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Performance Impact at the Board Level: Corporate Governance in Japan

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Abstract

Economic literature provides mixed results about what really matters at corporate governance and the board room. Some research covering different countries suggests that size and ratio of board room matters. The purpose of this paper is to investigate the performance impact at the board level in the corporate governance of Japanese companies. We investigate the size as well as the ratio of outside directors and outside auditors and apply them to all Japanese manufacturing companies listing on the First Stock Exchange in Tokyo, a set of 821 companies.

To do this, we put Japanese companies into three groups: 1st traditional companies (without outside directors), 2nd new Japanese companies (which appointed outside directors) and 3rd companies who decided to apply to the US-Style system. In our sample we found evidence that board size did not matter but we found correlation between the ratio of outside directors / outside auditors and the performance of the companies. Furthermore, traditional Japanese companies showed the weakest performance, US-style Japanese companies the strongest.

This result is highly important as it says that Japanese companies are better off having a high ratio of outside directors and outside auditors. In addition to this, Japanese companies might think about the advantages of introducing a US-style-system. At least in our research with only a few numbers of US-style companies, they outperformed the others.

Keywords: Corporate Governance; board room, US-style corporate governance, JUS-style corporate governance, outside ratio, board size;

1. Introduction

The boards of large organization play an important role in the corporate governance (Fama and Jensen, 1983). It plays a key role in monitoring and controlling managers and can be described as a bridge between company management and shareholders (Dalton et al., 1999). Previous, the Japanese bank-based system is often times closely linked to the German system (Sakakibara, 1995; Dore, 1996, 2000; Yamamura and Streeck, 2003). Historically, both countries have been bank-dominated by strong stakeholder-orientation (Jackson and Moerke, 2005). However, in contrast to German system of co-determination, Japanese law does not require employee participation at the board level. Japanese boards traditionally have been comprised almost exclusively of managers who served their whole career in the same company (Milhaupt and West, 2004). In recent years, there are indicators that this system changed in Japan already after the bubble economy in the beginning of the 90th.

Despite past economic success, Japanese companies faced strong pressure to change their corporate governance system. Japan's legal framework of corporate ownership changed (Egashira, 2001; Kanda, 2001; Wakasugi, 2004, Seki, 2005). The changes covered corporate law and other regulations as well as the role of the banks and the whole financial system (Jackson and Moerke, 2005). A new stock-swap system and a stock option plan was introduced. Furthermore, companies have to apply new market accounting standards (Bebenroth, 2003). Since April 2002 even US- style corporate governance system is possible for Japanese companies to choose. This was possible because of an amendment of the Commercial Code. Besides these legal changes, several attempts were made to introduce a corporate governance code. In 2001 a Japanese corporate governance code was published and in 2004 the "new principles of a corporate governance for stock listed companies" were released (Internet www.ecgi.org/codes). However, Japanese companies do not have to use British style of comply or explain in case they do not comply with the rules.

This paper is one of several contemporaneous papers, studying performance impact at the board level in the corporate governance of Japanese companies as a country in depth study. We investigate on the one hand board size as a performance impact, on the other hand the outside ratio of directors and auditors to the performance. The structure of this paper is the following. In chapter 2 we discuss ownership concentration versus board size performance impact of corporate governance. A segmentation of Japanese companies as a very new approach will be done in chapter 3. At chapter 4 we bring our research model, chapter 5 is about data and variables and in chapter 6 we present our analysis. Chapter 7 highlights discussion and in chapter 8 we close our research with a conclusion.

2. Ownership concentration versus board size

In the literature there is substantial evidence that a variation in country level rules, like the corporate governance system influences the capital market strength. A line of country comparison research by La Porta, Lopez-de-Silanes, Shleifer and Vishney provides evidence that corporate governance does matter. This evidence is based on several cross country studies (La Porta et al., 1997, 1998, 1999, 2000). Countries with stronger legal protection of minority shareholders have larger security markets, higher value for minority shareholder and less concentrated share ownership. Lopez-de-Silanes and Shleifer (2002) find out that changes in the legal protection of minority shareholders can affect the value of control rights. On the one hand, there are studies investigating about ownership concentration. On the other hand, some studies investigate about characteristics of the board room in regard to the corporate governance. Many studies in the field of ownership concentration emphasize on agency costs (Shleifer and Vishny, 1997) in relation to social context where ownership concentration has been used to measure ties to the investors (Gerlach, 1992). Gedajlovic and Shapiro (2002) researched about ownership structure and firm profitability of Japanese companies. They found a positive relationship between ownership concentration and financial

performance. Ownership was measured by three categories, the largest five blockholders, nonfinancial companies (Keiretsu) and financial companies. In all three cases they found correlation for performance. In the first case looking at five biggest shareholder, correlation was significant positive. When keireitsu or banks were concentrated owner, correlation was negative. However, data of their study was taken from 1986-1991. Especially this time period is difficult to analyse as it was at the end of the Japanese bubble economy. There is much more limited evidence at a single country level that variations of corporate governance practices lead to a performance impact. Several papers analyzed the corporate governance and the performance in single country approaches apart from Japan, for example, Black 2001 about Russian firms and Gompers, Ishii and Metrick 2003 about US firms.

Apart from ownership concentration there is much more limited research about features of board characteristics. There are only few studies which provide statistical evidence of significant impact of performance in corporate governance in regard to the board structure. The results found are for example in Millstain and MacAvoy (1998) as well as in Bhagat and Black (2002). Their research is about the relationship between firm value and the board characteristics. Bhagat, Carey and Elson (1999) investigate the relationship between firm performance and outside directors. A new way of research was introduced by Gompers, Ishii, Metrick (2003) who linked firm market performance to a corporate governance index based on takeover defenses.

There is some evidence that investors in emerging markets are sensitive for corporate governance. When companies in emerging markets adapt a corporate governance system what investors appreciate, it is secure for them to invest, the companies market value increases. Black (2001) reports a powerful correlation between corporate governance and performance in emerging markets. According to his study about Russian firms, a worst-to-best improvement in governance predicts an increase in market value of

70.000% (what means a 700-fold)[3]. Japan is not an emerging market, however, a strength of our in-depth study of corporate governance, compared to a multi-country study, is the strong data availability, which let us use a much more complete set of dependant and control variables.

3. Dividing three styles: Japanese – JUS - US

On April 2002 through an amendment of the Japanese Commercial Code the corporate governance system was strengthened. Since then, Japanese companies are given choice in terms of the governance system. Companies can stay with the old traditional corporate auditor system or they may change to US-style auditor system if their size allows them to do so. In this case three committees have to be established, for audit, for remuneration, and for nomination. On each of the committees the majority of the directors have to be from outside. The three committee governance system functions in the new law. In this regard, responsibilities of the board members for business decisions become clearer and accountability increases. In many countries where comply or explain rules exist, there is hope that the market will punish non complying companies. For the Japanese case, that would mean that companies who continued with their traditional system of not having any committees for remuneration and nomination they might come into the need for explaining to investors the reasons. Seki reports that at June 2004 some 43 companies decided to adopt the new system. Our sample only covers manufacturing firms listed on the first section of the Tokyo stock exchange so that we have only 24 companies for fiscal year 2003 and 29 for the fiscal year of 2004 who changed to US-style board system. It is to say that this is a dramatic and fundamental change from the traditional old system.

Somehow more or less in the middle to the traditional Japanese style and the new US-style board system there is a hybrid model what offers some

[3] Black's sample, however, is very small, consists only out of 21 firms. Furthermore, he did not control for endogeneity.

advantages of the American approach even if it is still Japanese company system. These companies different from the traditional ones have outside directors. Furthermore, there exists a clear trend in Japanese companies toward the separation between the members of the board and the executive officers at the board. These directors are responsible for divisional operation. They receive the new title of “shikko-yakuin.” Sony was one of the first companies who introduced an executive officer system with shikko-yakuin to separate monitoring board from operational functional board (Seki, 2005). Soon after, Sony, turned in to US-style system with nomination committees. In 2004, 678 companies listed on the First Section (some 43.5%) appointed at least one executive officer. In our research we describe this system as half Japanese half US-style, in the following called JUS-style system (Japanese US-style). In our empirical research we investigate about the ratio of outside directors and the performance of the companies. In the fiscal years 2003, from our investigated 821 companies there were 535 traditional Japanese companies. We found 262 JUS-style companies and 24 US-style companies. This tendency changed in fiscal year 2004 from traditional companies to JUS style and US-style companies. From again 821 companies in fiscal year 2004 we found only 507 traditional companies (minus 28) and an increase of JUS companies of 23 to 285 as well as an increase of US style companies of 5 to 29 companies (table board structure variables).

4. Research Model

This study deals about board room in Japanese companies and is very new in its kind. We divide Japanese companies into three blocks. First are companies who maintain with the traditional Japanese style board system without any outside directors. Second group contains Japanese companies who introduced outside directors but remained to the auditor system. Third group exists of Japanese companies who completely changed their board to US- style system which introduced outside directors but no conventional auditor system. In this system a three committee is set up (in Japanese:

Iinkai to sechi geisha). In this regard, we investigate about board size and ratio of outside directors /auditors in comparison to the performance. We measure performance with latest financial data by Tobin's Q for the year 2004.

Hypothesis

Board size

A bulk of literature determines the Board size as an important factor of effective corporate governance (Jensen, 1993; Dalten et al., 1999; Bonn et al., 2004). There is a clear sign that smaller board size is preferable to have better performance.

Only minor studies find a positive correlation between board size and firm value (Ferris et al., 2003). According to resource dependence theory, larger boards have higher level of performance as they have better ability of securing critical resources. Furthermore, large boards may be able to create links to other institutions more easily than smaller boards (Pfeffer, 1972; Goodstein et al., 1994). Pfeffer found that the effective external linkage increases with board size. Bigger board sizes insure normally an increased pool of expertise.

On the other side, there are many studies showing negative performance when having a bigger board size (especially for small firms: Eisenberg, Sundgren, Wells 1998). According to Lipton and Lorsch (1992), their research shows that large boards are less cohesive because too many voices are hard to transform into one strategic line. It is hard to take decisions and they are more difficult to coordinate. If a board is large, the ability of initiating strategic changes might be low (Goodstein 1994). Some researchers recommend board size at a best level of 10 members (Lipton and Lorsch, 1992; Bonn et al., 2004).

Historically, Japanese boards were very large in size (Kiel and Nicholson, 2003). In the literature it is reported that some firms have had over 60 directors sitting in the boards (Abegglen and Stalk, 1985; Dalton and Kesner 1987; Yoshikawa and Phan, 2001). Recently, board size in Japanese

companies is declining. Even if the numbers from other researcher seem not to be in line. Abbeglen reported many years ago about board sizes of 60 directors and more. Yoshikawa comes with more recent results to a range between 20 and 30 directors. Miwa/Ramseyer too report numbers in this range for company data in the early years of 2000. In any case the number of directors seems to decline. Since JUS-companies are regarded as a new style and US-style system even more timly we suggest that traditional Japanese companies have bigger board sizes. Therefore, our first hypotheses is:

1.a) Traditional Japanese board system companies have the biggest board size, JUS are in the middle and US-style boards have the smallest number of directors.

Ratio of outside directors and outside auditors

Naturally, the board of directors is composed not only of inside but also of outside directors. By amendment of the Commercial Code in 2002 the first definition of an “outside director” was established. An outside director is defined as a person who has not been director, officer or employee of the same company or its subsidiaries. Furthermore, this person does not executive the business of the company. However, neither a clear requirement nor independence of an outside director is clearly specified (Seki, 2005). There is already some research done about board composition including outside directors (Lorsch and MacIver, 1989; Bonn et al., 2004).
Japan is clearly considered to have insider dominated boards (Charkham, 1994). Studies have shown only to a small extend mixed results in what proportion is best for monitoring a company most effective (Baysinger et al., 1991; Chaganti et al., 1985). Some first studies in this field support the hypothesis that inside directors are less effective than boards with more outside directors. Some researcher suggest; therefore, that an increase of outside directors makes the board become more effective in managerial performance (Fama, 1980; Bonn et al. 2004). We want to test this hypothesis for our sample for outside directors and outside auditors. In 2004, exactly

523 companies from TSE First Section (35% of all listed companies) appointed at least one outside director (Seki, 2005). As traditional companies do not have any outside directors, this argument is to apply to two different Japanese boards, to the US-style board companies as well as to JUS system companies with outside directors. We suppose that US style system companies have a higher ratio of outside directors as they have majority of outside directors in their committees. Our hypothesis therefore is:

1.b) US-style boards have higher outside director ratio than JUS style Japanese companies.

As a next step regression analysis will be accomplished. Performance will be measured by Tobin's Q for fiscal year 2004. For this we measure the performance of our companies whom we divided into three groups.

With a regression analysis we measure performance to outside director ratio:

2.a) Small board size leads to higher performance.

In the next regression analysis, we measure ratio of outside director / auditor

2.b) High outside director /auditor ratio leads to higher performance.

In the final ANOVA analysis we measure performance to our three groups:

3.) Traditional Japanese board system companies have the weakest performance, JUS are in the middle and US-style board companies have the highest performance.

5. Data and Variables

For this study, several sources of data were necessary. Financial Data were collected from NEEDs-databank, an electronic version. Data about board

structure were collected from printed version of Yakuin Shikoho (Board of Director Handbook).

Our sample consists of 821 companies. All of these companies are from manufacturing sector to eliminate industry-level fixed effects. The sample consists of Japanese First Stock Exchange listed companies, where we found 834. For 13 companies we could not find data so that we filtered our sample finally to 821 companies for the fiscal year 2003 and 2004.

Board structure variables as independent variables

We use board structure as independent variables. Board structure includes the numbers of inside and outside directors /auditors, we come up also with the ratio of both groups. In our study we focus on the board size as well as the ratio of outside directors /outside auditors. Outside directors are defined as such directors who are not former employees of the firm. The ratio of outside directors /auditors was measured as outsiders to the total number of directors /auditors. We place a dummy variable for the traditional Japanese board system (without any outside director /auditor), for JUS-style companies (who appointed at least one outside director) and for US-style adopted companies.

Dependent variables and control variables

There are many ways of measuring the performance of companies. Better governed companies could be more profitable, or they could pay higher dividends for a given level of profits, or investors could just value same dividends (or earnings) to a higher level. Many other studies connected to Japan and related to performance use ROA (Prowse, 1992; Nitta 2000; Suzuki and Sho, 2000; Yoshikawa and Phan, 2003). As we divide Japanese companies into three groups with different assets, we measure the firm performance by Tobin's Q as the dependent variable. Tobin's Q was measured as Share Price * Outstanding Shares + Debts (long- and short term) / Total Assets.

We have to consider a time lag; therefore, we took the fiscal year of 2004 for Tobin's Q and the fiscal year of 2003 for our independent variables. As control variable we use five variables. LN(Total Assets), LN (Turnover), fixed asset ratio, growth rate of return (for the last 5 years) and growth rate of cash flow (also for the last 5 years).
For controlling the firm size, we follow the common practice of using LN (assets) as Durnev and Kim (2003). In line with prior research the coefficient on LN (assets) should be negative. These variables can be in contrast to each other. For example, some companies might focus on high turnover, others might focus on growth rate of return or on a high market share. All the financial data was retrieved from NEEDS Databank.

6. Analysis

We did 3 Types of Analyses. First, we accomplished a descriptive analysis. After that several correlation analyses were done. Finally, third, regression and ANOVA analyses were necessary to investigate about statistical significance of our variables.

Our descriptive Analyses contain 1. Board structure variables, 2. Control variables and 3. Performance variables (See attachments table 1 and 2). First, we tested two questions in a descriptive attempt. We divided three groups out of traditional Japanese companies, JUS-companies with outside directors and as a third group US-style companies. We tested the board size as e.g. Miwa and Ramseyer did. Furthermore we subtracted auditors from the board so that we came to the real director board size. The number of directors is smaller than any other study about board size of Japanese companies has shown yet. From the table above, we find evidence that the average board size at all investigated Japanese companies is 10.16 in the fiscal year 2003 and decreased to 9.81 directors in the fiscal year 2004. If auditors too are included into the board size, the director number increases in average to 13.87 in the year 2003 and to 13.55 in the year 2004.

Looking at the number of the board sizes in 2003, traditional Japanese companies have 13.71, JUS companies have 14.61 and US-style companies have 9.25. In fiscal year 2004 quite similar results appear. Again, traditional Japanese companies' board sizes are with 13.48 smaller than JUS companies with 14.15 directors. US-style companies once more have the smallest size with only 8.97 directors. Our hypothesis 1.a failed.

When dividing the number of outside directors into three groups, it is visible that JUS-companies in 2003 have on average 1.57 outside directors and US-style companies on average 3.71. For the year 2004 the numbers change only to a small amount. JUS companies have 1.69 outside directors on average and US-style companies 3.52. In 2003, JUS style companies have an outside ratio of 0.17 in contrast to US-style companies who have an outside ratio of 0.42. In 2004, JUS companies have an outside director ratio of 0.19 and US style companies of 0.41. Our hypothesis 1.b is supported.

In addition to this we looked at the number of outside auditors. For 2003 it is measured as 1.37 for traditional Japanese style companies and 1.65 for JUS companies. In 2004 this number changes again only to a small amount. For traditional Japanese style companies to 1.46 and for JUS companies to 1.67. Interestingly, the gap of outside auditors between traditional and JUS companies is only small.

Tobin's Q for all companies in 2003 is in average 1.23 (see attachment, table 4). As our hypothesis suggested, traditional Japanese style companies have the lowest value with 1.18, JUS companies are in the middle with 1.30 and US style companies have the highest score with 1.61 (Table 4, Tobin's Q in attachment).

Next we undertook a pearson correlation analysis for 2003 and 2004 (see attachment pearson correlation, table 6 and 7).

There is a strong correlation between the ratio of outside directors and Tobin's Q for both years with 1% significance. The ratio of outside auditors to Tobin's Q is significant for two years on 1% and 10% level.

In the regression part for Tobin's Q in the year 2004 we see that our $R^{2'}$ is 0.126, what means that our sample at the regression analysis can be

explained by 12.6%. As another figure, F=10.120, P=0.000 what means that our model is as a whole significant (see attached regression model, table 8-10).

According to ANOVA analysis, traditional Japanese companies have the weakest, JUS-companies are in the middle and US-Style companies have the strongest performance measured by Tobin's Q. The significance level of differences for each group is under 1% what means highly significant (Attachment ANOVA, table 11). Results of our hypothesis are as follows:

Descriptive analysis

1.a) The board size of JUS companies is not smaller than the size of traditional Japanese companies.

1.b) US-style companies have a higher ratio of outside directors than JUS companies.

Regression analysis

2.a) Smaller board size does not lead to a better performance.

2.b) The higher the ratio of outside directors /auditors the better the performance.

ANOVA analysis

3) Traditional Japanese companies show the weakest performance. JUS are in the middle, US-Style companies show the strongest performance.

7. Discussion

First, it is for us a surprise that the board member size in our study is much lower than described in almost all other previous studies about Japanese board rooms. The board size has far changed what was reported earlier by Abegglen who came to board size numbers like 60 members for Japanese boards (1985). Also Miwa and Ramseyer found sizes of more than 20 members on average in the early years of 2000 (Miwa and Ramseyer 2005).

Unexpectedly, the board size number in our research covering the fiscal year 2003 and 2004 is very low, just below 14 members. In fact, the number of the board size according to the Yakuin Shikiho includes the numbers of auditors too. It is to assume that previous studies included all persons written in the Yakuin Shikiho even there are the auditors included. Therefore, for receiving another independent variable we subtracted the number of auditors from the whole board size and came then to our real board size. The board size was in 2003 on average was at 10.16 and decreased again for 2004 to only 9.81 directors on an average Japanese board.

It is to mention that in Japan the power of directors might differ from the board size. It means to be on a board does not meant automatically to have any power. This might be quite different to boards in other countries. In Japan normally not the whole board for itself takes decisions but some groups from upper level in the board. This upper level is comprised of "Representative Directors" which can exist of Managing Director, Senior Managing Director, Executive-Vice-Director, Vice Chairman and Chairman. Future research could be done about representative directors, in Japanese language called "Jomu-kai." All the other officers in the board might not influence enough the actual decision making process.

Second, it is interesting for us to see that the ratio of outside directors and the ratio of outside auditors have impact on the performance, measured by Tobin's Q.

This study has also some shortcomings. We measured the performance only by Tobin's Q and only for the year 2004. It would be interesting to see

if the results will be robust using other measure for performance or other years.

8. Conclusion

The board room plays an outstanding role in the corporate governance research since Fama and Jensen (1983). There are several studies from different countries about corporate governance and board room impact with mixed results. Their research focused mainly about the size of the board room and their performance. The theory goes like this: the smaller the board room, the better the performance of the company.

We investigate the size as well as the ratio of outside directors and outside auditors and apply them to all Japanese manufacturing companies which are listed on the First Stock Exchange in Tokyo, a set of 821 companies. We obtained newest data for two years, 2003 and 2004. Japanese companies were taken into three groups. The 1st group contains traditional companies (without outside directors). A second group is of new-style Japanese companies which appointed at least one outside directors (called JUS companies). A third group only small in number is of companies who decided to apply themselves to the US-Style company system. Our performance was measured by Tobin's Q for the year 2004. We found that the board size did not matter. There was no performance gap between bigger board size and smaller board size companies. However, the ratio of outside directors and outside auditors mattered. Companies having a high ratio of outside directors as well as a high ratio of outside auditors outperformed the other companies. Furthermore, traditional Japanese companies showed the weakest performance, US-style Japanese companies showed the strongest performance. Companies who appointed at least one outside directors (called JUS-companies) were found somewhere in the middle.

Our results are important for academics and for practice too. If these first results can be verified in future research, it would mean that Japanese companies are advised to introduce more outside directors into their boards as well as having better more outside auditors.

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Attachments

Table1 Board Structure Variables

	2003				2004			
	ALL	**JPN**	**JUS**	**US**	**ALL**	**JPN**	**JUS**	**US**
No. of Directors and Auditors	13.87	13.71	14.61	9.25	13.55	13.48	14.15	8.97
No. of Directors	10.16	9.91	10.77	9.25	9.81	9.61	10.25	8.97
No. of Outside Directors	.61	0	1.57	3.71	.71	0	1.69	3.52
Ratio of Outside Directors	.07	0	.17	.42	.08	0	.19	.41
No. of Auditors	3.71	3.81	3.85	0	3.74	3.87	3.91	0
No. of Outside Auditors	1.42	1.37	1.65	0	1.48	1.46	1.67	0
Ratio of Outside Auditors	.38	.36	.42	0	.39	.38	.43	0
No. of Companies	821	535	262	24	821	507	285	29

Numbers through own results

Table2 Detailed Board Structure in 2003

報告書

03Corporate Governance STYLE: JAN=1, JUS=2, US =3.		03Total Board Size	03Number of Director Size	03Number of Outside Director	03Ratio of OUTSIDE Director	03Number of Auditor Size	03Number of Outside Auditor	03Ratio of OUTSIDE AUDITOR
1	平均値	13.7140	9.91	.00	.0000	3.81	1.37	.3591
	度数	535	535	535	535	535	535	535
	最小値	6.00	3	0	.00	3	0	.00
	最大値	42.00	36	0	.00	7	4	1.00
	標準偏差	4.6747	4.42	.00	.0000	.60	.84	.2159
2	平均値	14.6145	10.77	1.57	.1668	3.85	1.65	.4290
	度数	262	262	262	262	262	262	262
	最小値	7.00	4	1	.03	3	0	.00
	最大値	41.00	36	7	1.00	6	5	1.00
	標準偏差	5.1603	4.96	.96	.1150	.56	.89	.2199
3	平均値	9.2500	9.25	3.71	.4172	.00	.00	
	度数	24	24	24	24	24	24	
	最小値	5.00	5	2	.21	0	0	
	最大値	16.00	16	8	.67	0	0	
	標準偏差	2.8476	2.85	1.37	.1358	.00	.00	
合計	平均値	13.8709	10.16	.61	6.541E-02	3.71	1.42	.3821
	度数	821	821	821	821	821	821	797
	最小値	5.00	3	0	.00	0	0	.00
	最大値	42.00	36	8	1.00	7	5	1.00
	標準偏差	4.8736	4.58	1.08	.1201	.86	.89	.2196

Table3　Detailed Board Structure in 2004

報告書

04Corporate Governance STYLE : JAN=1, JUS=2, US =3.		04Total Board Size	04Number of Director Size 050731	04Number of Outside Director	04Ratio of OUTSIDE Director	04Number of Auditor Size	04Number of Outside Auditor	04Ratio of OUTSIDE AUDITOR
1	平均値	13.4773	9.61	.00	.0000	3.87	1.46	.3757
	度数	507	507	507	507	507	507	507
	最小値	7.00	4	0	.00	3	0	.00
	最大値	43.00	37	0	.00	7	4	1.00
	標準偏差	4.5298	4.29	.00	.0000	.61	.90	.2261
2	平均値	14.1509	10.25	1.69	.1860	3.91	1.67	.4278
	度数	285	285	285	285	285	285	285
	最小値	6.00	3	1	.03	3	0	.00
	最大値	35.00	31	8	1.00	6	4	1.00
	標準偏差	4.6378	4.37	1.12	.1344	.63	.87	.2167
3	平均値	8.9655	8.97	3.52	.4122	.00	.00	
	度数	29	29	29	29	29	29	
	最小値	5.00	5	1	.07	0	0	
	最大値	14.00	14	8	.75	0	0	
	標準偏差	2.4854	2.49	1.50	.1664	.00	.00	
合計	平均値	13.5518	9.81	.71	7.914E-02	3.74	1.48	.3944
	度数	821	821	821	821	821	821	792
	最小値	5.00	3	0	.00	0	0	.00
	最大値	43.00	37	8	1.00	7	4	1.00
	標準偏差	4.6037	4.27	1.20	.1377	.94	.92	.2241

Table4　Dependant variable (Performance, Tobin's Q)

	2004				2005			
	ALL	**JPN**	**JUS**	**US**	**ALL**	**JPN**	**JUS**	**US**
Tobin's Q	1.2307	1.1788	1.3030	1.6070	1.3027	1.2460	1.3558	1.7646
No. of Companies	815	533	258	24	800	495	276	29

Table5　Control Variables

	2003				2004			
	ALL	JPN	JUS	US	ALL	JPN	JUS	US
Total Assets(in 1000 Yen)	227714	203547	237497	658653	237107	195996	276945	559311
Turnover (in 1000 Yen)	41125	37065	45950	79173	42545	36792	49887	70984
Fixed Asset Ratio	128.17	123.49	138.99	115.78	131.81	114.79	163.85	114.60
Growth Rate of Return (for 5 years)	8.46	8.16	9.09	8.76	9.48	10.47	7.17	14.39
Growth Rate of Cash Flow (for 5 years)	5.17	5.64	4.29	3.42	5.73	6.45	4.37	6.27

Table6　Pearson Correlation in 2003

相関係数

		obin's Q200	obin's Q200	03Total Board Size	03Number of Director Size	03Ratio of OUTSIDE Director	04Number o Auditor Size	04Ratio of OUTSIDE AUDITOR	Total Assets2003	LN(Return 2003)
Tobin's Q2003	Pearson の相関	1.000	.797*	.007	.012	.219*	−.070*	.064	.065	.070*
	有意確率 (両側	.	.000	.853	.726	.000	.045	.074	.062	.045
	N	815	795	815	815	815	815	786	815	813
Tobin's Q2004	Pearson の相関	.797*	1.000	.020	.032	.171*	−.087*	.069	.070*	.099*
	有意確率 (両側	.000	.	.575	.369	.000	.014	.055	.047	.005
	N	795	800	800	800	800	800	771	799	798
03Total Board Size	Pearson の相関	.007	.020	1.000	.985*	−.164*	.399*	−.007	.371*	.407*
	有意確率 (両側	.853	.575	.	.000	.000	.000	.847	.000	.000
	N	815	800	821	821	821	821	792	820	819
03Number of Direct	Pearson の相関	.012	.032	.985*	1.000	−.101*	.263*	−.009	.368*	.392*
	有意確率 (両側	.726	.369	.000	.	.004	.000	.796	.000	.000
	N	815	800	821	821	821	821	792	820	819
03Ratio of OUTSIDE Director	Pearson の相関	.219*	.171*	−.164*	−.101*	1.000	−.377*	.115*	.040	−.050
	有意確率 (両側	.000	.000	.000	.004	.	.000	.001	.247	.151
	N	815	800	821	821	821	821	792	820	819
04Number of Audito	Pearson の相関	−.070*	−.087*	.399*	.263*	−.377*	1.000	.005	.131*	.212*
	有意確率 (両側	.045	.014	.000	.000	.000	.	.892	.000	.000
	N	815	800	821	821	821	821	792	820	819
04Ratio of OUTSIDE AUDITOR	Pearson の相関	.064	.069	−.007	−.009	.115*	.005	1.000	.032	.003
	有意確率 (両側	.074	.055	.847	.796	.001	.892	.	.370	.941
	N	786	771	792	792	792	792	792	791	790
Total Assets2003	Pearson の相関	.065	.070*	.371*	.368*	.040	.131*	.032	1.000	.544*
	有意確率 (両側	.062	.047	.000	.000	.247	.000	.370	.	.000
	N	815	799	820	820	820	820	791	820	818
LN(Return2003)	Pearson の相関	.070*	.099*	.407*	.392*	−.050	.212*	.003	.544*	1.000
	有意確率 (両側	.045	.005	.000	.000	.151	.000	.941	.000	.
	N	813	798	819	819	819	819	790	818	819

**.相関係数は 1% 水準で有意 (両側) です。

*.相関係数は 5% 水準で有意 (両側) です。

Table7 Pearson Correlation in 2004

相関係数

		Tobin's Q200	Tobin's Q200	04Total Board Size	4Number o Director Size 050731	04Ratio of OUTSIDE Director	4Number o Auditor Size	04Ratio of OUTSIDE AUDITOR	LN(Total Asstes2004)	Return200
Tobin's Q2003	Pearson の相関	1.000	.797*	−.011	.003	.196*	−.070*	.064	.049	.118*
	有意確率 (両側	.	.000	.744	.930	.000	.045	.074	.163	.001
	N	815	795	815	815	815	815	786	795	815
Tobin's Q2004	Pearson の相関	.797*	1.000	−.001	.018	.167*	−.087*	.069	.061	.129*
	有意確率 (両側	.000	.	.979	.608	.000	.014	.055	.083	.000
	N	795	800	800	800	800	800	771	800	800
04Total Board Size	Pearson の相関	−.011	−.001	1.000	.980*	−.175*	.441*	−.018	.471*	.337*
	有意確率 (両側	.744	.979	.	.000	.000	.000	.607	.000	.000
	N	815	800	821	821	821	821	792	800	821
04Number of Direct	Pearson の相関	.003	.018	.980*	1.000	−.108*	.256*	−.020	.458*	.328*
Size 050731	有意確率 (両側	.930	.608	.000	.	.002	.000	.573	.000	.000
	N	815	800	821	821	821	821	792	800	821
04Ratio of OUTSID	Pearson の相関	.196*	.167*	−.175*	−.108*	1.000	−.369*	.108*	−.003	.010
Director	有意確率 (両側	.000	.000	.000	.002	.	.000	.002	.942	.778
	N	815	800	821	821	821	821	792	800	821
04Number of Audit	Pearson の相関	−.070*	−.087*	.441*	.256*	−.369*	1.000	.005	.225*	.159*
	有意確率 (両側	.045	.014	.000	.000	.000	.	.892	.000	.000
	N	815	800	821	821	821	821	792	800	821
04Ratio of OUTSID	Pearson の相関	.064	.069	−.018	−.020	.108*	.005	1.000	−.022	.050
AUDITOR	有意確率 (両側	.074	.055	.607	.573	.002	.892	.	.546	.162
	N	786	771	792	792	792	792	792	771	792
LN(Total Asstes200	Pearson の相関	.049	.061	.471*	.458*	−.003	.225*	−.022	1.000	.546*
	有意確率 (両側	.163	.083	.000	.000	.942	.000	.546	.	.000
	N	795	800	800	800	800	800	771	800	800
Return2004	Pearson の相関	.118*	.129*	.337*	.328*	.010	.159*	.050	.546*	1.000
	有意確率 (両側	.001	.000	.000	.000	.778	.000	.162	.000	.
	N	815	800	821	821	821	821	792	800	821

**.相関係数は 1% 水準で有意 (両側) です。

*.相関係数は 5% 水準で有意 (両側) です。

Table8 Regression analysis for Total Companies

係数[a]

モデル		非標準化係数		標準化係数	t	有意確率
		B	標準誤差	ベータ		
1	(定数)	.363	.234		1.550	.122
	03Number of Director Size	−5.109E−03	.005	−.044	−.972	.331
	03Ratio of OUTSIDE Director	.567	.252	.089	2.254	.025
	03Number of Auditor Size	3.439E−02	.044	.036	.779	.436
	03Ratio of OUTSIDE AUDITOR	.249	.110	.091	2.274	.023
	LN(Total Asstes2003)	1.753E−03	.036	.004	.049	.961
	LN(Return2003)	9.000E−02	.032	.198	2.852	.005
	Fixed Assets Ratio2003	−1.915E−03	.000	−.204	−4.870	.000
	Growth Rate of Return2003	2.825E−03	.001	.108	2.499	.013
	Growth of Rate of Cash Flow2003	5.214E−03	.002	.143	3.299	.001

a. 従属変数: Tobin's Q2004

$R^{2'}$=0.126, F=10.120, p=0.000.

Table9　Regression analysis for Japanese-style companies

係数[a]

モデル		非標準化係数		標準化係数	t	有意確率
		B	標準誤差	ベータ		
1	(定数)	.189	.267		.709	.479
	03Number of Director Size	−2.286E−03	.006	−.020	−.354	.723
	03Number of Auditor Size	4.437E−02	.051	.050	.876	.381
	03Ratio of OUTSIDE AUDITOR	.130	.125	.050	1.041	.298
	LN(Total Asstes2003)	1.222E−02	.040	.027	.303	.762
	LN(Return2003)	9.195E−02	.035	.209	2.628	.009
	Fixed Assets Ratio2003	−1.857E−03	.000	−.206	−4.090	.000
	Growth Rate of Return2003	3.536E−03	.001	.139	2.590	.010
	Growth of Rate of Cash Flow2003	3.851E−03	.002	.110	2.083	.038

a. 従属変数: Tobin's Q2004

$R^{2'}$=0.121, F=7.787, p=0.000.

Table10　Regression analysis for JUS-Style companies

係数[a]

モデル		非標準化係数		標準化係数	t	有意確率
		B	標準誤差	ベータ		
1	(定数)	.720	.491		1.468	.144
	03Number of Director Size	−1.510E−02	.010	−.132	−1.452	.149
	03Ratio of OUTSIDE Director	.129	.525	.020	.246	.806
	03Number of Auditor Size	−1.018E−02	.089	−.009	−.114	.909
	03Ratio of OUTSIDE AUDITOR	.530	.233	.171	2.273	.024
	LN(Total Asstes2003)	6.874E−03	.076	.014	.091	.928
	LN(Return2003)	7.636E−02	.069	.159	1.111	.268
	Fixed Assets Ratio2003	−2.112E−03	.001	−.210	−2.728	.007
	Growth Rate of Return2003	7.787E−04	.002	.029	.369	.713
	Growth of Rate of Cash Flow2003	7.601E−03	.003	.193	2.434	.016

a. 従属変数: Tobin's Q2004

$R^{2'}$=0.116, F=3.516, p=0.000.

Table 11　ANOVA analysis for 3 groups

多重比較

従属変数: Tobin's Q2004

LSD

(I) 03Corporate Governance STYLE: JAN=1, JUS=2, US =3.	(J) 03Corporate Governance STYLE: JAN=1, JUS=2, US =3	平均値の差 (I-J)	標準誤差	有意確率	95% 信頼区間	
					下限	上限
1	2	-.1331*	4.500E-02	.003	-.2214	-4.47E-02
	3	-.4858*	.1227	.000	-.7266	-.2450
2	1	.1331*	4.500E-02	.003	4.474E-02	.2214
	3	-.3527*	.1255	.005	-.5991	-.1063
3	1	.4858*	.1227	.000	.2450	.7266
	2	.3527*	.1255	.005	.1063	.5991

*. 平均の差は .05 で有意