have extremely high ratios. This tendency is more notable in companies listed on the first section of the Stock Exchange, where the majority are between 10% to 20%, then followed by 20% to 30%, 30% to 40%, and 0% to 10%. In a large company with decentralized ownership, it is possible for shareholders to influence management with a relatively small shareholding ratio. But even if we take this into consideration, the degree of concentration of unlisted companies is much higher than that of listed companies.

In contrast, with regard to individual shareholders, their shareholding ratio in the unlisted companies tends to be rather lower than that in the listed companies. Among the unlisted companies, there are some owner-managed companies, where the holding ratio of an individual shareholder is 100%. This is an interesting characteristic that is never observed in the listed companies. However, such unlisted companies are less than 7% of the total. For more than half of the unlisted companies, the names of individual shareholders do not appear in the list of major shareholders. As a result, average holding ratio of individual major shareholders lies from 0% to 10% in the unlisted companies. Even if we limit the sample to those with individual major shareholders, the holding ratio of an individual major shareholder lies from 10% to 20% for the majority, followed by from 20% to 30% and from 30% to 40%. This is in marked contrast with what we observe for the listed companies. The holding ratio of individual shareholders of the listed companies (total shareholding ratio of all individual shareholders) is the highest at 20% to 30% for the companies listed on the first section, and is at 30% to 40% for those listed on the second section. Although an individual shareholder rarely holds a large portion of the shares in the listed companies, aggregate shares of individual investors are high because a large number of different individual investors hold the shares.

The shareholding ratio of financial institutions is much higher in listed companies than in unlisted companies. For 87% of our unlisted companies, the names of the financial institutions do not appear in the list of major shareholders. Even if the names of financial institutions appear in the list, most unlisted companies have less than 10% ownership ratio of financial institutions, and few companies have over 20%. On the other hand, as for the listed companies, although 10% to 20% is the largest of the total shareholding ratio of financial institutions, nearly half of the companies have more than 30%. The relatively large shareholding ratio of financial institutions is a unique characteristic of Japanese listed companies. However, the features are not observed on unlisted companies. One reason is that the liquidity of unlisted company stocks is very low. Thus most of the financial institutions find no attractiveness in holding shares.

5. Estimate result of the basic model

(1) Classification of companies

As we saw in Section 2, there are both good and bad aspects when corporate control is concentrated on a specific individual shareholder or on a parent company. While the good aspect dominates the bad aspect when the corporate performance is good, the bad aspect becomes more conspicuous when corporate performance deteriorates. Therefore, in the following analysis, we classify the companies into three categories: (A) companies with good performance, (B) companies with normal performance, and (C) companies with poor performance. We classify companies into “good,” “normal,” and “bad” ones based on operating profit ratios in the previous year. That is, in accordance with the operating profit ratio of the previous year, the target companies are classified using the criteria of upper one-third, middle one-third, and lower one-third of the operating profit ratio. Three coefficient dummy variables were created that take 1 when each case applies and 0 otherwise. Then, we examined what influence the governance structure has on Tobin’s q by estimating equation (1) when adding coefficient dummies to six explanatory variables.

Table 2 summarizes the estimated results of our basic model. It shows how the financial variables and the governance structure variables in each company group affect the Tobin’s q . The results are basically the same regardless of the choice of the baseline series and the reference series. They generally take the same sign as expected. Regardless of whether the

corporate performance is good or bad, the profit rate takes a plus sign and has a statistically significant effect in each case. In contrast, the debt/total asset ratio takes an opposite sign depending on whether the corporate performance is good or bad. That is, it takes a plus sign in the company group with good performance but minus signs in the company groups with medium and low performance. In particular, for the company group with low performance, the sign is significant at 1% level. In the company groups with medium and low performance, the increase in debt/total asset ratio reflects the deterioration of performance, which lowers Tobin's q .

(2) Governance by corporate shareholders and individual shareholders

Each indicator of the largest corporation shareholder and the largest individual shareholder is statistically significantly different from zero. But depending on whether the company's performance is good or bad, it has a totally opposite sign. In other words, for a company group with good performance, both the increase in the shareholding ratio of corporate shareholders and individual shareholders has a significant positive effect on Tobin's q . Also, in these company groups, "100% corporate shareholding dummy" has a plus sign. On the contrary, for a company group with poor performance, the increase in the shareholding ratio of corporate shareholders and individual shareholders has a significant negative impact on Tobin's q . Also, in the company group, the sign of "100% shareholding dummy" turned minus.

As mentioned in Section 2, the influence of governance by a parent company and individual major shareholders has good and bad aspects. A good aspect is that unlike minority shareholders, a parent company and individual major shareholders have a strong incentive to conduct various monitoring activities, and to discipline the management of subsidiaries aggressively. In many cases, a parent company and individual major shareholders get involved in various initiatives to improve performance.

However, a parent company and individual major shareholders may neglect the interests of minority shareholders and may put pressure on the decisions that are convenient to them. Also, when the parent company dispatches an executive or when a major shareholder himself / herself becomes a manager, even if the performance deteriorates, it is difficult to sufficiently restructure the management team, which may result in a further decline in corporate value. If

major shareholders seek shortsighted profits, it will be difficult to manage from medium- to long-term perspectives.

The results in Table 2 imply that the good aspects of governance by a parent company and individual major shareholders tend to become obvious when corporate performance is good. On the other hand, when the performance deteriorates, the bad aspects tend to become conspicuous. A number of previous studies suggested that when the performance of subsidiaries deteriorates, the parent company tends to get involved in various initiatives to improve the performance of subsidiaries. However, our results show that this is no longer valid for unlisted companies.

(3) Governance structure other than corporate and individual shareholders

Regarding governance indicators other than corporate and individual shareholders, the foreign capital shareholding ratio and the employee shareholding ratio have a positive impact on Tobin's q . This trend is more pronounced in companies with good performance, but the foreign capital shareholding ratio still has a significant positive influence on the company group with medium performance. This result suggests that the companies owned by foreign companies are able to use their special assets and may show better performance than non-foreign-affiliated companies. However, according to our estimation results, the influence of the foreign capital shareholding ratio and the employee shareholding ratio is not statistically significant in the company group with poor performance. Even if performance deteriorates, foreign capital can carry out bold restructuring and change business model relatively easily in listed companies because it is less constrained by existing stakeholders. But this tendency is not clear in the unlisted companies. For unlisted companies with poor performance, this happened because foreign capital is more likely to withdraw from the Japanese market than local capital. The royalty of employees to companies through the employee stock ownership also seems to be ineffective in improving the performance for unlisted companies with poor performance.

Unlike in previous studies, the impact of the shareholding ratio of the main bank and the other financial institutions is not clear in our analysis of unlisted companies. The influence of the shareholding ratio of the main bank and the other financial institutions was positive in the company group with good performance. However, the influence of the shareholding ratio of

the main bank and the other financial institutions was negative for companies with poor performance. A number of previous studies pointed out that the main bank is involved in the relief and restructuring of client companies when there is a decline in performance. But our estimation results suggest that this role is not valid in unlisted companies.

This may happen because the shareholding ratios of financial institutions in unlisted companies are not as high as those in listed companies. From the viewpoint of asymmetry of information and incompleteness of contracts, unlisted companies tend to rely heavily on bank borrowing for raising funds, because external funds other than bank borrowing are extremely limited. Therefore, the role played by banks in “discipline by debt” is usually expected to be large for unlisted companies. However, as a shareholder, banking discipline seems to have hardly worked in unlisted companies even when performance deteriorates.

6. Impact on other performance indicators

(1) Specification of the model

In the previous sections, we examined the influence of the governance structure on the performance by using Tobin’s q as the dependent variable. Using Tobin’s q as an indicator of corporate performance is the most common method in previous studies. However, since the stock price data is not available for the unlisted companies, the previous sections estimated the stream of forecasted future after-tax profits to approximate the Tobin’s q . In order to check the robustness of the results this section uses the operating profit ratio (the value normalized obtained by dividing operating profit by capital stock with fair market valuation) and the debt/total asset ratio (total borrowings divided by total assets) as alternative performance indicators. With these two dependent variables, we examine the influence of governance structure on the performance of unlisted companies.

The operating profit ratio, which is one of the typical corporate performance indicators, is a variable highly correlated with Tobin’s q . However, it is a different indicator from Tobin’s q in that it does not use the estimates of future profit streams, and that it does not include interest income or extraordinary income included in ordinary income.

On the other hand, the debt/total asset ratio is not common as an indicator of corporate performance compared to Tobin’s q and the operating profit ratio. It is not clear whether the performance is low or high in companies with high debt/total asset ratio. In companies with

poor performance, the increase in debt/total asset ratio reflects the deterioration in performance. But even in firms with good performance, debt/total asset ratio may be high, as the increase in borrowing may reflect aggressive capital investment. However, when we classify the companies into three groups, (A) companies with good performance, (B) companies with normal performance, and (C) companies with poor performance, this ambiguity can be partially avoided in the estimation. It deserves to consider how the governance structure affects the debt ratio of unlisted companies.

In the following, we use the operating profit ratio or the debt/total asset ratio as the dependent variable and estimate the following two equations.

$$(2) \quad \begin{aligned} \Pi_{i,t} = & \alpha_1 Q_{i,t-1} + \beta_1 D_{i,t-1} + \gamma_1 Corp_{i,t-1} + \delta_1 Dummy_{i,t-1} + \varepsilon_1 Ind_{i,t-1} \\ & + \phi_1 Main_{i,t-1} + \eta_1 Bank_{i,t-1} + \varphi_1 Foreign_{i,t-1} + \kappa_1 Emp_{i,t-1} + \rho_1 Gov_{i,t-1}, \end{aligned}$$

$$(3) \quad \begin{aligned} D_{i,t} = & \alpha_2 Q_{i,t-1} + \gamma_2 Corp_{i,t-1} + \delta_2 Dummy_{i,t-1} + \varepsilon_2 Ind_{i,t-1} + \phi_2 Main_{i,t-1} \\ & + \eta_2 Bank_{i,t-1} + \varphi_2 Foreign_{i,t-1} + \kappa_2 Emp_{i,t-1} + \rho_2 Gov_{i,t-1}, \end{aligned}$$

where $\Pi_{i,t}$ = the operating profit ratio in period t , and $D_{i,t}$ = the debt/total asset ratio at the end of the period t . The eight governance variables of $Corp_{i,t-1}$, $Dummy_{i,t-1}$, $Ind_{i,t-1}$, $Main_{i,t-1}$, $Bank_{i,t-1}$, $Foreign_{i,t-1}$, $Emp_{i,t-1}$, and $Gov_{i,t-1}$ are the same explanatory variables as those in previous sections. In the estimation, we include industry dummy and annual dummy by using unbalanced panel.

(2) Estimated results of the operating profit ratio

Table 3 summarizes the estimated results when the operating profit ratio is used as the dependent variable. Except for a few sign conditions, the results are almost the same as those in Table 2 where we used Tobin's q as the dependent variable. In particular, both of the largest corporate shareholder ratio and the largest individual shareholder ratio take exactly the opposite sign depending on whether corporate performance is good or bad. In other words, in a company group with good performance, the increases in the ratios of the largest corporate shareholder and the largest individual shareholder give significant positive influence to the operating profit ratio. Also, in these companies, the "100% corporate shareholding dummy"

has a significant plus sign. On the other hand, in a company group with poor performance, the increases in the ratios of the largest corporate shareholder and the largest individual shareholder have a significant negative impact on the operating profit ratio. In these companies, the sign of “100% shareholding dummy” also turned minus. Therefore, with regard to the influence of the corporate shareholder and the individual shareholder, the results do not depend on whether we use Tobin’s q or operating profit as the performance indicator.

However, with regard to the influence of governance indicators other than the corporate and individual shareholders, the result will change when the operating profit is used as the performance indicator. First, no significant positive influence was observed regarding the influence of the foreign capital shareholding ratio and the employee shareholding ratio, even if the company group has good performance. In addition, the influence of the shareholding ratio of the main bank and financial institutions other than the main bank was negative, not only for companies with poor performance but also for companies with good performance. According to our estimation results, the increase in the foreign capital shareholding ratio, the employee shareholding ratio, and the shareholding ratio of financial institutions do not seem to help, at least in the improvement of short-term operating profit.

(3) Estimation results of the debt/total asset ratio

Table 4 summarizes the estimation results when the debt/total asset ratio is used as the dependent variable. The results are essentially the same either when using the baseline series or when using the reference series. However, some of the coefficients in Table 4 are in marked contrast with those in Table 2.

The influence of the governance structure by the largest corporate shareholder takes the exact opposite sign depending on whether the corporate performance was good or bad. In other words, in a company group with good performance, the increase in the shareholding ratio of the largest corporate shareholder and the 100% corporate shareholding dummy have a significantly negative impact on the debt/total asset ratio. On the other hand, in a company group with poor performance, the increase in the largest corporate shareholder and the 100% corporate shareholding dummy have a significant positive influence on the debt/total asset ratio.

This result shows that in companies with a high largest corporate shareholding ratio, the liabilities are small when the performance is good, but the liabilities tend to increase more than in other companies when the performance deteriorates. The result that there are many liabilities when the performance deteriorates may be due to an increase in relief financing from the parent company. However, it also suggests the possibility that, in companies where the parent company has high shareholding ratio, the debt is not sufficiently compressed, and beneficial restructuring is not enough, regardless of the deterioration in performance.

In contrast, the influence of governance structure by the largest individual shareholder takes a significant plus sign regardless of whether the company's performance is good or bad. However, the estimated coefficient is much larger in the company group with bad performance, compared to the company group with good performance. In other words, in companies with high ratio of the largest individual major shareholder, there are more liabilities than in other companies, regardless of whether the performance is good or bad. However, liabilities tend to increase more when the performance deteriorates. Even for companies with a high ratio of the largest individual shareholder, the reduction of liabilities may not be sufficient, regardless of the deteriorating performance.

7. Impact through indirect ownership of stocks

In the previous sections, we have used direct shareholding ratios as variables of governance structure and considered their influence on the performance of unlisted companies. However, as pointed out by La Porta, Lopez-De-Silanes, and Shleifer (1999) and others, indirect stock ownership through subsidiaries and affiliates is widely observed even in listed companies of OECD countries. In the presence of such indirect ownership, voting rights for direct shareholders to influence corporate decision-making may be more limited than cash-flow rights such as the right to receive dividends. Therefore, in considering the influence of the governance structure on corporate performance, it may not be sufficient to use the holding ratio of direct major shareholders. It may be more appropriate to use the holding ratio of the ultimate large shareholders through indirect ownership.

A typical indirect ownership can be observed in several companies in our sample. For example, Figure 2 illustrates the ownership structure of *Taiho Pharmaceutical*. In the late 1990s, the direct major shareholders of *Taiho Pharmaceutical* are three companies: *Otsuka*

Pharmaceutical Factory, Otsuka Warehouse, and Otsuka Chemical. The shareholding ratio of each company is 23%, 17%, and 13%. However, *Otsuka Pharmaceutical Factory*, which is the largest shareholder, is a family owned business where *Masahito Otsuka* holds 38% of the shares and the other family members (*Yoshimitsu Otsuka, Isao Otsuka, and Masatomi Otsuka*) own more than 30% of the shares. In addition, *Otsuka Pharmaceutical Factory* is the largest shareholder of *Otsuka Warehouse* and *Otsuka Chemical*, which are the second and third major shareholders of *Taiho Pharmaceutical*. *Masahito Otsuka* is also a major shareholder of *Otsuka Warehouse* and *Otsuka Chemical*. This implies that the de facto shareholder of *Taiho Pharmaceutical* is *Masahito Otsuka* and his family. Until the previous section, we have treated *Taiho Pharmaceutical* as a company where *Otsuka Pharmaceutical Factory* is the largest shareholder. But it is better to treat *Taiho Pharmaceutical* as a company where *Masahito Otsuka* and his family are the largest shareholders.

Figure 3 shows the ownership structure of *Kanax*. The direct major shareholder of *Kanax* is *Shin Kurushima Dockyard*, whose shareholding ratio is 24%. However, *Shin Kurushima Dockyard*, which is the parent company, is a quasi-subsiary of *Kawasaki Heavy Industries* because *Kawasaki Heavy Industries* owns 17% of its shares. Therefore, in effect, *Kanax* is close to a sub-company of *Kawasaki Heavy Industries*. In addition, *Shin Kurushima Dockyard* and *Shin Kochi Heavy Industries*, both of which are a large shareholder of *Kanax*, have high employee shareholding ratio. Thus their employees have a significant influence on *Kanax*'s governance.

In this section, we thus explore whether our main results are essentially the same even if we allow such indirect shareholdings. In the analysis, we assume that when the parent company (y) of the company (x) is centrally controlled by a specific shareholder (z), the existence of this shareholder (z) makes the company (x) to be under an "indirect ownership". More specifically, when the largest shareholder (z) of the parent company (y) holds 20% or more of company y 's shares, we created data of indirect ownership by replacing the holding ratio of the parent company (y) with that of the shareholder (z) as the major shareholder of the company (x). Also, when the shareholder (z) is already listed as a direct shareholder of the company (x), we created data of the shareholder (z)'s holding ratio by summing up its direct and indirect holding ratios.

Table 5 summarizes the estimated results when allowing the existence of indirect ownership. The results are essentially the same as those in Table 2 both when using the

baseline series and when using the reference series. In particular, each indicator related to the governance structure of the largest corporate shareholder and the largest individual shareholder take a totally opposite sign, depending on whether the company's performance is good or bad. Even when allowing the existence of indirect ownership, the governance by a parent company and individual major shareholders tends to work well when corporate performance is good, while it tends to work badly when the performance deteriorates.

In our analysis, allowing the existence of indirect ownership did not change the essential results because there is not much indirect stock ownership in the unlisted companies in our sample. Some indirectly hold 20% or more of the shares through subsidiaries and affiliates. But looking at the ownership structure of each unlisted company for the largest corporate shareholder, only 4% of all samples were indirectly owned by a specific individual or corporation.

8. Classification by absolute standards of performance

A major characteristic of our analysis is that when looking at the influence of governance structure, companies are classified into three groups: (A) companies with good performance, (B) companies with normal performance, and (C) companies with poor performance. In the previous sections, we classified the companies based on the criteria of upper one-third, middle one-third and lower one-third of the operating profit ratio in the previous year. Since it was based on the relative performance, the share of each company group remains the same over the years, so that we could obtain stable estimation results. However, in order for our results to be robust, it is desirable to check whether the essential results do not change even if we change the classification method of the companies.

Therefore, in the following, we classify the companies into three groups based on the absolute level of operating profit ratio and check the robustness of the results. Specifically, using the operating profit ratios of all periods, we first define three absolute performances as "good" for the top 20%, "bad" for the bottom 20% and "normal" for the rest. We then classify the companies as "good," "normal" or "bad" based on their profit rate for each year.

Table 6 summarizes the estimation results based on the new classification. Since the number of "bad" companies decreases during the booming period and increases during the recession period, the statistical significance of the estimate of the largest individual

shareholder slightly declined in the company group with poor performance. However, they are essentially the same as those in Table 2 both when using the baseline series and when using the reference series. In particular, the governance structure indicators of the largest corporate and individual shareholders take a totally opposite sign, depending on whether the company's performance is good or bad. Even if companies are classified based on the absolute performances, the good aspects of governance by a parent company and individual major shareholders tend to become more conspicuous when corporate performance is good, but the bad aspects tend to become more conspicuous when the performance deteriorates.

9. Conclusion

In this paper, we examined what effects the governance structure (stock ownership structure) had on the performance of Japanese unlisted companies in the sample period from 1997 to 2002, when the problem of non-performing loans became serious. Estimating the determinants of Tobin's q (present discounted value of after-tax profits) of private companies, we found that the ownership structure of private companies has a significant influence on the performance of each unlisted company, in addition to standard financial variables. However, the impact was totally different between companies with good performance and bad performance. In particular, the rise in the shareholding ratio of a specific individual shareholder or a parent company worked positively for companies with good performance, but it worked negatively for companies with poor performance.

The results of this paper imply that the concentration of stock ownership in unlisted companies tends to have a rather favorable effect, as long as companies are constantly growing. However, once corporate management begins to stumble, it is highly likely that the distorted governance structure will cause further lowering of the performance. In Japan, after the crash of speculative bubble in the early 1990s, the corporate performance of Japanese unlisted companies deteriorated substantially. It is likely that the governance structure functioned to further lower the performance when the Japanese economy was under prolonged recession.

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Table 1. Basic Statistics of Financial Data

(a) Baseline series (n=6,709)

variable	average	standard deviation	minimum	median	maximum
Tobin's q	1.929	2.580	-19.736	1.405	19.872
operating profit ratio	0.412	1.128	-16.680	0.202	19.859
debt-total asset ratio	0.311	0.229	0.000	0.292	1.832
investment ratio	0.061	0.521	-0.939	-0.009	19.059

(b) Reference series (n=7,479)

variable	average	standard deviation	minimum	median	maximum
Tobin's q	2.061	3.049	-19.882	1.432	19.825
operating profit ratio	0.428	1.164	-16.680	0.207	19.859
debt-total asset ratio	0.302	0.228	0.000	0.282	1.928
investment ratio	0.063	0.511	-0.977	-0.008	19.059

Source: The data of unlisted companies with equity capital of 100 million yen or more is from the database of “Tokyo Shoko Research (TSR)”. We only use the data only when it was available for at least five consecutive years.

(a) Baseline series

dependent variable (t):	Tobin's q					
	(A) "good" performance		(B) "normal" performance		(C) "bad" performance	
group	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)
operating profit ratio	0.6170	(0.1150) ***	0.7947	(0.3370) **	0.8005	(0.3204) **
debt-asset ratio	0.4077	(0.3838)	-0.2583	(0.1963)	-0.7325	(0.2113) ***
stock holding ratio						
the largest corporate holding ratio						
(100% corporate holding dummy)	0.0211	(0.0035) ***	0.0021	(0.0013)	-0.0067	(0.0026) **
(the others)	0.0161	(0.0035) ***	0.0018	(0.0015)	-0.0103	(0.0022) ***
the largest individual holding ratio	0.0164	(0.0054) ***	-0.0022	(0.0017)	-0.0057	(0.0022) **
the main bank holding ratio	0.1111	(0.0587) *	-0.0214	(0.0233)	-0.1574	(0.0453) ***
holding ratio of the other financial inst.	0.0507	(0.0082) ***	-0.0104	(0.0080)	0.0270	(0.0303)
foreign shareholding ratio	0.0528	(0.0186) ***	0.0109	(0.0044) **	0.0050	(0.0099)
gov. or gov. agency holding ratio	-0.0082	(0.0140)	-0.0139	(0.0111)	0.0003	(0.0042)
employee shareholding ratio	0.0223	(0.0089) **	0.0042	(0.0032)	-0.0063	(0.0043)
constant term	1.1078	(0.1381) ***				
the number of firms	1,589					
the number of samples	6,706					

(continued)

(b) Reference series

dependent variable (t): group	Tobin's q					
	(A) "good" performance		(B) "normal" performance		(C) "bad" performance	
independent variables (t-1)	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)
operating profit ratio	0.8693	(0.1321) ***	1.1082	(0.3279) ***	1.4265	(0.3853) ***
debt-asset ratio	0.9034	(0.4356) **	-0.0557	(0.1740)	-0.8951	(0.2033) ***
stock holding ratio						
the largest corporate holding ratio						
(100% corporate holding dummy)	0.0250	(0.0034) ***	0.0018	(0.0010) *	-0.0070	(0.0021) ***
(the others)	0.0183	(0.0035) ***	0.0017	(0.0013)	-0.0092	(0.0020) ***
the largest individual holding ratio	0.0170	(0.0058) ***	-0.0020	(0.0018)	-0.0035	(0.0024)
the main bank holding ratio	0.0753	(0.0562)	-0.0103	(0.0229)	-0.1778	(0.0421) ***
holding ratio of the other financial inst.	0.0273	(0.0093) ***	-0.0116	(0.0094)	0.0317	(0.0321)
foreign shareholding ratio	0.0667	(0.0162) ***	0.0067	(0.0026) **	-0.0057	(0.0163)
gov. or gov. agency holding ratio	-0.0019	(0.0116)	-0.0099	(0.0109)	0.0047	(0.0047)
employee shareholding ratio	0.0150	(0.0080) *	-0.0003	(0.0027)	-0.0054	(0.0042)
constant term	1.1145	(0.1282) ***				
the number of firms	1,785					
the number of samples	7,479					

Note 1) * = significant at 10%, ** = significant at 5%, *** = significant at 1%.

2) "Top shareholder" is the largest shareholder whose holding ratio exceeds 20%.

3) The coefficient in each "performance" is calculated by estimating the coefficient dummies.

4) To save the space, the estimated coefficients of time dummies and industry dummies are not shown in the table.

Note 1) * = significant at 10%, ** = significant at 5%, *** = significant at 1%.

- 2) "Top shareholder" is the largest shareholder whose holding ratio exceeds 20%.
- 3) The coefficient in each "performance" is calculated by estimating the coefficient dummies
- 4) To save the space, the estimated coefficients of time dummies and industry dummies are not shown in the table.

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Table 3. Estimation Results: dependent variable = operating profit ratio

(a) Baseline series

dependent variable (t):		operating profit ratio					
group	(A) "good" performance		(B) "normal" performance		(C) "bad" performance		
independent variables (t-1)	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)	
Tobin's q (baseline series)	0.1444	(0.0220) ***	0.0011	(0.0236)	0.0793	(0.0348) **	
debt-asset ratio	0.0226	(0.1720)	-0.0446	(0.0675)	-0.2011	(0.0995) **	
stock holding ratio							
the largest corporate holding ratio							
(100% corporate holding dummy)	0.0042	(0.0016) ***	-0.0003	(0.0003)	-0.0026	(0.0014) *	
(the others)	0.0055	(0.0020) ***	0.0001	(0.0004)	-0.0017	(0.0008) **	
the largest individual holding ratio							
the main bank holding ratio	-0.0053	(0.0282)	-0.0009	(0.0060)	-0.0285	(0.0122) **	
holding ratio of the other financial inst.	-0.0099	(0.0026) ***	0.0002	(0.0017)	-0.0055	(0.0023) **	
foreign shareholding ratio	-0.0030	(0.0020)	0.0000	(0.0015)	-0.0033	(0.0013) **	
gov. or gov. agency holding ratio	0.0031	(0.0029)	0.0037	(0.0015) **	0.0001	(0.0011)	
employee shareholding ratio	0.0032	(0.0036)	-0.0008	(0.0008)	-0.0058	(0.0018) ***	
constant term	0.0120	(0.0692)					
the number of firms	1,589						
the number of samples	6,706						

**Table 3. Estimation Results: dependent variable = operating profit ratio
(continued)**

(b) Reference series

dependent variable (t): group	operating profit ratio					
	(A) "good" performance		(B) "normal" performance		(C) "bad" performance	
independent variables (t-1)	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)
Tobin's q (reference series)	0.1283	(0.0152) ***	0.0113	(0.0131)	-0.0247	(0.0326)
debt-asset ratio	-0.0370	(0.1801)	-0.1369	(0.0567) **	-0.1870	(0.0921) **
stock holding ratio						
the largest corporate holding ratio						
(100% corporate holding dummy)	0.0037	(0.0014) ***	-0.0008	(0.0003) **	-0.0029	(0.0011) **
(the others)	0.0049	(0.0016) ***	-0.0004	(0.0004)	-0.0017	(0.0009) *
the largest individual holding ratio	0.0097	(0.0024) ***	-0.0001	(0.0006)	-0.0026	(0.0009) ***
the main bank holding ratio	-0.0207	(0.0251)	-0.0071	(0.0055)	-0.0376	(0.0134) ***
holding ratio of the other financial inst.	-0.0059	(0.0026) **	-0.0008	(0.0018)	-0.0011	(0.0038)
foreign shareholding ratio	-0.0019	(0.0021)	-0.0005	(0.0013)	-0.0070	(0.0044)
gov. or gov. agency holding ratio	0.0010	(0.0023)	0.0016	(0.0011)	0.0002	(0.0012)
employee shareholding ratio	0.0053	(0.0033)	-0.0017	(0.0008) **	-0.0056	(0.0020) ***
constant term	0.0774	(0.0641)				
the number of firms	1,785					
the number of samples	7,479					

Note 1) * = significant at 10%, ** = significant at 5%,
*** = significant at 1%.

2) "Top shareholder" is the largest shareholder whose holding ratio exceeds 20%.

3) The coefficient in each "performance" is calculated by estimating the coefficient dummies.

4) To save the space, the estimated coefficients of time dummies and industry dummies are not shown in the table.

Table 4. Estimation Results: dependent variable = debt-asset ratio

(a) Baseline series

dependent variable (t):		debt-asset ratio					
group	(A) "good" performance		(B) "normal" performance		(C) "bad" performance		
independent variables (t-1)	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)	
Tobin's q (baseline series)	-0.0091	(0.0020) ***	0.0022	(0.0041)	0.0086	(0.0030) ***	
stock holding ratio							
the largest corporate holding ratio							
(100% corporate holding dummy)	-0.0004	(0.0002) *	0.0000	(0.0001)	0.0005	(0.0002) ***	
(the others)	-0.0010	(0.0002) ***	-0.0001	(0.0002)	0.0008	(0.0002) ***	
the largest individual holding ratio	0.0011	(0.0004) **	0.0023	(0.0004) ***	0.0039	(0.0004) ***	
the main bank holding ratio	0.0031	(0.0080)	-0.0054	(0.0055)	0.0226	(0.0065) ***	
holding ratio of the other financial inst.	0.0020	(0.0020)	0.0024	(0.0022)	0.0041	(0.0018) **	
foreign shareholding ratio	-0.0006	(0.0010)	0.0003	(0.0010)	-0.0003	(0.0009)	
gov. or gov. agency holding ratio	-0.0053	(0.0022) **	-0.0035	(0.0012) ***	0.0025	(0.0014) *	
employee shareholding ratio	-0.0012	(0.0007)	0.0011	(0.0004) ***	-0.0006	(0.0006)	
constant term	0.1458	(0.0332) ***					
the number of firms	1,589						
the number of samples	6,706						

Table 4. Estimation Results: dependent variable = debt-asset ratio (continued)

(b) Reference series

dependent variable (t):		debt-asset ratio					
group	(A) "good" performance		(B) "normal" performance		(C) "bad" performance		
independent variables (t-1)	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)	
Tobin's q (reference series)	-0.0062	(0.0016) ***	0.0022	(0.0037)	0.0043	(0.0020) **	

stock holding ratio						
the largest corporate holding ratio						
(100% corporate holding dummy)	-0.0007	(0.0001) ***	-0.0001	(0.0001)	0.0005	(0.0001) **
(the others)	-0.0010	(0.0002) ***	-0.0003	(0.0002)	0.0008	(0.0002) ***
the largest individual holding ratio						
the main bank holding ratio	0.0011	(0.0004) **	0.0024	(0.0003) ***	0.0041	(0.0004) ***
holding ratio of the other financial inst.	0.0003	(0.0069)	-0.0043	(0.0048)	0.0217	(0.0060) ***
foreign shareholding ratio	0.0022	(0.0016)	0.0027	(0.0022)	0.0047	(0.0017) ***
gov. or gov. agency holding ratio	-0.0002	(0.0008)	0.0000	(0.0009)	-0.0004	(0.0008)
employee shareholding ratio	-0.0052	(0.0018) ***	-0.0029	(0.0009) ***	0.0028	(0.0014) **
employee shareholding ratio	-0.0017	(0.0006) ***	0.0005	(0.0005)	-0.0007	(0.0006)
constant term	0.1317	(0.0308) ***				
the number of firms	1,785					
the number of samples	7,479					

Note 1) * = significant at 10%, ** = significant at 5%, *** = significant at 1%.

2) "Top shareholder" is the largest shareholder whose holding ratio exceeds 20%.

3) The coefficient in each "performance" is calculated by estimating the coefficient dummies.

4) To save the space, the estimated coefficients of time dummies and industry dummies are not shown in the table.

Table 5. Estimation Results Allowing Indirect Shareholdings

(a) Baseline series

dependent variable (t):		Tobin's q					
group	(A) "good" performance		(B) "normal" performance		(C) "bad" performance		
independent variables (t-1)	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)	
operating profit ratio	0.6169	(0.1148) ***	0.8017	(0.3371) **	0.8002	(0.3203) **	
debt-asset ratio	0.4275	(0.3833)	-0.2422	(0.1962)	-0.7148	(0.2105) ***	
stock holding ratio							
the largest corporate holding ratio							
(100% corporate holding dummy)	0.0212	(0.0035) ***	0.0022	(0.0013) *	-0.0066	(0.0026) **	
(the others)	0.0159	(0.0035) ***	0.0019	(0.0015)	-0.0102	(0.0022) ***	
the largest individual holding ratio							
the main bank holding ratio	0.1031	(0.0586) *	-0.0215	(0.0232)	-0.1566	(0.0453) ***	
holding ratio of the other financial inst.	0.0504	(0.0083) ***	-0.0113	(0.0080)	0.0261	(0.0304)	
foreign shareholding ratio	0.0522	(0.0178) ***	0.0107	(0.0042) **	0.0051	(0.0097)	
gov. or gov. agency holding ratio	0.0206	(0.0174)	-0.0063	(0.0062)	0.0009	(0.0041)	
employee shareholding ratio	0.0234	(0.0090) ***	0.0043	(0.0032)	-0.0061	(0.0042)	
constant term	1.0962	(0.1377) ***					
the number of firms	1,589						
the number of samples	6,706						

Table 5. Estimation Results Allowing Indirect Shareholdings (continued)

(b) Reference series

dependent variable (t):		Tobin's q					
group	(A) "good" performance		(B) "normal" performance		(C) "bad" performance		
independent variables (t-1)	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)	

operating profit ratio	0.8695	(0.1321) ***	1.1126	(0.3280) ***	1.4264	(0.3853) ***
debt-asset ratio	0.9200	(0.4349) **	-0.0469	(0.1737)	-0.8827	(0.2027) ***
stock holding ratio						
the largest corporate holding ratio						
(100% corporate holding dummy)	0.0250	(0.0034) ***	0.0018	(0.0010) *	-0.0070	(0.0021) ***
(the others)	0.0182	(0.0035) ***	0.0018	(0.0013)	-0.0091	(0.0020) ***
the largest individual holding ratio	0.0170	(0.0058) ***	-0.0020	(0.0018)	-0.0035	(0.0024)
the main bank holding ratio	0.0667	(0.0557)	-0.0108	(0.0228)	-0.1766	(0.0421) ***
holding ratio of the other financial inst.	0.0275	(0.0093) ***	-0.0113	(0.0093)	0.0303	(0.0323)
foreign shareholding ratio	0.0660	(0.0156) ***	0.0064	(0.0024) ***	-0.0057	(0.0160)
gov. or gov. agency holding ratio	0.0160	(0.0147)	-0.0061	(0.0065)	0.0050	(0.0045)
employee shareholding ratio	0.0152	(0.0081) *	-0.0003	(0.0027)	-0.0056	(0.0042)
constant term	1.1090	(0.1279) ***				
the number of firms	1,785					
the number of samples	7,479					

Note 1) * = significant at 10%, ** = significant at 5%, *** = significant at 1%.

2) "Top shareholder" is the largest shareholder whose holding ratio exceeds 20%.

3) The coefficient in each "performance" is calculated by estimating the coefficient dummies.

4) To save the space, the estimated coefficients of time dummies and industry dummies are not shown in the table.

Table 6. Estimation Results Based on Absolute Standards of Performance

(a) Baseline series

dependent variable (t):		Tobin's q					
group	(A) "good" performance		(B) "normal" performance		(C) "bad" performance		
	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)	
independent variables (t-1)							
operating profit ratio	0.5295	(0.1106) ***	2.5278	(0.2461) ***	0.7047	(0.3093) **	
debt-asset ratio	1.0077	(0.6381)	-0.2642	(0.1816)	-0.7361	(0.2486) ***	
stock holding ratio							
the largest corporate holding ratio							
(100% corporate holding dummy)	0.0319	(0.0048) ***	0.0006	(0.0012)	-0.0064	(0.0034) *	
(the others)	0.0293	(0.0055) ***	-0.0007	(0.0013)	-0.0103	(0.0030) ***	
the largest individual holding ratio							
the main bank holding ratio	0.0248	(0.0075) ***	-0.0030	(0.0016) *	-0.0019	(0.0029)	
the main bank holding ratio	0.0827	(0.0810)	-0.0204	(0.0309)	-0.1567	(0.0578) ***	
holding ratio of the other financial inst.	0.0414	(0.0085) ***	0.0346	(0.0311)	-0.0115	(0.0163)	
foreign shareholding ratio	0.0815	(0.0223) ***	0.0130	(0.0042) ***	-0.0068	(0.0129)	
gov. or gov. agency holding ratio	-0.0208	(0.0267)	-0.0159	(0.0071) **	0.0046	(0.0046)	
employee shareholding ratio	0.0538	(0.0168) ***	-0.0005	(0.0025)	-0.0018	(0.0069)	
constant term	0.9986	(0.1420) ***					
the number of firms	1,589						
the number of samples	6,706						

Table 6. Estimation Results Based on Absolute Standards of Performance (continued)

(b) Reference series

dependent variable (t):		Tobin's q					
group	(A) "good" performance		(B) "normal" performance		(C) "bad" performance		
independent variables (t-1)	Coefficient	(S.E.)	Coefficient	(S.E.)	Coefficient	(S.E.)	
operating profit ratio	0.7412	(0.1246) ***	2.7136	(0.2190) ***	1.2878	(0.3771) ***	
debt-asset ratio	2.0236	(0.7919) **	-0.2503	(0.1646)	-0.9043	(0.2333) ***	
stock holding ratio							
the largest corporate holding ratio							
(100% corporate holding dummy)	0.0362	(0.0046) ***	0.0020	(0.0010) *	-0.0101	(0.0031) ***	
(the others)	0.0333	(0.0055) ***	-0.0002	(0.0011)	-0.0106	(0.0028) ***	
the largest individual holding ratio	0.0245	(0.0084) ***	-0.0016	(0.0016)	-0.0014	(0.0034)	
the main bank holding ratio	0.0051	(0.0894)	-0.0088	(0.0287)	-0.2010	(0.0511) ***	
holding ratio of the other financial inst.	0.0043	(0.0101)	0.0397	(0.0329)	-0.0146	(0.0162)	
foreign shareholding ratio	0.0954	(0.0165) ***	0.0086	(0.0037) **	-0.0183	(0.0249)	
gov. or gov. agency holding ratio	0.0002	(0.0598)	-0.0152	(0.0069) **	0.0098	(0.0048) **	
employee shareholding ratio	0.0500	(0.0171) ***	-0.0029	(0.0023)	-0.0019	(0.0070)	
constant term	1.0323	(0.1296) ***					
the number of firms	1,785						
the number of samples	7,479						

Note 1) * = significant at 10%, ** = significant at 5%,

*** = significant at 1%.

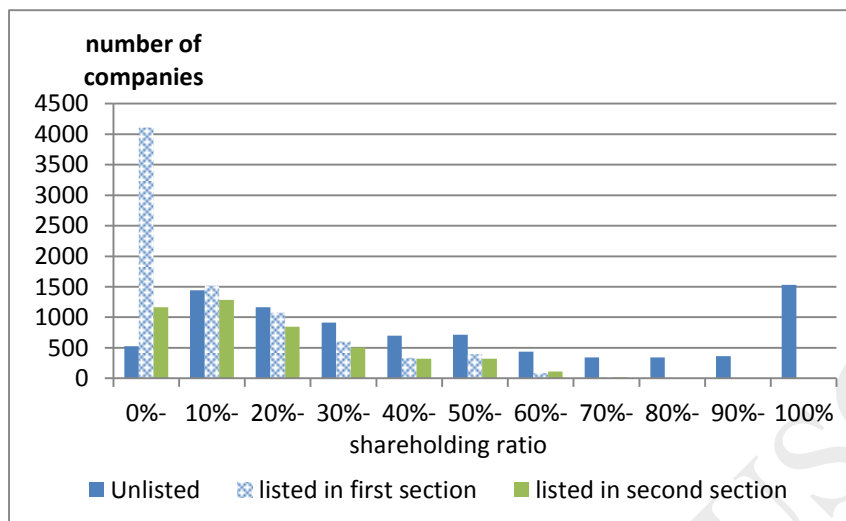
2) "Top shareholder" is the largest shareholder whose holding ratio exceeds 20%.

3) The coefficient in each "performance" is calculated by estimating the coefficient dummies.

4) To save the space, the estimated coefficients of time dummies and industry dummies are not shown in the table.

Figure 1. Distribution of the Shareholding Ratios

(a) Top shareholder's holding ratio



(b) Corporate shareholder's holding ratio

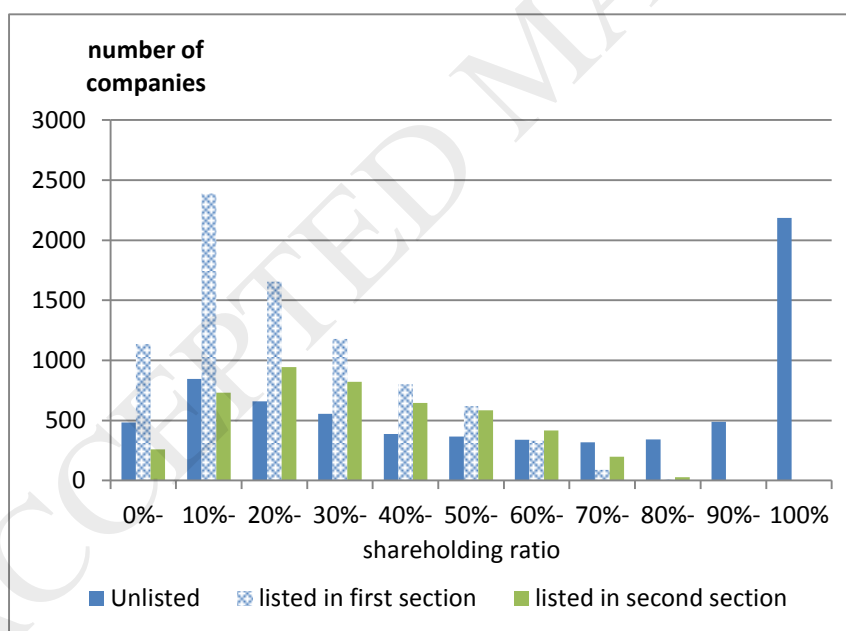
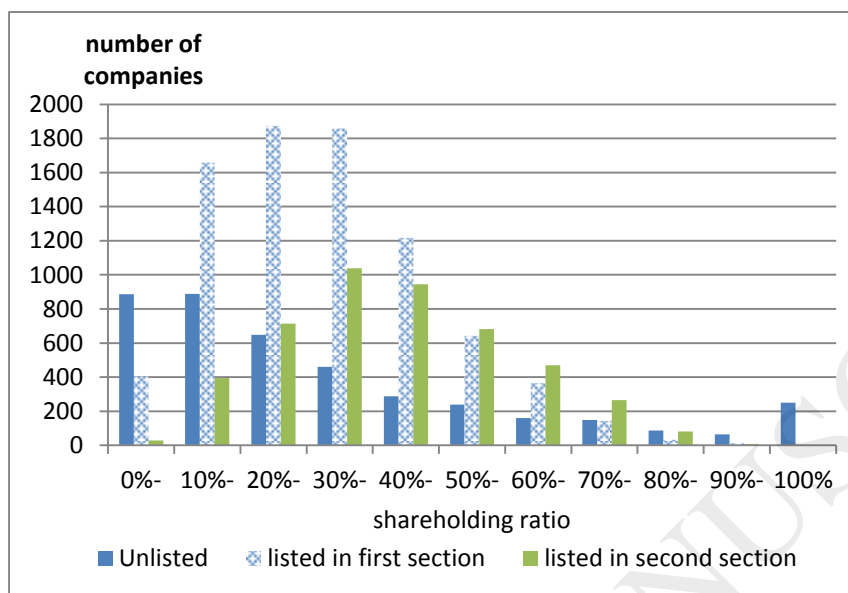
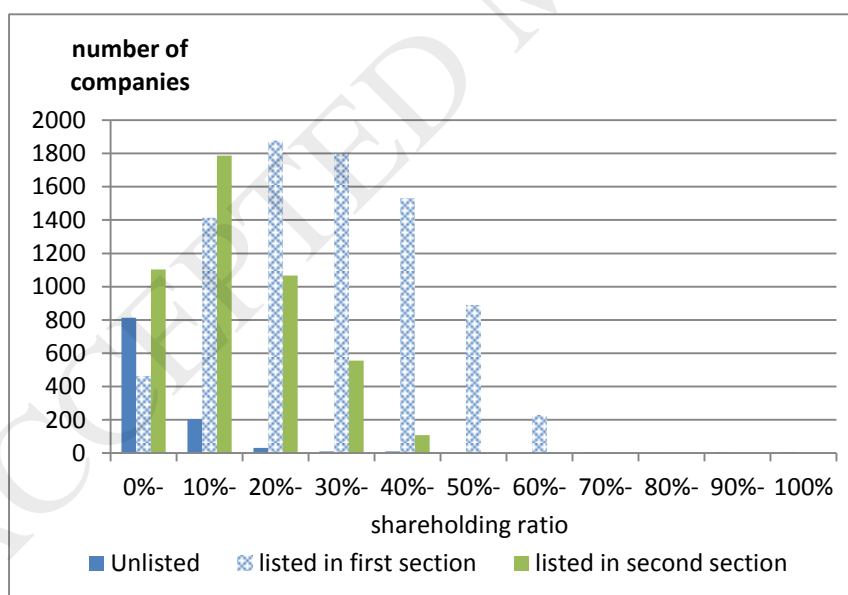


Figure 1. Distribution of the Shareholding Ratios (continued)

(c) Individual shareholder's holding ratio

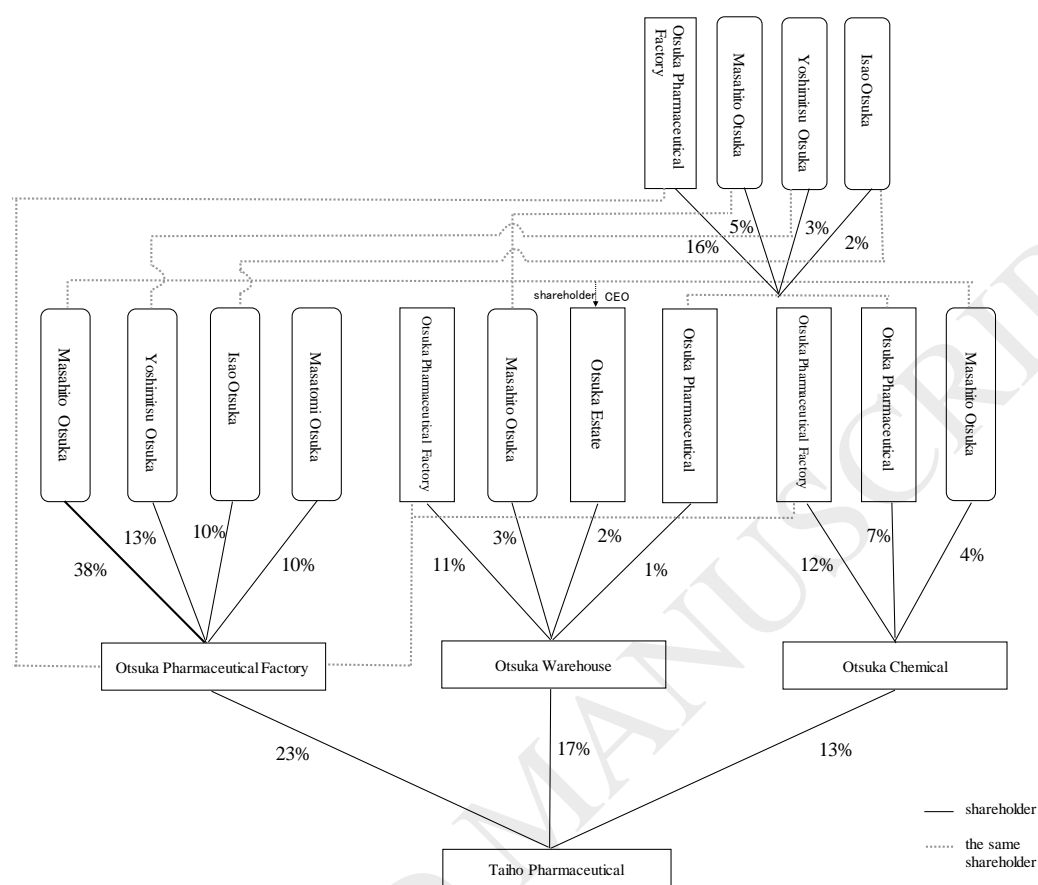


(d) Financial Institutions' shareholding ratio



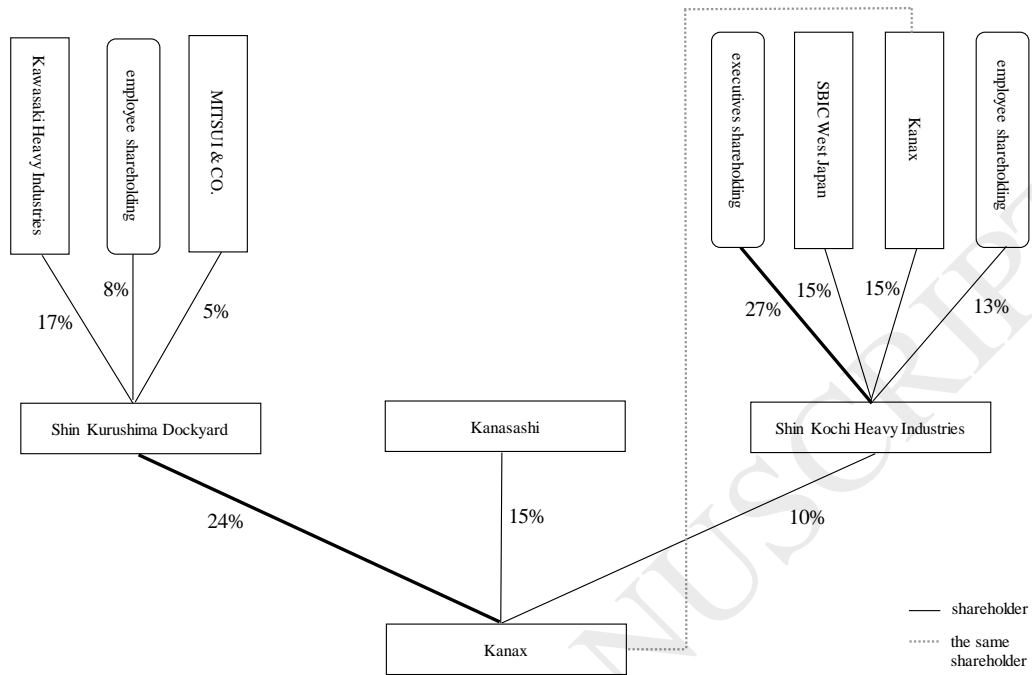
Note) Financial Institutions' shareholding ratio includes the shareholding ratio of the main bank.

Figure 2. Indirect Shareholding: Case of *Taiho Pharmaceutical*



Source: “CD Eyes” of “Tokyo Choko Research” and “Company Quarterly Report: Unlisted Companies Version” of Toyo Keizai Inc.

Figure 3. Indirect Shareholding: Case of *Kanax*



Source: “CD Eyes” of “Tokyo Choko Research” and “Company Quarterly Report: Unlisted Companies Version” of Toyo Keizai Inc.