Do Japanese CEOs Matter*?

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Abstract

In a country where individualism is not valued, we ask whether the CEO (shacho) of a Japanese corporation affects corporate behavior. To answer this question, we construct a shacho-firm matched panel data set in the period 1990 through 2002 of *all* listed 1,419 Japanese manufacturing firms and their 3,520 shachos. We utilize three distinct empirical methodologies to detect a shacho effect. First, we attempt to separate a firm-fixed effect from a shacho-fixed effect. We are unable to disentangle a shacho-fixed effect. Second, we examine whether the year of or the year after a shacho change was a turning point in the firm's 1990 to 2002 history of performance and policies. Our answer is generally no, *even when the shacho change is non-routine*. Third, we employ a classic event study to check whether the market thinks a shacho change is value-relevant. We do find a significant positive price response on the day a shacho change is announced, *especially when the shacho change is non-routine*. We are thus left to conclude that shachos do not matter in the Japanese corporation in this decade of a stagnant economy, though the market remains optimistic.

DO JAPANESE CEOs MATTER?

Individualism is not valued in Japan. This is aptly summarized in the Japanese proverb: "The nail that sticks up gets hammered down". There are two schools of thought which explain why this is so. The Nihonjinron school maintains that the Japanese are essentially different, and one of the important differences is their rejection of individualism in favor of psychological interdependency.[1] The other view is diametrically opposite, which postulates that the Japanese are essentially similar and, if there are any differences, it can be explained by history, economics, and social structure. Schooler (1998) notes that there was as much individualism in 16th century Japan as there was in 16th century Europe. All that changed during the Tokugawa shogunate (1603-1867), when Japan closed itself. Group loyalty almost became a religious principle. This does not appear to be so anymore. Schooler (1998) refers to a number of empirical studies which show that individualism in Japan is on the rise. Her hypothesis is that as societies become more complex, and as individuals have to take more decisions, individualism increases. Japan is no exception.

The purpose of this paper is to shed some light on this debate using methodologies and data from financial economics. Specifically, we ask whether in a country where individualism is not valued, the top manager (shacho) of a Japanese corporation affects corporate behavior. Our null hypothesis is that as the Japanese individual is so much less important than the Japanese group he belongs to, it should not matter who the individual shacho (CEO) is in a Japanese corporation. Our alternate hypothesis is that since the asset bubble burst in the early 1990s in Japan, and since the Japanese economy has stagnated ever since, corporate governance in Japan is in great flux.[2] Maybe Japanese shachos make a difference in these modern times.

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[1] See Befu (1993) for a review.

[2] The Japanese Prime Minister's Commission on Japan's Goals in the 21st Century produced a report in 2000 called "The Frontier Within." That report proclaims the dawning of "the century of the individual" and proposes "a momentous about-face: entrusting the revitalization of society and the economy to individual initiative and ambition". (taken from Robert Fulford's column in *The National Post*, June 19, 2001).

The question – does it matter who the CEO of a firm is – is a question that has great relevance for all firms, not just Japanese firms. The leadership school (see Child (1972)) argues that CEOs do matter, whereas the constraints school holds that there are so many constraints on CEO actions that CEOs have limited power (see Hannan and Freeman (1989)). The classic empirical paper addressing this issue is Lieberson and O'Connor (1972), who, using a sample of 167 major U.S. public companies from 1946 to 1965, provide evidence in favor of both the schools. In a recent paper, Wasserman, Nohria and Anand (2001), change the question from do CEOs matter to when do CEOs matter, and find that they do matter in some industries where opportunities are scarce or where CEOs have slack resources.

A rich literature exists in financial economics exploring the link between firm performance and CEO turnover (the early papers were by Coughlan and Schmidt (1985), Warner, Watts and Wruck (1988)), and Weisbach (1988)). Brickley (2003) provides a survey of this literature. The consensus is that bad performance leads to the CEO being fired. It is also true in Japan, as documented in Kaplan (1994, 1997), Kang and Shivdasani (1995), and Abe (1997). This seems to be true even in emerging markets (see Gibson (2002)). Curiously, though there is a big literature documenting that bad performance leads to CEO dismissals, few papers in financial economics explore the question of whether, once a CEO has been fired, the new CEO makes a difference. Important exceptions are Murphy and Zimmerman (1993) for U.S. firms, and Kang and Shivdasani (1995) for Japanese firms. Kang and Shivdasani (1995), in a sample of 270 non-financial Japanese firms, find that performance does improve after non-routine turnover and outside succession.

Our first contribution to the literature is our choice of sample. We construct a shacho-firm matched panel data set in the period 1990 through 2002 of *all* listed 1,419 Japanese manufacturing firms and their 3,520 shachos. To the best of our knowledge, empirical research on CEO turnover with such a comprehensive sample has not been done in any country. As most papers on CEO turnovers rely on data from the Fortune list or Moody's list of covered companies, our data set is not plagued by the selection bias of these sources.

Our second contribution to the literature is our employment of three distinct empirical methodologies to answer the question whether Japanese shachos matter. The first methodology is taken from Bertrand and Schoar (2003), who tried to disentangle a firm-fixed effect from a manager-fixed effect for a sample of about 600 U.S. firms and 500 individual managers. They do find a manager fixed-effect, and they conclude that some U.S. managers have style. We do not find a shacho-fixed effect in Japan. In other words, we cannot attribute to shachos changes in firm performance (as measured by return on assets, return on equity, operating profit margin, sales growth or stock return), changes in investment policy (as measured by capital expenditure or advertising), and changes in financial policy (as measured by leverage, interest coverage, cash holdings, or dividend payout). This is not surprising because, as many others have remarked, there is virtually no external market for Japanese CEOs. Shachos are nearly all home-grown, and they remain in the same company all their professional lives.

A minor contribution of our paper is to formally record the lack of external mobility of the Japanese shacho which, to the best of our knowledge, has not been so comprehensively recorded before. We document that of the 3,520 shachos we track across all the 1,419 listed Japanese manufacturing firms, a mere 20 (0.57%) were once shachos of another firm at a previous time.[3] Of these 20 who moved horizontally, 8 were movements within the same group of companies (i.e., within the same keiretsu). We conclude that horizontal mobility is virtually non-existent even in recent times. There is, however, some vertical mobility. 180 (5.1%) of the 3,520 shachos were once non-shacho top officers in another firm at another time. Of these 180 who moved vertically, 85, however, were movements within the keiretsu.

Our second method to examine whether Japanese shachos matter is to analyze whether the year of or the year after a shacho change was a turning point in the firm's recent history of performance and policies. We use the same metrics as before to measure firm performance, investment policy, and financial policy. We find that the year of or the year after a shacho change to be like a median year in the firm's history in terms of these metrics, *even when the shacho change was non-routine*.

[3] Contrast this with the findings of Betrand and Schoar (2003), who find that 117 CEOs moved in their sample of 600 U.S. firms.

A minor contribution of our paper here is a methodological contribution. Previous papers – see for example Kang and Shivdasani (1995) – have tested whether new CEOs make a difference by checking whether performance, either raw or industry or market adjusted, improve after the new CEO joins. We believe this is a weak test. The reason we believe this is a weak test is because, if firm performance (either raw or industry or market adjusted) is mean-reverting, an improvement will be observed if the new CEO joins when the firm is in a slump. This should not be attributed to the CEO. The real test is whether the change in a firm the year the new CEO joined is markedly better than the change in the same firm in a year there was no CEO change. We find for nearly all our cases – firm performance, investment policies, financial policies – that the CEO change year was close to a median year. Assuming that it takes one year for the new shacho's policies to start taking effect, we repeat the above exercise for the year after the shacho change. This year also turns out to be close to a median year for the firm. Our results, or rather our non-results, do not change *even when the shacho change is non-routine*.

Our third method to examine whether Japanese shachos matter is to find out what shareholders think. Assuming that the announcement of a shacho change will be reflected in traded asset prices, if shareholders think that a shacho change is for the better, there should be an abnormal positive stock return at the announcement date. We do find a significant positive price response on the day a shacho change is announced, *especially when the shacho change is non-routine*. This is the same result Kang and Shivdasani (1996) obtained in their study of stock price effects of 432 Japanese firms in the 1985 to 1990 period.

Results from these three distinct empirical methodologies lead us to the following conclusion: shachos do not seem to matter in the Japanese corporation even in recent times, though the market is optimistic. This leads us to the third and last contribution of our paper. It is the partial debunking of the myth that after the asset price bubble of the early 1990s, and after more than a decade of a stagnant economy, Japanese companies were starting to become more like U.S. companies. Though there is much heated normative debate on convergence of corporate governance in academic and policy circles, especially after the OECD (1999) report on the principles of corporate governance – see Dore (2003) for a

spirited argument against convergence – the number of papers rigorously examining what is happening in corporate governance in Japanese corporations in this decade of stagnation is far fewer. We are one such paper. Though our paper is positive – we document that Japanese CEOs do not matter even today – we conclude with a normative question for future research. If CEOs do not have much power, as in Japan, what should be the focus of corporate governance?

Our paper is organized as follows. Section I discusses our data, and gives some revealing descriptive statistics on all 1,419 listed Japanese manufacturing firms and their 3,520 shachos. We formally document the horizontal mobility and the vertical mobility of Japanese shachos in Section II. In Section III we try to disentangle a shacho-fixed effect from the firm-effect, and are unsuccessful. Section IV analyzes whether the year of or the year after a shacho change was a turning point in the firm's 1990 to 2002 history of performance and policies. In Section V we employ a classic event study to check whether the market thinks a shacho change is value-relevant. Section VI concludes.

I. Data

Our data comes from a variety of sources. We first obtain a list of all 1,419 manufacturing firms whose stocks traded in Tokyo Stock Exchange (TSE) and other regional stock exchanges (such as Osaka Securities Exchange and Nagoya Stock Exchange) in the period 1990 to 2002. This list comes from *Toyo Keizai Yakuin Shikiho*, which regularly publishes information on directors of Japanese listed and non-listed companies. As this list includes firms whose stocks traded in TSE and other regional stock exchanges at any point during 1990 to 2002, our list is free of survivorship bias.

We next obtain financial data on these 1,419 manufacturing firms for each of the fiscal years their stock traded from 1987 to 1990. Note that we start recording financial data three years before 1990. This is because in some of our tests we need to use lagged variables with lags as long as three years. The financial data on listed firms come from *Nikkei Economic Electronic Databank System* (NEEDS).

We calculate the following measures of firm performance every year for each firm from 1987 to 2002: return on assets, return on equity, operating profit margin, sales growth, and stock return. We

measure the following dimensions of firm investment policy every year for each firm from 1987 to 2002: capital expenditure, and advertising. We measure the following dimensions of firm financial policy every year for each firm from 1987 to 2002: leverage, interest coverage, cash holdings, and dividend payout. Some other firm-specific measures that we use sometimes as control variables, and we therefore calculate every year, are Tobin's Q and cash flow. The precise definitions of these variables are given in the Data Appendix. We also record the following measures of firm size every year for each firm from 1990 to 2002: sales, book value of assets, and market value of equity (which is number of shares outstanding multiplied by the price per share at the beginning of the year.)

We next obtain the industries the 1,419 manufacturing firms in our sample belonged to in the year 1990. If the firm entered our panel data set after 1990, we record its industry in its first year of entry into our panel data. Industry is important in studies of top management changes because, as many papers document (see, for example, Parrino (1997)), there is a strong industry effect. Industry is particularly important in our study because, as Wasserman, Nohria and Anand (2001) demonstrated for the U.S., CEOs may matter in some industries, and they may not matter in other industries. The classification into industries is by the 2-digit SIC Code given in the Nikkei Industry Code, which is obtained from *Nikkei Economic Electronic Databank System* (NEEDS).

We next obtain some characteristics of corporate governance about the 1,419 manufacturing firms in our sample for the year 1990. If the firm entered our panel data set after 1990, we record our observations in its first year of entry. We first note whether the firm belongs to a keiretsu or not. The reason we do this is because a keiretsu is a Japanese business group whose members are bound together by a nexus of implicit and explicit contracts (see Nakatani (1984)). Though there is much debate on how interlinked member firms in a keiretsu are these days, there is no denying the fact that corporate governance is still different inside the keiretsus.[4] Data on keiretsu membership comes from *Keiretsu no Kenkyu*.

[4] The $4 billion bailout of Mitsubishi Motors by the Mitsubishi group in May 2004 is a recent example.

Second, we note whether the firm has a main bank or not. A firm has a main bank if its largest bank is also one of its top 5 shareholders. Aoki (1990) argues that the primary objective of Japanese firms is to satisfy their banks, and the main bank, which holds stock in the firm, is also the main monitor. Sheard (1989) argues that the disciplining role of the main bank in Japan is a substitute for the disciplining role played by takeovers (which are virtually non-existent in Japan). Kang and Shivdasani (1999) find that Japanese firms not affiliated with main banks have substitute monitoring mechanisms. Data on ownership were obtained from *Nikkei Economic Electronic Databank System* (NEEDS) and from *Toyo Keizai Okabunushi (Major Large Shareholders) Data*.

Third, we record the number of inside and outside directors in each of the boards of the 1,419 Japanese firms. An inside director is defined as a person who has always been an employee of the firm. As a robustness check, we later expand the definition of an inside director to a person to also include person(s) from the main bank and person(s) from other firms in the same keiretsu. Weisbach (1988) documented the important disciplining role played by outside directors in the U.S. In Japan, Kaplan and Minton (1994) and Morck and Nakamura (1999) documented the same thing. Data on number of directors and their type (inside or outside) come from *Toyo Keizai Yakuin Shikiho*.

Fourth, we obtain some data on ownership. We obtain the proportion of shares owned by the ten largest outside shareholders, where an outside shareholder is a non-management shareholder. As there was never an equivalent of the 1933 U.S. Glass-Steagall Act in Japan, financial institutions are big holders of Japanese stock, and therefore, as shown by Shleifer and Vishny (1986), have an incentive to monitor. Kang and Shivdasani (1997) find that the probability of management turnover in Japan increases if outside blockholding increases. We also obtain the proportion of shares owned by managers. Morck, Shleifer and Vishny (1998) documented a non-linear relationship between managerial ownership and firm value. Very low managerial ownership implied little alignment of managerial interests with firm interests, whereas very high managerial ownership implied entrenchment. Data on ownership were obtained from *Nikkei Economic Electronic Databank System* (NEEDS) and from *Toyo Keizai Okabunushi (Major Large Shareholders) Data*.

Table 1 gives some descriptive statistics of all manufacturing listed firms in Japan in the period 1990 through 2002. Notice first the dismal statistics in this period of stagnancy for the average Japanese manufacturing firm – sales grew at a paltry 1.9% per year, the return on assets was a disappointing 3.5% per year, and stock returns fell by 6.4% per year. Big firms did better than smaller firms in terms of sales growth and stock returns, though even their stock returns were negative.

Notice next in Table 1 the differences in firm performance when we classify by different measures of corporate governance. Most listed manufacturing firms (about 86%) belonged to a keiretsu. They were slightly larger in average than firms that did not belong to a keiretsu, and had much more debt. The most interesting fact to note is that these keiretsu-firms significantly underperformed non-keiretsu firms in terms of sales growth or return on assets, though their stock returns were similar. This implies that it did not help belonging to a keiretsu. Most firms (about 66%) did not have a main bank. These firms had higher sales growth and higher return on assets, but similar stock returns than firms that did have a main bank. So it is difficult to conclude whether the main bank was a good monitor or not. Most firms (about 91%) had boards which were dominated by insiders. These firms had lower sales growth and lower return on assets, but similar stock returns, than firms that had boards where there were more outsiders than insiders. So it is difficult to conclude whether outside directors were good monitors. This result does not change if we expand the definition of inside directors to include persons from the main bank or persons from the same keiretsu. There was not much difference in firm performance between the average firm and the firm where the top ten outside shareholders held less than 50% of the shares, leading us to conclude that perhaps outside block shareholders did not do much monitoring. The effect of managerial ownership, however, was unambiguous. Firms in which managers owned more than 30% of the shares significantly outperformed the other firms in all dimensions (sales growth, return on assets, and stock returns).

The third thing to note in Table 1 is how important the industry-effect is in this decade of stagnation in Japan. The null hypothesis that all industries suffered equally in the period 1990 to 2002 is soundly rejected. In terms of stock returns, ceramics, shipbuilding and transportation were the hardest-hit

industries, whereas pharmaceuticals did relatively well. As a matter of fact, the pharmaceutical industry was the only industry that did not suffer a negative mean stock return. It had the highest sales growth and return on assets among all industries.

To summarize, Table 1 tells us that though the performance of Japanese manufacturing firms was disappointing in the 1990-2002 period, there was tremendous variation in performance. From a corporate governance point of view, it seems that non-keiretsu firms and firms where managers owned a significant amount of shares, suffered much less. Industry, however, seems to be the biggest determinant of firm performance in this period.

We identify 3,520 shachos in these 1,419 firms in the years 1990 to 2002. This allows us to construct a shacho-firm matched panel data set in the period 1990 through 2002 of *all* listed 1,419 manufacturing firms and their 3,520 shachos. Incidentally, of the 1,419 manufacturing firms in our panel, 1,383 exist as of the end of 2002. We obtain some characteristics of these 3,520 shachos. First, we obtain their age when they became a shacho. Second, we find out how long they were a shacho if they are no longer a shacho (2,137 of the 3,520 shachos), or how long they have been a shacho if they are still a shacho (1,383 of the 3,520 shachos). Third, and the most important, we track the career paths of all 3,520 shachos in some detail.

This is what we record for the career path of each shacho. When new shachos join, we identify whether they were promoted from within the company, or whether they came from the main bank, or whether they came from the same keiretsu, or whether they came from outside. If they did come from outside, we record whether they were shachos in another firm, or non-shacho top officers in another firm, and was this another firm a member of the same keiretsu. When shachos leave, we record where they go. They could stay on the board as chairman, they could stay on the board but not as chairman, or they could leave the board. If they stay on the board, we define that to be a routine turnover. If not, we define that to be a non-routine turnover. Kang and Shivdasani (1995) used the same classification. As a robustness check, we later restrict the definition of a routine turnover to a move from shacho to chairman, and non-

routine turnover to be everything else. The personal data on all 3,520 shachos are from *Toyo Keizai Yakuin Shikiho*.

Table 2 gives some descriptive statistics of all 3,520 Japanese shachos in the period 1990 through 2002. Notice first that the median age when a manager becomes a shacho is 62, and the median tenure is 6 years. This is consistent with the finding of Kaplan (1994), who found the median shacho age to be 66, and the median tenure to be 5.3 in the period 1980-1988. Of the 2,137 shachos who leave their position in the period 1990 to 2002, we find that 66% stay on in the board (our primary definition of a routine turnover), and the rest 34% leave the board (our primary definition of a non-routine turnover). Kang and Shivdasani (1995), in their sample of 270 Japanese manufacturing firms in the period 1985 to 1990, had documented routine turnovers to be 63.8%. Our findings are remarkably similar, suggesting that, at least in terms of CEO turnover, there has not been much change in corporate governance in Japan in this decade of stagnation. A new finding of ours is the size effect. Though there is 34% non-routine turnover overall, there is much more non-routine turnover in smaller firms (47% of all turnovers) than in larger firms (22% of all turnovers). Though 23% of shacho replacements are done with outsiders, outsiders are more likely to be brought in for smaller firms (32% of all replacements) than for larger firms (11 % of all replacements). When we include persons from the main bank as insiders and when we include persons from another firm in the same keiretsu as insiders, we find that 14% of shacho replacements are done with outsiders. Outsiders are still more likely to be brought in for smaller firms (21% of all replacements) than for larger firms (7 % of all replacements).

Notice next in Table 2 the differences when we classify Japanese firms by different measures of corporate governance. Firms that belong to keiretsus have similar non-routine shacho turnovers as firms that do not belong to keiretsus, though the former are more likely to replace their shachos with outsiders. However, if we exclude persons from main bank or a keiretsu-related firm from the set of outsiders, there is no difference. Firms that have main banks have lower non-routine shacho turnovers as firms that do not have main banks, and the former are also less likely to replace their shachos with outsiders. This suggests that main banks may not have been the tough disciplinarians of shachos in recent times, as they

had been shown to be in the 1980s by Kaplan (1994) and King and Shivdasani (1995). The most striking feature of Table 2 is the role of outside directors in disciplining shachos. Firms that have more outside directors than inside directors in their board have much higher non-routine shacho turnovers as firms that do not have this feature, and the former are also much more likely to replace their shachos with outsiders. The role of outside blockholders in disciplining shachos is weaker. Firms that have their top ten outside shareholders owning less than 50% of the firm's shares have slightly lower non-routine shacho turnovers than the average firm, and the former are also less likely to replace their shachos with outsiders. Finally, firms in which managerial ownership is above 30%, have less non-routine turnover and less replacement by outsiders than the average firm. This might suggest some managerial entrenchment.

The third thing to note in Table 2 is how important the industry-effect even for shacho turnover. Non-routine shacho turnover as a fraction of all turnovers ranged from a low of 13.5% in the pharmaceutical industry to a high of 48.3% in the petroleum industry. The pharmaceutical industry also seemed to have the lowest replacement of shachos by outsiders (7.7%), whereas the petroleum industry had the highest replacement of shachos by outsiders (37.9%).

To summarize, Table 2 tells us that non-routine turnovers in shacho positions and replacement of shachos by outsiders in the 1990-2002 period was about the same as had been documented by other researchers in the eighties. There was, however, large variation within firms. From a corporate governance point of view, it seems that the toughest disciplinarian of shachos were outside directors followed by outside block shareholders, whereas main banks did not seem to do much disciplining. The industry effect continued to remain strong.

There are three other pieces of data that we collect. The first is the stock returns of the Nikkei Composite Stock Price Index from 1987 to 2002. We use this for market-adjusting the firm raw stock return. We also use this for computing the abnormal stock return for the firm the day a shacho change is announced. The second is the industry stock returns from 1987 to 2002. We use this for industry-adjusting the firm raw stock return. Data on the market index and the industry index are obtained from *Nikkei Economic Electronic Databank System* (NEEDS). The third piece of data that we collect are the

announcement dates of shacho changes. We use this in an event study. These dates are obtained by electronic search of articles in *Nikkei Telecom*.

II. Mobility of Japanese shachos

Horizontal Mobility

Of the 3,520 shachos that exist in our panel data set, we find out whether they are or were shachos simultaneously in another firm. There were 6 such shachos. We also find out how many were shachos before in another firm. There were 20 such shachos. This implies that only 26 of 3,520 shachos – a miniscule 0.77% -- had horizontal mobility.

Table 3 gives some descriptive statistics of these 26 horizontally mobile shachos. Of the 20 who moved horizontally from another firm, 8 were movements within the same keiretsu. Of the 6 who hold or held simultaneous shacho positions in two firms, 2 were shachos simultaneously of two firms in the same keiretsu. There seems to be more horizontal mobility in larger firms.

Notice next in Table 3 the differences in horizontal mobility when we classify Japanese firms by different measures of corporate governance. The striking thing to note is that there exists horizontal mobility for shachos only in firms that belong to keiretsus. Shachos in firms that have main banks have about the same mobility as shachos in firms that do not have main banks. Shachos in firms that have more outside directors than inside directors in their board have much higher horizontal shacho mobility than shachos in firms that do not have this feature. This result does not change if we expand the definition of inside directors to include persons from the main bank or persons from the same keiretsu. Shachos in firms that have their top ten outside shareholders owning less than 50% of the firm's shares have about the same horizontal mobility than shachos in the average firm. Finally, shachos in firms in which managerial ownership is above 30% have no horizontal mobility. This may be because the shacho is entrenched, and he has no reason to move.

The third thing to note in Table 3 is how important the industry-effect is for horizontal shacho mobility. About half the number of industries we track have had no horizontal movement of shachos in the period 1990 to 2002. The ceramic industry exhibited the highest level of horizontal shacho mobility.

Vertical Mobility

We choose the top 5 officers of a company based on each director's rank in the *Toyo Keizai Yakuin* Database. *Toyo Keizai Yakuin Shikiho* lists directors for each company starting from the highest officer. Based on this order, *Toyo Keizai Yakuin* Database gives rank code to each director of a company each year. Our top 5 officers are those having a rank code of 1 through 5.

Of the 3,520 shachos that exist in our panel data set, we find out whether they are or were non-shacho top officers in another firm before. There were 180 such individuals. We also find out whether they are or were non-shacho top officers simultaneously in another firm. There were 103 such shachos. This implies that only 283 of 3,520 shachos (8%) had vertical mobility.

Table 4 gives some descriptive statistics of these 283 vertically mobile shachos. Of the 180 who moved vertically from another firm, 85 were movements within the same keiretsu. Of the 103 who hold or held simultaneous positions in two firms, 36 had simultaneous positions in two firms in the same keiretsu. There seems to be more vertical mobility in larger firms.

Notice next in Table 4 the differences in vertical mobility when we classify Japanese firms by different measures of corporate governance. There exists far more vertical mobility within keiretsu firms than within non-keiretsu firms. This makes sense because, as mobility is restricted because of lifetime employment in most Japanese firms, it is easier to move intra-keiretsu than inter-keiretsu. Shachos in firms that have main banks have somewhat less vertical mobility than shachos in firms that do not have main banks. Shachos in firms that have more outside directors than inside directors in their board have much higher vertical mobility than shachos in firms that do not have this feature. This result does not change if we expand the definition of inside directors to include persons from the main bank or persons

from the same keiretsu. Shachos in firms that have their top ten outside shareholders owning less than 50% of the firm's shares have less vertical mobility than shachos in the average firm. Finally, shachos in firms in which managerial ownership is above 30% have little vertical mobility.

The third thing to note in Table 4 is how important the industry-effect is even for vertical shacho mobility. The ceramic industry exhibited the highest level of vertical shacho mobility, whereas the steel industry had the lowest level of vertical mobility in 1990-2002.

To summarize, Tables 3 and 4 tell us that only about 9% of Japanese shachos were shachos in another firm or a top officer in another firm. Of these 9%, nearly all moved up vertically; horizontal movement was rare. Further, of these 9%, a significant fraction came from within the same keiretsu. Many other commentators have remarked on the lack of mobility amongst Japanese top managers (see, for example, Dore (2003)), but, to the best of our knowledge, this table is the first comprehensive documentation of this phenomenon.

III. Is there a shacho-fixed effect?

Bertrand and Schoar (2003) ask a similar question as we do: "How much do individual managers matter for firm behavior and economic performance?" Their method of answering this question is very intuitive; in a manager-firm matched panel data set, they try to disentangle a manager-fixed effect from a firm-fixed effect, and are successful in doing so for a sample of about 600 U.S. firms and 500 individual managers. This implies that a significant variation in firm performance and firm policies can be explained by the presence of individual managers. So managers in the U.S. have style.

The first empirical methodology we employ to detect whether Japanese shachos matter is the Bertrand and Schoar (2003) methodology. Like them, we restrict our sample to managers who have moved at least once in their career. This is because, if managers spend all their professional lives in one firm, a manager fixed-effect cannot be disentangled from a firm-fixed effect. As we observed in Table 3, only 26 out of 3,520 Japanese shachos have been horizontally mobile in the period 1990 to 2002. These 26 were associated with 51 Japanese firms. This is our first shacho-firm matched panel data set.

We ask whether shachos affect firm performance, investment policies, and financial policies of the firm. We use five measures of firm performance – return on assets, return on equity, operating profit margin, sales growth and stock return. The first three are accounting numbers, which have the disadvantages of being manipulable (though operating profit margin, being a hard number, is more difficult to manipulate). The fourth number measures performance in the product market, and it has the disadvantage of ignoring costs. The fifth number is forward looking, and is reliable only if the stock market is informationally efficient. We measure two dimensions of firm investment policies – capital expenditure and advertising expenses. We measure four dimensions of firm financial policies – leverage, interest coverage, cash holdings, and dividend payout. Detailed descriptions of these 11 measures are given in the Data Appendix.

The dependent variables in our 11 panel regressions are, respectively, each of the 5 measures of firm performance, the 2 dimensions of firm investment policies, and the 4 dimensions of firm financial policies. The independent variables in the panel regressions are the firm-fixed effects, the year-fixed effects, and some panel specific control variables. Following Bertrand and Schoar (2003), we use the following control variables. For return on assets and return on equity, we use the lagged log of book value of assets to control for size. For operating profit margin and sales growth, we use the lagged log of net sales to control for size. For stock return, we do not use any extra control variables. For capital expenditure, we use cash flow (control for liquidity), lagged Tobin's Q (control for growth opportunities), and the lagged log of book value of assets (control for size). For advertising, we use cash flow (control for liquidity), return on assets (control for profitability), and the lagged log of book value of assets (control for size). For all the financial policy variables, we use cash flow (control for liquidity), return on assets (control for profitability), and the lagged log of book value of assets (control for size).

We run the 11 panel regressions first without shacho-fixed effects, and then with shacho fixed effects. The idea is to check how much additional explanatory power is added when we include shacho fixed effects. The statistic used is the F-statistic which, if high, will make us reject the null hypothesis that shacho-fixed effects are zero.

The results from our 11 panel regressions are given in Table 5. As can be seen, in only 1 of the 11 panel regressions – cash holdings – can we reject the null hypothesis that there is no shacho-fixed effect. In other words, shachos had no significant personal influence in the 1990 to 2002 period on a Japanese firm's performance, however you measure performance. Shachos also had no significant personal influence in the 1990 to 2002 period on a Japanese firm's capital expenditure, advertising, leverage, interest coverage, or dividend payout policies. The only dimension that shachos seemed to have personally influenced – p-value of 5% or less – in the 1990 to 2002 period was the level of cash holdings. They seemed to have increased it.

It could be argued that Bertrand and Schoar (2003) could disentangle a manager fixed-effect from a firm-fixed effect because they had a large sample of 600 U.S. firms and 500 individual managers, whereas our tests do not have power because we only have a small sample of 51 Japanese firms and 26 shachos. That is true, but it misses the point. As our sample is comprehensive, the reason we have a small sample size is because we have a small population size. In other words, as shachos are nearly all home-grown, and they remain in the same Japanese company all their professional lives, it is impossible to disentangle a shacho-fixed effect from a firm-fixed effect in Japan.

We make an attempt to increase our sample size by including not just the 26 horizontally mobile shachos from Table 3, but also the 283 vertically mobile shachos from Table 4. These 309 mobile shachos are associated with 367 Japanese firms. So our expanded panel has 367 firms. The advantage of using this expanded panel is simply the increase in power brought about by the increase in sample size. The disadvantage of using this expanded panel is that we assume that a non-shacho top officer could make a difference in his firm, an assumption that may not be reasonable considering that we just showed that even shachos make no difference.

We re-ran all our 11 panel regressions using this expanded sample. We do not report the results here because they are quite similar to the results in Table 5. Japanese managers, whether shachos or non-top officer shachos, had no significant (p-value of 5% or less) personal influence in the 1990 to 2002 period on a Japanese firm's performance, however you measure performance. They also had no

significant personal influence in the 1990 to 2002 period on a Japanese firm's capital expenditure, cash holdings or dividend payout policies. The only dimensions that shachos seemed to have personally influenced – p-value of 5% or less – in the 1990 to 2002 period was advertising, leverage, and interest coverage. They increased advertising, decreased leverage, and increased interest coverage.

The fact that there is virtually no external market for Japanese shachos does not necessarily imply that Japanese shachos make no difference to their firms. It could be that the internal market for Japanese shachos is very efficient, and firms choose the best person from within for the job. This person may make a difference. To explore this issue, we now go on to our second empirical methodology.

IV. Is the year the shacho changed different from other years?

We introduce a new empirical methodology in this section. It is based on the idea that change occurs each year in a firm's life. If these changes are major, we term that year a turning point. If a year in which the shacho changed is also a turning point year, we conclude that the shacho was associated with the major change, and he mattered. Note that the shacho may not have caused the major change at all but, by giving him the benefit of the doubt, we are biasing our test towards finding that a shacho mattered.

The above idea is implemented in the following way. We consider firms that had at least one shacho change. There are 1,139 such firms. For these firms, we first define a shacho change year in the period, 1990 to 2002. A shacho is assumed to have changed in year t if the shacho in year t is different from the shacho in year t-1. This implies that a shacho change year could be any year in the period, 1991 to 2002.

Second, we define "change". For each of our 1,139 Japanese manufacturing firms that had at least one shacho change in the period 1991 through 2002, for each year in the period 1991 through 2002, for each of the 11 firm-year-specific metrics (5 measures of firm performance, 2 dimensions of firm investment policies, and 4 dimensions of firm financial policies), we compute a measure of change called delta. Delta for 1991 through 1999 is the difference between the average of the next three years and the average of the previous three years for this firm-specific metric. Delta for 2000 (2001) is the difference

between the average of the next two years (next one year) and the average of the previous three years for this firm-specific metric. The reason for this change in definition of delta is that we do not want to lose the 2000 and 2001 years, which, given the fact that our data extends only to 2002, we would have lost had we kept the former definition. Delta for 2002 is not defined. The reason we use change in a time-series average to compute delta is because we want to smooth out fluctuations. Some fluctuations, like taking an "earnings bath," severely distort one year results.

Third, we define "turning point". For each firm, for each of the 11 metrics, we sort by delta all years in the period 1991 to 2001. Each year is given a percentile rank: the year gets a rank of 100 if delta is the highest there, and a rank of 0 if delta is the lowest there. As there are 11 years in the period 1991 to 2001, our ranks are 0, 10, 20, …100. A year is a turning point in a firm's history if it has a rank of 80 or higher or a rank of 20 or lower. This simply implies that a turning point year is in the top three years or in the bottom three years of the firm's recent 11-year history. Note that this is quite a generous definition of a turning point year.

Fourth, and finally, we compute whether a year in which the shacho changed was a turning point year. We do it in the following way. For each firm, for each of the 11 metrics, we note the rank of the year there was a shacho change. We average these ranks across the firms for each of the 11 metrics.

We redo steps one through four above for non-routine shacho changes, where the primary definition of a non-routine shacho change is when the shacho leaves the board. There are 497 firms in our panel in which there was at least one non-routine shacho change. Later, for robustness, we expand our definition of "non-routine shacho change" to shachos who remain on the board, but not as chairman. There are 643 firms in our panel in which there was at least one non-routine shacho change, if we use this expanded definition of non-routine shacho change. Our results do not change.

Table 6 reports the mean percentile rank of the year there was a shacho change for each of the 11 metrics. The top numbers are for all shacho changes, routine or non-routine. The bottom numbers in parenthesis are only for non-routine shacho changes. The top row in Table 6 shows that, for the average firm, none of the mean percentile ranks is 80 or higher. None are either 20 or below. The mean

percentile rank is not significant even for non-routine shacho turnovers, though the numbers here are, as expected, higher than the former numbers. This means that the year a shacho changed was not a turning point year, even if the shacho change was non-routine. A small point to note in the top row in Table 6 is that the shacho seems to matter most when it comes to stock returns, but even here it is not significant.

The striking thing to note in Table 6 is that there seems to be no effect of size or corporate governance. Shachos do not matter in large firms and they do not matter in small firms. This disputes the popular view that individuals make a difference in smaller organizations because there are less constraints on them. Shachos do not matter in firms that exist in keiretsus and they do not matter in independent firms, which implies that constraints on shachos in independent firms are perhaps as large as in firms that belong to keiretsus. Shachos do not matter in firms that have main banks and they do not matter in firms that do not have main banks, which suggests that main banks are not the culprits that tie the hands of shachos. Shachos do not matter in firms whose boards have more outside directors than inside directors and they do not matter in firms whose boards are insider-dominated, suggesting that outside directors are not the ones constraining shachos. This result does not change if we expand the definition of inside directors to include persons from the main bank or persons from the same keiretsu. Shachos do not matter in firms where the top ten outside shareholders own less than 50% of the firm's shares and they do not matter in firms where they own more than or equal to 50% of the firm's shares, implying that outside blockholders are not the constraints on the shachos behavior. Finally, shachos do not matter whether management owns more than 30% of a firm's shares or management does not.

The third thing to note in Table 6 is that there is an industry effect. In pharmaceuticals, return on assets, operating profit margins, stock returns and leverage increase, though not significantly, after a non-routine shacho turnover. In petroleum, cash holdings increase, though not significantly, after a non-routine turnover.

It could be argued that it takes time for a shacho to make a difference. He cannot implement his plan immediately when he joins. He has to get the approval of the board and, in Japan, he has to get the approval of many employee committees. We assume that it takes him about a year to implement his

policies for the firm. So we redo our entire analysis by asking whether the year after the year there was a shacho change was a turning point year.

Table 7 reports the mean percentile rank of the year after the year there was a shacho change for each of the 11 metrics. Note that as we are ranking the delta of the year after the year there was a shacho change, we lose a year. As there are 10 years in the period 1992 to 2001, our ranks are 0, 11.1, 22.22,…100. This time a year is a turning point in a firm's history if it has a rank of 77.77 or higher or a rank of 22.22 or lower.

As in Table 6, the top numbers in Table 7 are for all shacho changes, routine or non-routine, and the bottom numbers in parenthesis are only for non-routine shacho changes. The results in Table 7 are similar to the results in Table 6. A shacho change year, even if it is a non-routine shacho change year, is not a turning point in the firm's history. This is true even after categorizing by size or some corporate governance characteristics. There are some exceptions when we categorize by industry. In pharmaceuticals, after a non-routine shacho change, return on equity and cash holdings significantly increases. In shipbuilding, after a non-routine shacho change, stock return and cash holdings significantly increases.

To summarize, Tables 6 and 7 tell us that, on average, shachos do not seem to have any significant effect on firm performance, firm investment policies, or firm financial policies. If the shacho change is non-routine, his effect is larger, but it is still not significant. There are some exceptions in some industries for some variables for non-routine shacho changes.

It could be debated that, though there is some merit to comparing the performance and policies of a firm across time, there is merit also of comparing the performance and policies of a firm to its industry benchmark. We do this. For each year in the period 1991 through 2002, for each firm, for each of the 11 firm-year-specific metrics (5 measures of firm performance, 2 dimensions of firm investment policies, and 4 dimensions of firm financial policies), we compute a firm-year-specific industry-adjusted metric. This is simply the metric for the firm minus the median metric for the industry for that year. Using this industry-adjusted metric, we redo steps one through four for all firms in which there was at least one

shacho change, and then again for all firms in which there was at least one non-routine shacho change. We reproduce Tables 6 and 7 with these industry-adjusted metrics.

We do not show the results here because they are quite similar to Tables 6 and 7. The year a shacho joins or the year after a shacho joins is not a turning point in the firm's history when all firm-specific variables are industry-adjusted. If the shacho change is non-routine, his effect is larger than if the change was routine, and his effect is larger than the case where the numbers were not industry-adjusted, but it is still not significant. There are some exceptions in some industries for some variables for non-routine shacho changes: advertising significantly increases in the paper and pulp industry, whereas return on equity significantly increases in the pharmaceutical industry.

V. Do shareholders view a shacho change as significant?

Our third method to examine whether Japanese shachos matter is to find out whether shareholders think shachos matter. To gauge whether shareholders view shachos to be important, financial economics tells us to document how shareholders trade when it is announced that there would be a shacho change. A classic methodology to analyze this is an event study.[5] Assuming that the announcement of a shacho change will be reflected in traded asset prices, if shareholders think that a shacho change is important, there should be an abnormal stock return at the announcement date. Further, if the shareholders believe that the shacho change is for the better, especially if it is a non-routine shacho change, the abnormal stock return should be positive.

There were 2,137 shacho changes in all listed Japanese manufacturing firms in the period 1990 to 2002. We could identify news announcements of departures for all of them. However, as 167 of these 2,137 shacho changes were for newly listed firms, we did not have enough stock market data to compute their abnormal returns. So our event study is for 1,970 shacho change announcements. These news

[5] Ball and Brown (1968), and Fama et al. (1969) pioneered the classic event study methodology and, except, for minor modifications (see Salinger (1992)), their methodology continues to be used. Campbell et al. (1997) provide an excellent exposition of the event-study methodology in Chapter 4 of their book.

announcements and the dates of the news announcements were obtained by electronic search of newspaper articles on *Nikkei Telecom*.

Table 8 presents the abnormal return in the event window. The event window starts a day before the announcement was seen in the press (this takes care of the fact that media coverage is mostly a day late) and ends two days after the announcement was seen in the press (this gives enough time for the news to be "digested")[6]. The abnormal return is defined as the firm's stock return in the event window minus the "normal" value of the firm's stock return in the event window. The "normal" value is computed using the market model. The Nikkei Composite is assumed to be the market. The parameter estimates of the market model are computed in the period, -270 to -90, where day 0 is the announcement date.

Table 8 tells us that shareholders react positively to news about shacho departures. The abnormal return at the announcement is significantly positive for all shacho departures. It is much more positive if the shacho departure is non-routine, or if the shacho is being replaced by an outsider. It is interesting to note that shareholders in smaller firms are more overjoyed than shareholders in larger firms when they hear about shacho departures, especially about non-routine shacho departures and replacement by outsiders. This result, however, could simply be an artifact of scale.

A further categorization by corporate governance characteristics reveals some interesting features in Table 8. Shacho departures, especially non-routine shacho departures and replacement by outsiders, is regarded as good news only for keiretsu firms. Shareholders seem indifferent to shacho departures in non-keiretsu firms. Shacho departures, especially non-routine shacho departures and replacement by outsiders, is regarded as more good news for firms that have main banks than for firms that do not have main banks. Shacho departures is regarded as better good news for firms that have more outside directors than inside directors in their board than for firms that do not have this feature. This result does not change if we expand the definition of inside directors to include persons from the main bank or persons from the same keiretsu. Shacho departures, especially non-routine shacho departures and replacement by

[6] We ran all our event studies using two other methodologies – the market-adjusted returns and comparison-period returns – as well as another event window, -1 to +1. Our results do not change.

outsiders, is regarded as equally good news for firms that have their top ten outside shareholders owning less than 50% of the firm's shares and firms that are average. Finally, shareholders seem indifferent to shacho departures, non-routine or otherwise, for firms in which managerial ownership is above 30%. This last finding could be an artifact of the small sample size in this category.

The last thing to note in Table 8 is how important the industry-effect is even for shareholder reaction to news about shacho departures. It seems that shareholders in the textiles and chemical industries are particularly delighted when they hear about non-routine shacho departures in the period 1990-2002.

To summarize, Table 8 tells us that shareholders expect shacho changes, on an average, to be value improving. This is especially true if the shacho change is non-routine and/or there is a replacement by an outsider. Further, this is especially true for firms within a keiretsu and/or for firms that are affiliated with main banks.

VI. Conclusion

This paper asks whether the CEO (shacho) of a Japanese corporation affects corporate behavior. Our question is motivated by the fact that a CEO cannot make much difference in a culture where individualism is not valued, and Japan probably happens to have one such culture. Or does it? There seems to growing evidence, much of it anecdotal, that individualism is on the rise in Japan. When it comes to corporate governance, there is no denying the fact that in this decade of economic stagnancy, there has been much talk of change. Maybe shachos make a difference in this recent period of economic stagnation.

To answer whether shachos matter, we construct a shacho-firm matched panel data set in the period 1990 through 2002 of *all* listed 1,419 Japanese manufacturing firms and their 3,520 shachos. We utilize three distinct empirical methodologies to detect a shacho effect. First, as did Bertrand and Schoar (2003) for the U.S., we attempt to separate a firm-fixed effect from a manager-fixed effect. We are unable to disentangle a shacho-fixed effect. So we cannot attribute to individual shachos changes in firm

performance or firm policies in the period 1990 to 2002. However, as we formally document, nearly all shachos remain in the same Japanese company all their professional lives; so it is impossible to disentangle a shacho-fixed effect from a firm-fixed effect in Japan. This leads us to our second empirical methodology. We examine whether the year of or the year after a shacho change was a turning point in the firm's 1990 to 2002 history of performance and policies. Our answer is generally no, *even when the shacho change is non-routine*. Our third empirical methodology is to check whether the market thinks a shacho change is value-relevant. We do find a significant positive price response on the day a shacho change is announced, *especially when the shacho change is non-routine.*

We are thus left to conclude that shachos do not matter in the Japanese corporation in this decade of a stagnant economy, though the market remains optimistic.

Data Appendix

The financial data on listed firms come from *Nikkei Economic Electronic Databank System* (NEEDS). The specific financial variables used in the analysis are defined as follows:

Firm performance variables

- Return on assets of firm i in year t is defined as earnings before interest and taxes of firm i in year t divided by book value of assets of firm i in year t-1
- Return on equity of firm i in year t is defined as net income of firm i in year t divided by book value of equity of firm i in year t-1
- Operating profit margin of firm i in year t is defined as operating profit of firm i in year t divided by net sales of firm i in year t
- Sales growth of firm i in year t is defined as change in net sales of firm i in year t divided by net sales of firm i in year t-1
- Stock return of firm i in year t is defined as change in stock price of firm i in year t divided by stock price of firm i in year t-1. All stock prices are gross dividends.

Investment policy variables

- Capital expenditure of firm i in year t is defined as capital expenditures over net property, plant and equipment of firm i in year t divided by net property, plant and equipment of firm i in year t-1
- Advertising of firm i in year t is defined as advertising expenditures of firm i in year t divided by book value of assets of firm i in year t-1

Financial policy variables

- Leverage of firm i in year t is defined as the sum of short-term debt and long-term debt of firm i in year t divided by the sum of short-term debt, long-term debt and book value of equity of firm i in year t
- Interest coverage of firm i in year t is defined as earnings before interest, taxes and depreciation of firm i in year t divided by interest expenses of firm i in year t

- Cash holdings of firm i in year t is defined as the sum of cash and short-term investments of firm i in year t divided by net property, plant and equipment of firm i in year t-1
- Dividend payout of firm i in year t is defined as the sum of common dividends and preferred dividends of firm i in year t divided by earnings before interest, taxes and depreciation of firm i in year t

Other variables

- Tobin's Q of firm i in year t is defined as (book value of assets $_{i,t}$ +(market value of equity $_{i,t}$ - (book value of equity $_{i,t}$ + deferred taxes $_{i,t}$)))/(book value of assets $_{i,t}$)
- Cash flow of firm i in year t is defined as the sum of net income and depreciation of firm i in year t

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Table 1: Descriptive statistics of Japanese manufacturing firms, 1990-2002

			Number of firms (% of All)	Firm Size[8]			Financial Statistics[8]				
				Mean sales (Med. sales)	Mean BV of assets (Med. BV of assets)	Mean MV of equity (Med. MV of equity)	Mean leverage (Med. leverage)	Mean sales growth (Med. sales growth)	Mean ROA (Med. ROA)	Mean cap. exp. (Med. cap. exp.)	Mean stock returns (Med. stock returns)
All			1419	128089.0	142273.2	61254.6	0.463	0.019	0.035	0.108	-0.064
			(100.0%)	(36157.2)	(41864.4)	(18677.3)	(0.453)	(0.008)	(0.031)	(0.118)	(-0.073)
Size[1]		Largest quartile	355	414757.8	462135.8	195162.8	0.486	0.026	0.033	0.111	-0.041
			(25.0%)	(197768.0)	(236903.8)	(97147.4)	(0.492)	(0.012)	(0.029)	(0.120)	(-0.046)
		Smallest quartile	355	11847.3***	12181.71***	5599.3***	0.468	0.013**	0.033	0.086	-0.077***
			(25.0%)	(-10909.2)***	(11585)***	(4943.077)***	(0.460)	(0.003)***	(0.031)	(0.116)***	(-0.089)***
Corporate governance	Keiretsu[2]	Yes, keiretsu	1220	132028.4	147202.4	61099.5	0.472	0.016	0.033	0.106	-0.064
			(86.0%)	(37489.8)	(43026.2)	(18199.0)	(0.464)	(0.007)	(0.030)	(0.117)	(-0.075)
		No, keiretsu	199	103938	112054.2	62205.4	0.378***	0.034**	0.049***	0.120	-0.062
			(14.0%)	(26594.5)***	(36211.23)**	(21279.8)	(0.351)***	(0.016)**	(0.043)***	(0.119)	(-0.055)
	Main bank[3]	Yes, main bank	477	91291.8	100546.1	36784.3	0.462	0.013	0.031	0.113	-0.057
			(33.6%)	(31947.6)	(37425.0)	(15415.5)	(0.453)	(0.003)	(0.028)	(0.115)	(-0.075)
		No, main bank	942	146722***	163402.6***	73645.63***	0.463	0.022***	0.037***	0.105	-0.067
			(66.4%)	(37393.9)**	(43791.58)***	(20916.77)***	(0.453)	(0.009)**	(0.033)***	(0.119)	(-0.073)
	Board structure[4]	Inside directors < Outside directors	128	56855.4	55695.6	26898.1	0.434	0.028	0.042	0.133	-0.07
			(9.0%)	(28547.0)	(31765.0)	(15167.5)	(0.407)	(0.013)	(0.034)	(0.138)	(-0.070)
		Inside directors >= Outside directors	1291	135151.7***	150857.2***	64660.98***	0.465**	0.018**	0.035	0.105	-0.063
			(91.0%)	(36454.77)***	(43333.88)***	(19370.08)***	(0.458)**	(0.007)**	(0.031)**	(0.117)***	(-0.073)
	Owners	Top ten outside shareholders[5] < 50%	959	148948.4**	172120.5***	74099.02***	0.447	0.020	0.037	0.105***	-0.059
			(67.6%)	(38532.15)*	(45367.33)***	(22607.31)***	(0.442)	(0.009)	(0.033)	(0.113)***	(-0.068)**
		Managers[6] > 30%	71	29747.3***	37726.89***	24428.91***	0.321***	0.052**	0.070***	0.028	-0.043
			(5.0%)	(18794.17)***	(25479.33)***	(14173)**	(0.291)***	(0.291)***	(0.058)***	(0.085)***	(-0.035)**
Industry[7]		Food	127	136458.9	113004.5	55456.5	0.435	0.022	0.046	0.098	-0.061
			(8.9%)	(54453.3)	(38578.6)	(21115.6)	(0.425)	(0.018)	(0.037)	(0.099)	(-0.063)
		Textiles	77	57380.5	82461.4	32610.0	0.576	-0.025	0.013	0.068	-0.100
			(5.4%)	(17958.0)	(28335.2)	(9175.6)	(0.564)	(-0.020)	(0.012)	(0.098)	(-0.110)
		Pulp/Paper	34	119740.1	169398.8	50974.7	0.581	0.019	0.026	0.072	-0.091
			(2.4%)	(49559.2)	(52874.8)	(15808.3)	(0.584)	(0.001)	(0.030)	(0.112)	(-0.078)
		Chemical	175	96296.5	125248.2	52540.5	0.444	0.019	0.040	0.125	-0.067
			(12.3%)	(36390.1)	(43742.3)	(21159.8)	(0.434)	(0.001)	(0.036)	(0.120)	(-0.068)
		Pharmaceutical	46	98646.6	162035.4	100593.0	0.334	0.061	0.075	0.098	0.007
			(3.2%)	(51727.6)	(83689.0)	(41565.1)	(0.308)	(0.045)	(0.066)	(0.102)	-0.001
		Petroleum	12	659525.3	516554.4	119807.1	0.542	0.043	0.031	0.117	-0.077
			(0.8%)	(379094.6)	(343327.3)	(87403.5)	(0.573)	(0.020)	(0.031)	(0.120)	(-0.075)
		Rubber	23	93800.2	121288.1	55889.1	0.456	0.015	0.033	0.127	-0.073
			(1.6%)	(43928.7)	(44198.5)	(12706.4)	(0.341)	(0.002)	(0.035)	(0.127)	(-0.079)
		Ceramic	64	70335.1	97437.3	43061.1	0.492	0.024	0.032	0.118	-0.106
			(4.5%)	(23712.1)	(26542.6)	(11487.1)	(0.469)	(0.010)	(0.031)	(0.117)	(-0.101)
		Steel	59	146835.2	230426.7	71943.7	0.537	-0.014	0.025	0.052	-0.099
			(4.2%)	(36157.2)	(51199.9)	(17953.0)	(0.567)	(-0.025)	(0.025)	(0.114)	(-0.109)
		Non-ferrous metal	123	78238.6	91394.5	35346.0	0.481	0.018	0.037	0.125	-0.068
			(8.7%)	(26021.5)	(31492.6)	(14497.9)	(0.501)	(0.002)	(0.032)	(0.119)	(-0.088)
		Machine	214	65840.5	90564.3	37773.6	0.447	0.024	0.033	0.065	-0.076
			(15.1%)	(23274.1)	(33444.4)	(15152.9)	(0.439)	(0.012)	(0.027)	(0.114)	(-0.092)
		Electrics	245	184968.4	200866.8	92107.8	0.432	0.026	0.032	0.142	-0.037
			(17.3%)	(41271.2)	(46240.5)	(21233.1)	(0.420)	(0.012)	(0.029)	(0.142)	(-0.049)
		Shipbuilding	7	316896.7	411535.6	60629.3	0.657	0.052	0.028	0.120	-0.106
			(0.5%)	(54137.5)	(66496.7)	(22242.0)	(0.700)	(0.052)	(0.028)	(0.116)	(-0.101)
		Automobile	71	416053.1	321276.0	150585.6	0.466	0.021	0.032	0.171	-0.036
			(5.0%)	(79071.8)	(63430.5)	(26987.3)	(0.453)	(0.015)	(0.032)	(0.170)	(-0.050)
		Transportation	21	48543.2	58317.7	25819.2	0.539	-0.014	0.010	0.090	-0.106
			(1.5%)	(37105.9)	(41082.9)	(13818.5)	(0.501)	(-0.011)	(0.021)	(0.105)	(-0.133)
		Precision machinery	37	86132.8	99359.6	47972.2	0.445	0.014	0.030	0.115	-0.047
			(2.6%)	(40972.3)	(46855.6)	(21981.1)	(0.425)	(0.010)	(0.027)	(0.147)	(-0.066)
		Other manufacturing	84	75210.8	81030.4	43535.1	0.391	0.017	0.046	0.095	-0.051
			(5.9%)	(33647.1)	(40893.3)	(18506.8)	(0.357)	(0.010)	(0.043)	(0.090)	(-0.086)
		F-statistics[10]		5.3	3.2	2.3	5.3	4.8	9.7	1.8	3.4
		(p-values)		(0.000)	(0.000)	(0.003)	(0.000)	(0.000)	(0.000)	(0.032)	(0.000)

Notes:

(1) The measure of size is total assets. Data on size were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). Firms are sorted by size into equal quartiles. The sorting and classification is made when a firm *first enters* the panel.

(2) The identification of member firms in a keiretsu follows the classification given in *Keiretsu no Kenkyu*. The classification is made when a firm *first enters* the panel.

(3) A firm has a main bank if its largest bank lender is also one of its top 5 shareholders. Data on bank ownership were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(4) An inside director is someone who has been in the firm throughout, whereas outside director is everyone else. Data on board structure were obtained from *Toyo Keizai Yakuin Shikiho*. The classification is made when a firm *first enters* the panel.

(5) An outside shareholder is a non-management shareholder. Data on ownership were obtained from *Toyo Keizai Okabunushi (Major Large Shareholders) Data* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(6) Data on management ownership were obtained from *Toyo Keizai Yakuin Shikiho* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(7) The classification into industries is by 2-digit SIC code given in the Nikkei Industry Code. The classification is made when a firm *first enters* the panel.

(8) The unit is 1 million Yen. The source and description of financial statistics of the firm is given in the Data Appendix.

(9) For size, keiretsu, main bank and board structure, *, ** and *** signify that the mean or median in this cell is significantly different from the mean or median of the cell above at the 10%, 5%, 1% level respectively. For owners, *, ** and *** signify that the mean or median in this cell is significantly different from the mean or median of the "All" cell at the 10%, 5%, 1% level respectively.

(10) The F-statistics are for the null that all means (medians) of the industry-specific variables are equal.

Table 2: Descriptive statistics of Japanese shachos, 1990-2002

			Number of firms (Percentage of All)	Number of shachos[8]	Mean age at joining (Med. age at joining)[8]	Med. Tenure as shacho[8]	Shachos who lose their position[8]				
							All	Stay on the board as chairman (Percentage of All)	Stay on the board, but not as chairman (Percentage of All)	Leave the board (Percentage of All)	Replaced by an outsider (Percentage of All)
All			1419 (100.0%)	3520	61.0 (62)	6	2137	1117 (52.3%)	291 (13.6%)	729 (34.1%)	480 (22.5%)
Size[1]		Largest quartile	355 (25.0%)	963	61.8 (63)	6	615	406 (66.0%)	72 (11.7%)	137 (22.3%)	65 (10.6%)
		Smallest quartile	355 (25.0%)	846	60.1 (61)	6	498	197 (39.6%)	67 (13.5%)	234 (47.0%)	160 (32.1%)
Corporate governance	Keiretsu[2]	Yes, keiretsu	1220 (86.0%)	3141	61.2 (62)	6	1953	1013 (51.9%)	271 (13.9%)	669 (34.3%)	456 (23.3%)
		No, keiretsu	199 (14.0%)	379	59.2 (60)	8	184	104 (56.5%)	20 (10.9%)	60 (32.6%)	24 (13.0%)
	Main bank[3]	Yes, main bank	477 (33.6%)	1208	61.2 (62)	6	736	410 (55.7%)	109 (14.8%)	217 (29.5%)	130 (17.7%)
		No, main bank	942 (66.4%)	2312	60.9 (62)	6	1401	707 (50.5%)	182 (13.0%)	512 (36.5%)	350 (25.0%)
	Board structure[4]	Inside directors < Outside directors	128 (9.0%)	797	61.3 (62)	5	525	183 (34.9%)	76 (14.5%)	266 (50.7%)	256 (48.8%)
		Inside directors >= Outside directors	1291 (91.0%)	2723	60.9 (62)	6	1612	934 (57.9%)	215 (13.3%)	463 (28.7%)	224 (13.9%)
	Owners	Top ten outside shareholders[5] < 50%	959 (67.6%)	2539	60.6 (62)	6	1482	850 (57.4%)	210 (14.2%)	422 (28.5%)	188 (12.7%)
		Managers[6] > 30%	71 (5.0%)	116	57.7 (58)	10	36	17 (47.2%)	8 (22.2%)	11 (30.6%)	4 (11.1%)
Industry[7]		Food	127 (8.9%)	296	60.5 (61)	6	175	87 (49.7%)	28 (16.0%)	60 (34.3%)	38 (21.7%)
		Textiles	77 (5.4%)	210	60.8 (62)	6	135	68 (50.4%)	20 (14.8%)	47 (34.8%)	34 (25.2%)
		Pulp/Paper	34 (2.4%)	86	62.6 (64)	6	52	24 (46.2%)	6 (11.5%)	22 (42.3%)	12 (23.1%)
		Chemical	175 (12.3%)	433	62.0 (63)	6	263	157 (59.7%)	30 (11.4%)	76 (28.9%)	49 (18.6%)
		Pharmaceutical	46 (3.2%)	99	61.0 (62)	8	52	38 (73.1%)	7 (13.5%)	7 (13.5%)	4 (7.7%)
		Petroleum	12 (0.8%)	40	61.7 (62)	5	29	10 (34.5%)	5 (17.2%)	14 (48.3%)	11 (37.9%)
		Rubber	23 (1.6%)	63	61.0 (62)	5	40	18 (45.0%)	5 (12.5%)	17 (42.5%)	8 (20.0%)
		Ceramic	64 (4.5%)	159	61.8 (63)	6	98	47 (48.0%)	14 (14.3%)	37 (37.8%)	22 (22.4%)
		Steel	59 (4.2%)	171	61.9 (62)	5	111	53 (47.7%)	20 (18.0%)	38 (34.2%)	31 (27.9%)
		Non-ferrous metal	123 (8.7%)	293	61.0 (62)	6	173	110 (63.6%)	16 (9.2%)	47 (27.2%)	42 (24.3%)
		Machine	214 (15.1%)	523	60.6 (62)	6	315	152 (48.3%)	44 (14.0%)	119 (37.8%)	72 (22.9%)
		Electrics	245 (17.3%)	602	60.3 (61)	6	363	173 (47.7%)	52 (14.3%)	138 (38.0%)	92 (25.3%)
		Shipbuilding	7 (0.5%)	20	64.6 (65)	5	13	7 (53.8%)	1 (7.7%)	5 (38.5%)	3 (23.1%)
		Automobile	71 (5.0%)	196	60.8 (62)	5	125	69 (55.2%)	13 (10.4%)	43 (34.4%)	32 (25.6%)
		Transportation	21 (1.5%)	62	62.4 (63)	6	40	22 (55.0%)	4 (10.0%)	14 (35.0%)	6 (15.0%)
		Precision machinery	37 (2.6%)	100	62.3 (62)	6	64	31 (48.4%)	12 (18.8%)	21 (32.8%)	12 (18.8%)
		Other manufacturing	84 (5.9%)	167	59.8 (61)	8	89	51 (57.3%)	14 (15.7%)	24 (27.0%)	12 (13.5%)

Notes:

(1) The measure of size is total assets. Data on size were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). Firms are sorted by size into equal quartiles. The sorting and classification is made when a firm *first enters* the panel.

(2) The identification of member firms in a keiretsu follows the classification given in *Keiretsu no Kenkyu*. The classification is made when a firm *first enters* the panel.

(3) A firm has a main bank if its largest bank lender is also one of its top 5 shareholders. Data on bank ownership were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(4) An inside director is someone who has been in the firm throughout, whereas outside director is everyone else. Data on board structure were obtained from *Toyo Keizai Yakuin Shikiho*. The classification is made when a firm *first enters* the panel.

(5) An outside shareholder is a non-management shareholder. Data on ownership were obtained from *Toyo Keizai Okabunushi (Major Large Shareholders) Data* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(6) Data on management ownership were obtained from *Toyo Keizai Yakuin Shikiho* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(7) The classification into industries is by 2-digit SIC code given in the Nikkei Industry Code. The classification is made when a firm *first enters* the panel.

(8) Data on shachos were obtained from *Toyo Keizai Yakuin Shikiho*.

Table 3: The horizontal mobility of Japanese shachos, 1990-2002

			Number of Firms	Number of shachos[8]	Number of shachos who are or were shachos of another firm *at the same time*[8]		Number of shachos who are or were shachos of another keiretsu-related firm *at the same time*[8]		Number of shachos who are or were shachos of another firm *at a previous time*[8]		Number of shachos who are or were shachos of another keiretsu-related firm *at a previous time*[8]	
			F	N	C	C/N	CG	CG/C	P	P/N	PG	PG/P
All			1419	3520	6	0.17%	2	33.33%	20	0.57%	8	40.00%
Size[1]		Largest quartile	355	963	2	0.21%	0	0.00%	10	1.04%	4	40.00%
		Smallest quartile	355	846	2	0.24%	0	0.00%	4	0.47%	2	50.00%
Corporate governance	Keiretsu[2]	Yes, keiretsu	1220	3141	6	0.19%	2	33.33%	20	0.64%	8	40.00%
		No, keiretsu	199	379	0	0.00%	0	-	0	0.00%	0	-
	Main bank[3]	Yes, main bank	477	1208	2	0.17%	0	0.00%	9	0.75%	1	11.11%
		No, main bank	942	2312	4	0.17%	2	50.00%	11	0.48%	7	63.64%
	Board structure[4]	Inside directors < Outside directors	128	797	5	0.63%	1	20.00%	12	1.51%	6	50.00%
		Inside directors >= Outside directors	1291	2723	1	0.04%	1	100.00%	8	0.29%	2	25.00%
	Owners	Top ten outside shareholders[5] < 50%	959	2539	6	0.24%	2	33.33%	15	0.59%	4	26.67%
		Managers[6] > 30%	71	116	0	0.00%	0	-	0	0.00%	0	-
Industry[7]		Food	127	296	1	0.34%	0	0.00%	3	1.01%	1	33.33%
		Textiles	77	210	0	0.00%	0	-	0	0.00%	0	-
		Pulp/Paper	34	86	0	0.00%	0	-	0	0.00%	0	-
		Chemical	175	433	1	0.23%	1	100.00%	6	1.39%	3	50.00%
		Pharmaceutical	46	99	0	0.00%	0	-	0	0.00%	0	-
		Petroleum	12	40	0	0.00%	0	-	1	2.50%	0	0.00%
		Rubber	23	63	0	0.00%	0	-	0	0.00%	0	-
		Ceramic	64	159	0	0.00%	0	-	5	3.14%	3	60.00%
		Steel	59	171	1	0.58%	1	100.00%	0	0.00%	0	-
		Non-ferrous metal	123	293	1	0.34%	0	0.00%	0	0.00%	0	-
		Machine	214	523	2	0.38%	0	0.00%	3	0.57%	0	0.00%
		Electrics	245	602	0	0.00%	0	-	1	0.17%	0	0.00%
		Shipbuilding	7	20	0	0.00%	0	-	0	0.00%	0	-
		Automobile	71	196	0	0.00%	0	-	1	0.51%	1	100.00%
		Transportation	21	62	0	0.00%	0	-	0	0.00%	0	-
		Precision machinery	37	100	0	0.00%	0	-	0	0.00%	0	-
		Other manufacturing	84	167	0	0.00%	0	-	0	0.00%	0	-

Notes:

(1) The measure of size is total assets. Data on size were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). Firms are sorted by size into equal quartiles. The sorting and classification is made when a firm *first enters* the panel.

(2) The identification of member firms in a keiretsu follows the classification given in *Keiretsu no Kenkyu*. The classification is made when a firm *first enters* the panel.

(3) A firm has a main bank if its largest bank lender is also one of its top 5 shareholders. Data on bank ownership were obtained from *Nikkei Economic Electronic Databank System* (NEEDS) *Data*. The classification is made when a firm *first enters* the panel.

(4) An inside director is someone who has been in the firm throughout, whereas outside director is everyone else. Data on board structure were obtained from *Toyo Keizai Yakuin Shikiho*. The classification is made when a firm *first enters* the panel.

(5) An outside shareholder is a non-management shareholder. Data on ownership were obtained from *Toyo Keizai Okabunushi (Major Large Shareholders) Data* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(6) Data on management ownership were obtained from *Toyo Keizai Yakuin Shikiho* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(7) The classification into industries is by 2-digit SIC code given in the Nikkei Industry Code. The classification is made when a firm *first enters* the panel.

(8) Data on shachos were obtained from *Toyo Keizai Yakuin Shikiho.*

Table 4: The vertical mobility of Japanese shachos, 1990-2002

			Number of Firms	Number of shachos[8]	Number of shachos who are or were top officers of another firm at the same time[9]		Number of shachos who are or were top officers of another keiretsu-related firm at the same time[9]		Number of shachos who are or were top officers of another firm at a previous time[9]		Number of shachos who are or were top officers of another keiretsu-related firm at a previous time[9]	
			F	N	C	C/N	CG	CG/C	P	P/N	PG	PG/P
All			1419	3520	103	2.93%	36	34.95%	180	5.11%	85	47.22%
Size[1]		Largest quartile	355	963	58	6.02%	22	37.93%	35	3.63%	16	45.71%
		Smallest quartile	355	846	14	1.65%	6	42.86%	42	4.96%	17	40.48%
Corporate governance	Keiretsu[2]	Yes, keiretsu	1220	3141	96	3.06%	36	37.50%	174	5.54%	85	48.85%
		No, keiretsu	199	379	7	1.85%	0	0.00%	6	1.58%	0	0.00%
	Main bank[3]	Yes, main bank	477	1208	42	3.48%	7	16.67%	44	3.64%	13	29.55%
		No, main bank	942	2312	61	2.64%	29	47.54%	136	5.88%	72	52.94%
	Board structure[4]	Inside directors < Outside directors	128	797	15	1.88%	7	46.67%	78	9.79%	38	48.72%
		Inside directors >= Outside	1291	2723	88	3.23%	29	32.95%	102	3.75%	47	46.08%
	Owners	Top ten outside shareholders[5] < 50%	959	2539	81	3.19%	24	29.63%	70	2.76%	25	35.71%
		Managers[6] > 30%	71	116	0	0.00%	0	-	2	1.72%	0	0.00%
Industry[7]		Food	127	296	8	2.70%	2	25.00%	12	4.05%	6	50.00%
		Textiles	77	210	11	5.24%	3	27.27%	8	3.81%	3	37.50%
		Pulp/Paper	34	86	0	0.00%	0	-	9	10.47%	3	33.33%
		Chemical	175	433	9	2.08%	5	55.56%	25	5.77%	18	72.00%
		Pharmaceutical	46	99	3	3.03%	2	66.67%	4	4.04%	3	75.00%
		Petroleum	12	40	0	0.00%	0	-	3	7.50%	1	33.33%
		Rubber	23	63	2	3.17%	2	100.00%	2	3.17%	2	100.00%
		Ceramic	64	159	10	6.29%	8	80.00%	11	6.92%	5	45.45%
		Steel	59	171	2	1.17%	0	0.00%	6	3.51%	1	16.67%
		Non-ferrous metal	123	293	11	3.75%	2	18.18%	25	8.53%	15	60.00%
		Machine	214	523	16	3.06%	5	31.25%	26	4.97%	12	46.15%
		Electrics	245	602	21	3.49%	6	28.57%	21	3.49%	10	47.62%
		Shipbuilding	7	20	1	5.00%	0	0.00%	1	5.00%	1	100.00%
		Automobile	71	196	5	2.55%	1	20.00%	9	4.59%	3	33.33%
		Transportation	21	62	0	0.00%	0	-	6	9.68%	1	16.67%
		Precision machinery	37	100	1	1.00%	0	0.00%	5	5.00%	1	20.00%
		Other manufacturing	84	167	3	1.80%	0	0.00%	7	4.19%	0	0.00%

Notes:

(1) The measure of size is total assets. Data on size were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). Firms are sorted by size into equal quartiles. The sorting and classification is made when a firm *first enters* the panel.

(2) The identification of member firms in a keiretsu follows the classification given in *Keiretsu no Kenkyu*. The classification is made when a firm *first enters* the panel.

(3) A firm has a main bank if its largest bank lender is also one of its top 5 shareholders. Data on bank ownership were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(4) An inside director is someone who has been in the firm throughout, whereas outside director is everyone else. Data on board structure were obtained from *Toyo Keizai Yakuin Shikiho*. The classification is made when a firm *first enters* the panel.

(5) An outside shareholder is a non-management shareholder. Data on ownership were obtained from *Toyo Keizai Okabunushi (Major Large Shareholders) Data* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(6) Data on management ownership were obtained from *Toyo Keizai Yakuin Shikiho* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(7) The classification into industries is by 2-digit SIC code given in the Nikkei Industry Code. The classification is made when a firm *first enters* the panel.

(8) Data on shachos were obtained from *Toyo Keizai Yakuin Shikiho*.

(9) We define a top officer as the top five members of the management team. This does not include the shacho. This data were obtained from *Toyo Keizai Yakuin Shikiho*.

Table 5: Shacho fixed-effects, 1990-2002

Panel A: Firm Performance

Dependent variable[3]	Independent variables[3]				F-Statistic of Shacho-fixed effect (p-value)	N	Adjusted R^2
	Firm-fixed effect	Year-fixed effect	Other independent variables	Shacho-fixed effect			
Return on assets $_{i,t}$	Yes	Yes	Log of book value of assets$_{i,t-1}$	No	-	571	0.448
	Yes	Yes		Yes	0.03(0.875)	571	0.462
Return on equity $_{i,t}$	Yes	Yes	Log of book value of equity $_{i,t-1}$	No	-	566	-0.011
	Yes	Yes		Yes	2.00(0.163)	566	0.002
Operating profit margin $_{i,t}$	Yes	Yes	Log of net sales $_{i,t-1}$	No	-	571	0.369
	Yes	Yes		Yes	0.03(0.859)	571	0.390
Sales growth $_{i,t}$	Yes	Yes	Log of net sales $_{i,t-1}$	No	-	571	0.930
	Yes	Yes		Yes	0.27(0.608)	571	0.930
Stock return $_{i,t}$	Yes	Yes		No	-	555	0.092
	Yes	Yes		Yes	0.57(0.452)	555	0.060

Panel B: Investment Policy

Dependent variable[3]	Independent variables[3]				F-Statistic of Shacho-fixed effect (p-value)	N	Adjusted R^2
	Firm-fixed effect	Year-fixed effect	Other independent variables	Shacho-fixed effect			
Capital expenditure $_{i,t}$	Yes	Yes	Cash flow $_{i,t}$, Tobin's Q $_{i,t-1}$, Log of book value of assets$_{t-1}$	No	-	548	0.454
	Yes	Yes		Yes	2.05(0.159)	548	0.469
Advertising $_{i,t}$	Yes	Yes	Cash flow $_{i,t}$, Return on assets $_{i,t}$, Log of book value of assets $_{i,t-1}$	No	-	510	0.855
	Yes	Yes		Yes	0.16(0.695)	510	0.863

Panel C: Financial Policy

Dependent Variable[3]	Independent Variables[3]				F-Statistic of Shacho-fixed effect (p-value)	N	Adjusted R^2
	Firm-fixed effect	Year-fixed effect	Other independent variables	Shacho-fixed effect			
Leverage $_{i,t}$	Yes	Yes	Cash flow $_{i,t}$, Return on assets $_{i,t}$, Log of book value of assets $_{i,t-1}$	No	-	363	0.792
	Yes	Yes		Yes	0.02(0.876)	363	0.796
Interest coverage $_{i,t}$	Yes	Yes	Cash flow $_{i,t}$, Return on assets $_{i,t}$, Log of book value of assets $_{i,t-1}$	No	-	513	0.613
	Yes	Yes		Yes	0.43(0.515)	513	0.600
Cash holdings $_{i,t}$	Yes	Yes	Cash flow $_{i,t}$, Return on assets $_{i,t}$, Log of book value of assets $_{i,t-1}$	No	-	560	0.379
	Yes	Yes		Yes	3.95(0.052)	560	0.453
Dividend payout $_{i,t}$	Yes	Yes	Cash flow $_{i,t}$, Return on assets $_{i,t}$, Log of book value of assets $_{i,t-1}$	No	-	428	-0.017
	Yes	Yes		Yes	2.45(0.124)	428	-0.049

Notes:

(1) The sample consists only of firms who were associated with mobile shachos. Mobile shachos are those shachos who are or were shachos in another firm at the same time or in a previous time. There are 26 such mobile shachos, as obtained from Table 3 (26 shachos, 6 + 20). They were associated with 51 firms.

(2) The table reports the F-test results from fixed effects panel regressions. For each F-test, we report the value of the F-statistic and its associated p-value.

(3) The source and description of the dependent and independent variables are given in the Data Appendix.

Table 6: The significance of the year there was a shacho change: univariate results

			Mean percentile rank of the year there was a shacho change when all years for a firm are ranked with respect to (Mean percentile rank of the year there was a non-routine shacho change when all years for a firm are ranked with respect to) [2]										
			Firm performance[3]					Investment policy[3]		Financial policy[3]			
			Return on assets	Return on equity	Op. profit	Sales growth	Stock return	Cap. exp.	Adv.	Leverage	Interest coverage	Cash hold.	Dividend payout
All			54.2 (56.4)	53.7 (55.5)	53.8 (56.2)	54.4 (55.6)	59.1 (62.7)	52.1 (51.3)	53.9 (54.0)	56.6 (58.3)	55.2 (56.0)	56.1 (59.0)	55.9 (55.4)
Size[4]		Largest quartile	55.2 (56.1)	53.9 (54.4)	55.0 (57.1)	55.2 (55.1)	59.9 (67.4)	51.7 (50.6)	53.8 (51.4)	56.6 (62.9)	55.7 (55.3)	55.6 (61.4)	55.4 (56.5)
		Smallest quartile	53.5 (55.5)	52.8 (54.4)	53.3 (56.4)	55.5 (58.4)	58.0 (59.2)	53.2 (52.0)	54.0 (54.1)	56.9 (58.8)	54.5 (55.5)	55.4 (58.7)	58.3 (56.1)
Corporate governance	Keiretsu[5]	Yes, keiretsu	54.0 (56.2)	53.6 (55.4)	53.7 (55.9)	54.3 (55.4)	59.2 (62.5)	52.0 (51.6)	53.6 (54.7)	56.3 (57.6)	55.1 (55.8)	56.2 (59.5)	56.2 (55.0)
		No, keiretsu	55.9 (58.2)	53.6 (56.5)	55.4 (59.7)	55.5 (57.7)	58.1 (64.4)	53.2 (47.6)	56.6 (45.8)	61.7 (70.3)	56.4 (59.1)	55.1 (53.1)	52.9 (59.3)
	Main bank[6]	Yes, main bank	54.5 (56.6)	54.3 (56.1)	53.7 (55.3)	55.5 (55.4)	58.3 (62.2)	51.3 (49.7)	54.5 (54.5)	56.0 (56.1)	55.7 (57.2)	55.0 (55.7)	57.8 (55.1)
		No, main bank	54.0 (56.3)	53.4 (55.3)	53.9 (56.6)	54.3 (55.6)	59.6 (62.9)	52.6 (52.0)	53.5 (53.8)	57.0 (59.3)	54.9 (55.5)	56.7 (60.4)	54.9 (55.4)
	Board structure[7]	Inside directors < Outside directors	53.5 (55.3)	53.4 (56.3)	53.4 (54.3)	53.1 (54.2)	59.7 (63.0)	50.5 (50.6)	54.5 (55.4)	57.9 (59.7)	53.2 (54.1)	57.2 (58.8)	57.9 (55.6)
		Inside directors >= Outside directors	54.4 (57.1)	53.7 (55.1)	53.9 (57.3)	54.8 (56.3)	59.0 (62.5)	52.7 (51.7)	53.7 (53.3)	56.2 (57.5)	55.8 (57.1)	55.8 (59.1)	55.3 (55.2)
	Owners	Top ten outside shareholders[8] < 50%	54.0 (56.3)	53.6 (56.1)	53.5 (56.1)	54.2 (56.3)	59.2 (61.9)	52.0 (50.5)	53.1 (53.0)	56.1 (58.9)	55.3 (56.6)	55.7 (58.4)	55.9 (54.8)
		Managers[9] > 30%	53.9 (60.0)	49.4 (56.9)	50.8 (56.0)	54.2 (55.7)	50.7 (48.9)	49.9 (44.8)	59.4 (50.4)	60.2 (57.2)	52.9 (55.7)	51.2 (45.9)	50.1 (43.9)
Industry[10]		Food	56.4 (63.7)	50.5 (56.8)	55.3 (62.6)	54.7 (55.6)	59.7 (69.5)	56.6 (57.2)	56.6 (55.8)	57.6 (59.6)	54.8 (54.4)	54.6 (58.6)	56.5 (61.4)
		Textiles	53.0 (57.7)	54.2 (57.3)	52.5 (56.6)	50.3 (57.8)	58.4 (60.9)	53.9 (61.7)	52.4 (52.4)	56.2 (56.1)	52.6 (54.2)	52.8 (59.1)	60.2 (58.7)
		Pulp/Paper	56.2 (55.8)	59.5 (54.9)	55.8 (53.9)	50.9 (55.0)	57.0 (53.7)	53.3 (50.1)	51.3 (62.1)	53.4 (46.4)	55.1 (57.6)	53.7 (55.2)	49.3 (48.4)
		Chemical	56.9 (61.1)	55.4 (61.0)	55.5 (61.1)	57.2 (55.4)	57.5 (61.8)	53.4 (53.1)	56.3 (59.2)	55.3 (57.2)	57.6 (61.8)	56.7 (57.4)	53.3 (46.7)
		Pharmaceutical	56.7 (71.4)	57.7 (72.6)	60.9 (79.2)	57.7 (54.6)	61.3 (72.9)	50.5 (60.3)	51.2 (32.3)	57.7 (70.8)	57.6 (52.8)	49.8 (66.1)	49.5 (50.3)
		Petroleum	52.5 (55.2)	53.0 (58.8)	53.4 (54.5)	45.9 (53.5)	59.8 (65.0)	46.5 (44.2)	53.3 (54.0)	56.1 (62.9)	54.0 (51.3)	59.4 (72.1)	62.2 (58.8)
		Rubber	55.0 (52.2)	53.0 (47.6)	52.0 (47.4)	60.4 (65.4)	59.5 (57.9)	47.4 (46.4)	54.8 (60.2)	48.6 (43.7)	62.3 (60.2)	53.8 (58.3)	58.9 (62.3)
		Ceramic	57.3 (54.8)	54.9 (53.7)	57.0 (54.2)	50.5 (49.7)	62.6 (62.4)	51.5 (52.3)	50.8 (51.9)	55.8 (54.7)	59.7 (60.7)	58.9 (63.3)	53.7 (54.6)
		Steel	54.1 (60.9)	52.5 (50.9)	53.6 (61.2)	56.8 (60.5)	58.2 (62.1)	48.5 (48.6)	50.1 (48.6)	60.0 (60.2)	53.3 (57.9)	56.8 (65.5)	54.8 (48.7)
		Non-ferrous metal	53.6 (59.1)	52.9 (57.0)	53.7 (59.0)	54.1 (53.8)	57.3 (68.5)	52.7 (45.5)	52.4 (50.3)	59.1 (61.9)	52.0 (54.6)	54.9 (57.3)	55.2 (51.4)
		Machine	52.6 (53.8)	53.5 (56.7)	52.7 (55.2)	56.4 (56.5)	59.7 (60.9)	51.0 (45.8)	51.3 (46.1)	56.9 (61.1)	55.3 (54.9)	56.8 (57.2)	58.2 (54.7)
		Electrics	53.2 (52.2)	53.6 (53.2)	52.6 (51.2)	52.5 (54.1)	61.0 (64.5)	51.6 (52.1)	55.0 (55.9)	56.5 (57.5)	53.6 (53.7)	55.2 (54.2)	54.2 (58.5)
		Shipbuilding	43.8 (36.9)	45.0 (33.8)	42.0 (33.8)	45.6 (52.3)	58.0 (64.6)	42.6 (20.5)	47.9 (52.3)	58.0 (81.5)	50.3 (33.8)	47.3 (55.4)	59.4 (70.0)
		Automobile	55.0 (58.5)	54.6 (57.2)	55.8 (59.2)	56.8 (55.5)	58.4 (58.7)	52.9 (58.4)	54.3 (56.9)	58.2 (61.4)	58.9 (57.7)	62.7 (65.9)	61.0 (57.3)
		Transportation	54.3 (56.0)	47.9 (49.4)	56.0 (59.5)	55.1 (68.8)	58.7 (59.3)	47.7 (50.3)	53.9 (70.4)	59.0 (62.0)	55.1 (59.7)	55.7 (55.6)	51.7 (56.8)
		Precision machinery	53.2 (58.2)	55.9 (52.4)	53.7 (58.3)	52.1 (54.3)	59.2 (54.2)	54.4 (57.2)	57.1 (65.8)	52.1 (56.3)	58.7 (55.4)	54.1 (64.3)	57.9 (52.9)
		Other manufacturing	49.6 (47.1)	53.3 (53.1)	47.7 (46.3)	53.2 (48.9)	56.8 (66.4)	52.0 (45.4)	58.6 (54.3)	55.9 (56.4)	50.0 (55.2)	60.7 (67.7)	59.5 (68.0)

Notes:

(1) The sample consists only of firms who were associated with shachos that left their positions during 1991 to 2002. There are 2,137 shachos who lose their position (as obtained from Table 2). They were associated with 1,139 firms. We redo the analysis when the sample consists only of firms who were associated with shachos that left their positions and also the board during 1991 to 2002. There are 729 such non-routine shacho changes (as obtained from Table 2). They were associated with 497 firms.

(2) For each firm, for each year, for each financial variable, we compute a delta. Delta from 1991 to 1999 is the difference between the average of the next three years and the average of the previous three years for this financial variable. Delta for 2000 (2001) is the difference between the average of the next two years (next one year) and the average of the previous three years for this firm-specific metric. We then sort by delta all years in the period 1991 to 2001 for a firm. The year is then given a percentile rank: the year gets a rank of 100 if delta is the highest here, and a rank of 0 if delta is the lowest here. The mean percentile rank of the year there was a shacho change (non-routine shacho change) is entered in each cell.

(3) The description and sources of our financial variables are given in the Data Appendix.

(4) The measure of size is total assets. Data on size were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). Firms are sorted by size into equal quartiles. The sorting and classification is made when a firm *first enters* the panel.

(5) The identification of member firms in a keiretsu follows the classification given in *Keiretsu no Kenkyu*. The classification is made when a firm *first enters* the panel.

(6) A firm has a main bank if its largest bank lender is also one of its top 5 shareholders. Data on bank ownership were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(7) An inside director is someone who has been in the firm throughout, whereas outside director is everyone else. Data on board structure were obtained from *Toyo Keizai Yakuin Shikiho*. The classification is made when a firm *first enters* the panel.

(8) An outside shareholder is a non-management shareholder. Data on ownership were obtained from *Toyo Keizai Okabunushi (Major Large Shareholders) Data* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(9) Data on management ownership were obtained from *Toyo Keizai Yakuin Shikiho* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(10) The classification into industries is by 2-digit SIC code given in the Nikkei Industry Code. The classification is made when a firm *first enters* the panel.

Table 7: The significance of the year after the year there was a shacho change: univariate results

			Mean percentile rank of the year there was a shacho change when all years for a firm are ranked with respect to (Mean percentile rank of the year there was a non-routine shacho change when all years for a firm are ranked with respect to) [2]										
			Firm performance[3]					Investment policy[3]		Financial policy[3]			
			Return on assets	Return on equity	Op. profit	Sales growth	Stock return	Cap. exp.	Adv.	Leverage	Interest coverage	Cash hold.	Dividend payout
All			56.3 (60.9)	56.3 (59.5)	56.0 (61.1)	57.8 (60.6)	59.3 (59.7)	53.6 (54.1)	54.5 (56.7)	56.1 (53.7)	57.8 (60.5)	58.1 (60.7)	56.3 (54.7)
Size[4]		Largest quartile	57.6 (62.9)	57.0 (57.7)	57.4 (63.4)	57.5 (57.5)	59.1 (60.1)	52.7 (53.9)	54.9 (56.8)	55.9 (53.4)	59.4 (64.0)	57.8 (63.0)	55.8 (50.2)
		Smallest quartile	55.1 (58.7)	55.1 (58.5)	54.7 (58.5)	59.1 (63.5)	58.9 (58.7)	55.3 (55.5)	54.7 (55.6)	55.8 (55.3)	56.3 (57.7)	58.7 (61.0)	56.2 (54.6)
Corporate governance	Keiretsu[5]	Yes, keiretsu	56.3 (60.7)	56.3 (59.2)	56.1 (60.9)	57.9 (60.0)	59.1 (59.7)	53.4 (54.2)	54.6 (57.0)	55.9 (53.6)	57.8 (60.0)	58.3 (61.2)	56.2 (54.5)
		No, keiretsu	56.1 (63.1)	57.2 (63.4)	54.6 (63.8)	57.2 (68.0)	60.7 (60.6)	55.5 (52.6)	53.6 (53.1)	58.5 (56.0)	58.2 (66.1)	56.1 (54.7)	57.7 (56.0)
	Main bank[6]	Yes, main bank	55.4 (61.0)	56.6 (60.6)	55.0 (60.7)	58.1 (58.7)	59.2 (61.4)	54.4 (52.9)	55.2 (57.9)	55.8 (52.4)	58.0 (60.4)	57.7 (59.5)	57.8 (52.5)
		No, main bank	56.8 (60.9)	56.2 (59.1)	56.5 (61.3)	57.7 (61.5)	59.3 (59.0)	53.2 (54.6)	54.1 (56.0)	56.2 (54.4)	57.7 (60.5)	58.4 (61.2)	55.6 (55.5)
	Board structure[7]	Inside directors < Outside directors	56.6 (61.3)	57.3 (60.9)	56.8 (62.2)	58.3 (62.2)	60.1 (60.2)	53.5 (55.9)	55.0 (55.5)	55.5 (54.4)	56.9 (60.0)	58.6 (60.8)	56.8 (55.4)
		Inside directors >= Outside directors	56.2 (60.7)	56.0 (58.8)	55.7 (60.5)	57.7 (59.8)	59.0 (59.5)	53.6 (53.0)	54.4 (57.3)	56.2 (53.4)	58.1 (60.7)	58.0 (60.6)	56.2 (54.3)
	Owners	Top ten outside shareholders[8] < 50%	56.1 (60.8)	56.1 (58.9)	55.8 (60.7)	57.3 (60.6)	59.0 (59.6)	53.2 (53.9)	53.8 (56.1)	55.5 (54.8)	57.9 (60.8)	57.7 (59.9)	56.1 (53.2)
		Managers[9] > 30%	56.5 (64.2)	59.2 (60.4)	52.0 (57.0)	60.1 (56.7)	53.5 (49.7)	56.7 (51.4)	59.8 (56.6)	51.7 (42.3)	57.0 (57.6)	54.8 (56.5)	52.9 (45.5)
Industry[10]		Food	56.8 (61.9)	56.9 (61.0)	55.6 (61.8)	56.0 (57.5)	59.4 (63.1)	54.1 (58.4)	60.6 (60.8)	56.0 (51.8)	57.6 (54.5)	55.1 (54.5)	53.2 (57.6)
		Textiles	55.3 (64.1)	57.5 (63.1)	54.2 (61.7)	53.6 (62.6)	61.3 (56.3)	53.8 (65.0)	52.7 (55.1)	54.9 (49.7)	54.9 (59.9)	57.2 (58.0)	64.2 (58.2)
		Pulp/Paper	60.1 (62.7)	55.5 (50.7)	60.9 (64.9)	58.0 (61.4)	60.2 (57.9)	54.2 (65.1)	55.2 (68.9)	56.2 (52.1)	60.3 (56.8)	64.1 (60.3)	57.0 (46.8)
		Chemical	58.7 (60.8)	59.4 (59.1)	57.7 (60.8)	58.3 (60.3)	56.4 (56.1)	55.5 (52.1)	55.6 (60.1)	55.2 (55.9)	60.1 (61.7)	58.0 (63.0)	53.9 (51.5)
		Pharmaceutical	54.7 (62.7)	59.2 (84.5)	58.6 (68.7)	50.8 (51.2)	51.0 (51.7)	49.3 (70.5)	55.1 (46.8)	64.5 (58.3)	59.4 (48.2)	61.4 (87.3)	53.0 (58.3)
		Petroleum	48.9 (62.1)	52.0 (57.1)	49.6 (64.7)	55.5 (63.2)	61.5 (65.6)	44.9 (50.3)	48.5 (51.8)	60.7 (62.3)	54.2 (65.9)	52.8 (54.6)	61.3 (50.6)
		Rubber	48.5 (50.8)	51.1 (44.2)	47.1 (47.2)	56.9 (58.6)	57.9 (49.5)	55.4 (60.1)	56.7 (67.9)	54.3 (47.0)	58.6 (46.1)	56.9 (62.3)	62.1 (49.6)
		Ceramic	56.2 (57.4)	57.7 (56.7)	59.1 (57.6)	55.1 (58.9)	61.0 (57.3)	55.4 (57.4)	50.6 (52.4)	52.8 (46.0)	58.9 (57.9)	59.1 (62.5)	57.7 (59.7)
		Steel	57.7 (66.3)	57.3 (60.8)	58.5 (70.2)	62.1 (64.1)	58.4 (63.4)	51.0 (58.0)	51.6 (53.3)	60.9 (56.4)	58.5 (69.2)	59.8 (66.5)	54.3 (49.0)
		Non-ferrous metal	57.2 (63.5)	55.2 (58.9)	56.9 (60.7)	61.5 (58.4)	61.4 (70.3)	49.8 (38.9)	52.2 (53.8)	60.8 (58.4)	55.4 (55.9)	56.6 (63.0)	53.1 (47.5)
		Machine	54.5 (60.7)	54.2 (59.2)	54.6 (62.1)	58.0 (60.9)	60.4 (59.2)	53.9 (50.6)	53.0 (50.0)	56.4 (56.7)	57.8 (62.4)	59.3 (62.5)	59.2 (54.5)
		Electrics	56.5 (61.0)	56.5 (61.7)	55.6 (61.3)	57.7 (63.9)	59.9 (59.9)	54.8 (56.4)	54.6 (56.4)	53.5 (50.8)	56.8 (60.7)	56.5 (55.5)	56.1 (53.9)
		Shipbuilding	44.2 (46.2)	51.9 (69.2)	46.2 (55.8)	50.0 (40.4)	65.4 (78.8)	38.0 (26.9)	48.7 (53.8)	57.7 (67.3)	50.6 (51.9)	56.4 (78.8)	58.1 (75.0)
		Automobile	59.6 (60.7)	56.8 (58.0)	59.5 (60.4)	60.3 (59.2)	57.6 (56.0)	53.6 (55.2)	55.0 (58.5)	55.9 (55.4)	63.8 (65.7)	62.7 (64.3)	59.2 (63.5)
		Transportation	50.0 (47.9)	51.5 (61.2)	50.3 (47.0)	59.9 (69.2)	62.6 (72.3)	50.9 (46.7)	57.1 (77.0)	52.7 (46.7)	53.9 (57.4)	60.8 (60.1)	57.4 (68.3)
		Precision machinery	57.6 (65.0)	57.3 (56.2)	57.2 (64.1)	58.1 (47.9)	58.6 (52.8)	55.1 (50.4)	54.8 (63.0)	47.2 (44.8)	58.3 (63.2)	50.8 (55.8)	56.0 (45.3)
		Other manufacturing	54.5 (54.1)	54.8 (60.2)	51.7 (53.3)	58.5 (63.4)	57.9 (61.2)	54.8 (47.3)	57.0 (62.1)	57.3 (58.0)	53.9 (60.0)	62.5 (64.8)	56.6 (62.8)

Notes:

(1) The sample consists only of firms who were associated with shachos that left their positions during 1991 to 2002. There are 2137 shachos who lose their position (as obtained from Table 2). They were associated with 1139 firms. We redo the analysis when the sample consists only of firms who were associated with shachos that left their positions and also the board during 1991 to 2002. There are 729 such non-routine shacho changes (as obtained from Table 2). They were associated with 497 firms.

(2) For each firm, for each year, for each financial variable, we compute a delta. Delta from 1991 to 1999 is the difference between the average of the next three years and the average of the previous three years for this financial variable. Delta for 2000 (2001) is the difference between the average of the next two years (next one year) and the average of the previous three years for this firm-specific metric. We then sort by delta all years in the period 1991 to 2000 for a firm. The year is then given a percentile rank: the year gets a rank of 100 if delta is the highest here, and a rank of 0 if delta is the lowest here. The mean percentile rank of the year there was a shacho change (non-routine shacho change) is entered in each cell.

(3) The description and sources of our financial variables are given in the Data Appendix.

(4) The measure of size is total assets. Data on size were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). Firms are sorted by size into equal quartiles. The sorting and classification is made when a firm *first enters* the panel.

(5) The identification of member firms in a keiretsu follows the classification given in *Keiretsu no Kenkyu*. The classification is made when a firm *first enters* the panel.

(6) A firm has a main bank if its largest bank lender is also its largest shareholder. Data on bank ownership were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(7) An inside director is someone who has been in the firm throughout, whereas outside director is everyone else. Data on board structure were obtained from *Toyo Keizai Yakuin Shikiho*. The classification is made when a firm *first enters* the panel.

(8) An outside shareholder is a non-management shareholder. Data on ownership were obtained from *Toyo Keizai Okabunushi (Major Large Shareholders) Data* and *Nikkei Economic Electronic Databank System* (NEEDS).The classification is made when a firm *first enters* the panel.

(9) Data on management ownership were obtained from *Toyo Keizai Yakuin Shikiho* and *Nikkei Economic Electronic Databank System* (NEEDS). The classification is made when a firm *first enters* the panel.

(10) The classification into industries is by 2-digit SIC code given in the Nikkei Industry Code. The classification is made when a firm *first enters* the panel.

Table 8: Abnormal share price change at the announcement of a Shacho departure, 1990-2002

			All [9]		Stay on as board as chairman[9]		Stay on as board, but not as chairman[9]		Leave the board[9]		Replaced by an outsider[9]	
			Mean (Med.)	N	Mean (Med.)	N	Mean (Med.)	N	Mean (Med.)	N	Mean (Med.)	N
All			0.62%*** (-0.03%)	1970	0.43%** (0.00%)	1050	0.21% (-0.07%)	269	1.08%*** (-0.07%)	651	0.90%** (-0.22%)	418
Size[2]		Largest quartile	0.27% (-0.25%)*	571	0.11% (-0.21%)	386	-0.11% (0.69%)	65	1.00% (-0.57%)***	120	1.68% (0.74%)	53
		Smallest quartile	1.40%*** (0.17%)	457	1.15%* (0.27%)	183	-0.12% (-0.68%)*	63	2.07%*** (0.33%)	211	2.15%** (0.11%)	142
Corporate governance	Keiretsu[3]	Yes, keiretsu	0.61%*** (-0.04%)	1795	0.44%** (0.01%)	950	0.07% (-0.06%)	251	1.12%*** (-0.09%)	594	0.83%* (-0.25%)	397
		No, keiretsu	0.63% (0.00%)	175	0.35% (-0.05%)	100	2.25% (-1.22%)	18	0.61% (0.28%)	57	2.24% (1.86%)	21
	Main bank[4]	Yes, main bank	0.93%*** (0.12%)	705	0.45% (0.01%)	391	0.18% (-0.06%)	105	2.23%*** (0.55%)	209	2.31%** (0.55%)	120
		No, main bank	0.44%** (-0.11%)	1265	0.43%* (0.00%)	659	0.24% (-0.10%)	164	0.54% (-0.25%)	442	0.33% (-0.61%)	298
	Board structure[5]	Inside directors < Outside directors	1.05%*** (0.07%)	465	1.69%*** (0.70%)	162	-0.59% (-0.87%)	69	1.08%** (0.07%)	234	0.60% (-0.53%)	223
		Inside directors >= Outside	0.48%*** (-0.05%)	1505	0.21% (-0.06%)	888	0.49% (0.30%)	200	1.08%*** (-0.09%)	417	1.25%* (0.04%)	195
	Owners	Top ten outside shareholders[6] <	0.56%*** (0.00%)	1397	0.46%** (0.05%)	812	-0.02% (-0.10%)	196	1.06%*** (-0.11%)	389	1.50%* (0.08%)	166
		Managers[7] > 30%	-1.27% (-1.45%)	31	-1.13% (-1.45%)	13	-3.55% (-2.61%)	7	0.03% (-0.89%)	11	0.24% (-2.46%)	4
Industry[8]		Food	0.73% (-0.11%)	147	0.63% (-0.21%)	77	0.02% (0.08%)	25	1.30% (-0.09%)	45	1.08% (-0.38%)	29
		Textiles	1.02% (0.01%)	132	0.56% (0.01%)	68	-3.15% (-0.64%)	19	3.48%* (0.28%)	45	2.45% (0.78%)	32
		Pulp/Paper	0.25% (0.38%)	42	0.00% (-0.26%)	19	-2.07% (-2.80%)	6	1.36% (0.52%)	17	1.02% (1.15%)	8
		Chemical	0.98%** (-0.11%)	259	0.29% (-0.14%)	154	1.98% (0.04%)	30	2.01%** (0.27%)	75	0.54% (0.04%)	48
		Pharmaceutical	1.63%** (-0.53%)	51	-1.85% (-1.33%)	38	-3.38% (-2.36%)	6	1.09% (-0.06%)	7	-0.34% (-1.45%)	4
		Petroleum	1.73% (0.86%)	25	4.94%* (1.41%)	9	-0.02% (-0.10%)	5	-0.09% (-2.89%)	11	4.37% (0.86%)	8
		Rubber	-0.41% (-0.22%)	40	0.24% (0.26%)	18	1.63% (0.34%)	5	-1.70% (-0.27%)	17	0.32% (1.45%)	8
		Ceramic	-0.44% (-0.69%)*	91	-0.22% (-0.53%)	44	0.91% (-0.03%)	12	-1.17% (-1.03%)	35	-2.98% (-3.03%)	20
		Steel	-0.08% (0.21%)	101	-1.08% (-0.65%)	51	0.71% (1.47%)	17	1.08% (0.55%)	33	-0.96% (-0.18%)	28
		Non-ferrous metal	0.93%* (-0.06%)	164	1.52%** (0.53%)	106	-1.43% (-0.80%)	12	0.19% (-0.22%)	46	1.13% (0.72%)	38
		Machine	0.61% (0.22%)	293	0.12% (0.48%)	141	1.24% (-0.06%)	44	0.98% (0.04%)	108	2.09%** (0.28%)	65
		Electrics	0.89%** (0.20%)	318	1.08%** (0.24%)	152	-0.02% (-0.05%)	47	1.01% (0.16%)	119	0.90% (-0.27%)	74
		Shipbuilding	-0.32% (-1.48%)	10	-1.21% (-1.55%)	6	- -	0	1.02% (1.57%)	4	-1.73% (-1.55%)*	2
		Automobile	0.85% (-0.08%)	117	0.56% (-0.06%)	68	0.41% (-0.93%)	13	1.56% (0.06%)	36	1.61% (0.29%)	29
		Transportation	-0.62% (-0.05%)	36	-1.55% (-0.05%)	21	-1.36% (-0.61%)	4	1.42%* (1.23%)	11	1.87% (-0.61%)	4
		Precision machinery	1.91%** (0.39%)	62	1.16% (0.32%)	30	3.74%* (3.96%)*	12	1.95% (-0.57%)	20	0.51% (-2.37%)	11
		Other manufacturing	0.12% (-0.06%)	82	0.79% (0.24%)	48	-1.84% (-2.31%)	12	-0.28% (-0.22%)	22	-1.72% (-0.06%)	10

Notes:

(1) The event date is the date that announcement of a change in shacho is documented in the Japanese media. These were btained by electronic search of newspaper articles on Nikkei Telecom. The event window is one day before to two days after, a four-day window. The abnormal return is the cumulative raw return over this window minus the cumulative standard return over this window. The standard return is obtained from the market model. The market basket is assumed to be the Nikkei Composite. The beta parameter estimates of the market model are from -270 to -90 days before the event. Significance at the 10%, 5%, and 1% levels are denoted by *, **, and *** respectively.

(2) The measure of size is total assets. Data on size were obtained from *Nikkei Economic Electronic Databank System* (NEEDS). Firms are sorted by size into equal quartiles. The sorting and classification is made when a firm *first enters* the panel.

(3) The identification of member firms in a keiretsu follows the classification given in *Keiretsu no Kenkyu*. The classification is made when a firm *first enters* the panel.

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(8) The classification into industries is by 2-digit SIC code given in the Nikkei Industry Code. The classification is made when a firm *first enters* the panel.

(9) Data on shachos were obtained from *Toyo Keizai Yakuin Shikiho*.