

ANALYSES OF THE SHAREHOLDER BENEFIT PROGRAM IN JAPAN

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAII AT MĀNOA IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN
INTERNATIONAL MANAGEMENT

DECEMBER 2012

By

Taeko Yasutake

Dissertation Committee:

S. Ghon Rhee, Chairperson

Mitsuru Misawa

Wei Huang

Qianqiu Liu

Boochun Jung

Sang-Hyop Lee

DEDICATION

This dissertation is dedicated to my late father, Yozo Yasutake, and my mother, Sumi Yasutake. I also would like to dedicate this dissertation to my mentor in life, Dr. Daisaku Ikeda.

ACKNOWLEDGEMENTS

I gratefully acknowledge support from U.H. Professor Misawa Honjo International Fellowship, Center for International Business Education and Research, and University of Hawaii Graduate Student Organization. I thank Research Institute for Economics & Business Administration at Kobe University for hosting me as a visiting fellow to conduct this research.

ABSTRACT

The shareholder benefit is noncash gifts and services Japanese companies provide to their shareholders. We find that firms that initiate the shareholder benefit program experience a significant increase in the number of individual investors but the average number of shares held by individual investors become smaller, indicating a more diffused ownership by individual investors. Our analyses on the price movement and trade volume around the ex-benefit day show that the shareholder benefit is reflected in the stock price around the ex-benefit day, providing evidence of an existence of shareholder benefit clientele in Japan. We also find a positive relation between firm value and the number of individual investors, our proxy for the investor recognition, consistent with Merton's (1987) investor recognition hypothesis. The positive relationship, however, does not hold when firm age is 10 years or older, asset size is larger than the median value, and the percentage ownership structure by individuals exceeds 51%. Our analyses suggest a possible trade-off between the improvement in investor recognition and the deterioration in effective monitoring due to more diffused ownership by individual investors.

TABLE OF CONTENTS

Dedication	ii
Acknowledgments	iii
Abstract	iv
List of Tables	vi
List of Figure	vii
Chapter 1: Introduction	1
Chapter 2: Related literature and contribution of this study	9
Chapter 3: Description of the shareholder benefit program	13
Chapter 4: Impact of the initiation of the shareholder benefit program on ownership structure	23
Chapter 5: Price and volume movement around the ex-benefit day	35
A. Data	37
B. Summary statistics	41
C. Price drop around the Ex-dividend/benefit day	44
D. Trade volume around the Ex-dividend/benefit day	49
Chapter 5: The relation between ownership structure and firm value	54
Chapter 6: Conclusion.....	64
References.....	67
Appendix: Example of the Shareholder Benefit Program	71

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Number of firms with Shareholder Benefit Program	73
2. The value of the Shareholder benefit program and dividend payout	74
3. Determinants of the shareholder benefit program	76
4. Summary statistics for the sample firms that initiated the shareholder benefit program and the control firms	78
5. The impact of the initiation of the shareholder benefit on ownership measures over time	80
6. The impact of the shareholder benefit on ownership measures: Difference-in-difference regression analyses	83
7. The impact of the shareholder benefit on ownership measures for stocks newly listed during 1997-2008	84
8. Ex-dividend/benefit day price movement and trade volume: Summary statistics	87
9. Price movement around Ex-dividend/benefit day: Univariate Analysis	88
10. Price movement around Ex-dividend/benefit day: Multivariate Analysis	90
11. Trade volume around Ex-dividend/benefit day: Univariate Analysis	91
12. Trade volume around Ex-dividend/benefit day: Multivariate Analysis	93
13. Ownership structure and Firm value: Summary statistics	94
14. Ownership structure and firm value: Multivariate Analysis	96
15. Ownership structure and firm value: Multivariate Analysis (by asset size)	98
16. Ownership structure and firm value: Multivariate Analysis (by age)	100
17. Ownership structure and firm value: Multivariate Analysis (by percentage ownership by individuals)	102

LIST OF FIGURE

<u>Figure</u>	<u>Page</u>
1. Number of firms with Shareholder benefit program: Industry breakdown	104

CHAPTER 1: Introduction

Shareholder benefits, called *kabunushi-yutai* in Japanese, are various kinds of noncash gifts that firms provide to their shareholders in Japan. Examples of such gifts include the firm's products, discount coupons for purchases of goods and services from the firm, and retail store gift cards. The number of firms with such shareholder benefits programs has increased steadily over the past decades, from 283 firms in 1993 (or 10.9% of all listed firms in Japan) to 1,089 firms (or 28.3%) in 2008.¹ Similar shareholder benefits, called "shareholder perks," are provided by some companies in the United Kingdom and Australia, but by a limited number of companies in the United States.²

The shareholder benefit is not a form of dividend which is paid in cash out of after-tax earnings, but the process of distribution to the investors is similar to the distribution of dividend.³ An investor receives the benefit annually or semi-annually if he/she owns the stock on the holder of record day, on which he/she is also entitled to receive dividend if the stock pays dividend. The major differences between the shareholder benefit and dividend are the amount of the benefit received and its value perceived by each investor. The

¹ Daiwa Investor Relations, <http://www.daiwair.co.jp/yutai/naru/index.html>, accessed on April 2012.

² According to Hargreaves and Lansdown, 52 firms have shareholder benefit in UK as of 2011. RBS Morgans (former Stockbroker ABN-AMRO Morgans) provides information on 16 shareholder benefits in Australia. A website on US shareholder perks shows there are only 6 shareholder-perks programs in US (<http://www.shareholderperks.org/brk.htm>, accessed on April, 2012).

³ Shareholder benefit is different from dividends-in-kind. Distribution in the form of dividends-in-kind became allowed under the Companies Act of 2005, but there are certain criteria. First, if the dividend is not in cash, it has to be decided "by special resolution of a shareholders meeting" unless "Right to Demand Distribution of Monies (meaning the right to demand that the stock company deliver monies in lieu of such dividend property)" is granted to shareholders (Article 390(2)-(x), 454(4)-(i), and 459(1)-(iv)). Second, the dividends have to be "assigned in proportion to the number of the shares" (Article 454(3)-(iii)). The shareholder benefit does not satisfy either criterion.

shareholder benefit is provided if a shareholder holds a minimum number of shares to receive the benefit, which is usually the minimum trading unit set by each company.⁴ Many firms offer additional benefits when larger numbers of shares are held, but the amounts of benefits do not increase proportionally to the number of shares held.⁵ This makes the per share amount of the benefit higher for investors who hold a small number of shares and lower for investors who hold a large number of shares. The value of the shareholder benefit varies among investors due to its noncash nature as well as its tax treatment. The shareholder benefit is not considered as dividend income and it is not taxed unless reported as other income by each shareholder.⁶ For individual investors who can directly consume the gifts or use the discount coupons, shareholder benefits are almost tax-free extra gain in addition to taxable dividends income. For investors who have no use of such noncash gifts, such as institutional investors or foreign investors, the shareholder benefit has no value. Some of the shareholder benefits can be sold at the secondary market, but the transaction costs reduce

⁴ As of July 2012, there are 8 minimum trading units set by each company (1, 10, 50, 100, 200, 500, 1000, and 2000). The Japanese Stock Exchanges Conference encourages all companies listed at any exchange in Japan to change the minimum trading unit to either 100 or 1,000 by April 1st, 2014. The Conference aims to have a uniform trading unit of 100 for all stocks eventually, but no specific target date is set as of July 2012.

⁵ For example, an investor who owns 1,000 shares receives a gift card of ¥3,000 value, while an investor who owns 10,000 shares receives a gift card of ¥5,000 value.

⁶ The Income Tax Act Basic Interpretive Regulation states on Article 24(2) (Dividend Income) that the shareholder benefits such as boarding ticket provided by transportation company, admission ticket to a performance provided by production company, voucher to use company's facility such as hotels, discount coupons for the company's products, and special anniversary gift etc. are excluded from dividend income unless these benefits are treated as distribution of residual income by the company. The Income Tax Act Basic Interpretive Regulation on Article 35(1) (Miscellaneous Income) state that the economic benefit received by shareholders of a corporation based on the status as a shareholder other than dividend income prescribed in Article 24(2) fall under miscellaneous income. The shareholder benefit is supposed to be reported as miscellaneous income and taxed accordingly, but it is doubtful that shareholders report the value of the shareholder benefit as miscellaneous income and pay tax.

their values and the proceeds have to be reported and will be taxed when they are distributed.⁷⁸

Despite an alleged violation of the principle of the equal treatment of all shareholders, Japanese companies employ such individual investor-favored shareholder benefits as an important tool of investor relations activity particularly targeted at individual investors. The increase in the number of firms introducing the shareholder benefit program reflects Japanese companies' growing concern for securing stable shareholder base. Miyajima and Kuroki (2005) show that the stable shareholder ratio (the ratio of shares owned by commercial banks, insurance companies, and other non-financial firms), dropped from 45.8% in 1987 to 27.1% in 2002, mainly due to a decline in bank ownership. They also show that individuals became net purchaser of stocks while foreigners, business companies, insurance companies, and banks became net seller in Japan since the banking crisis in 1997. As a new class of influential investors, Japanese individual investors are humorously known as Mrs. Watanabe in the foreign exchange market, "a term that can conjure up images of day-trading housewives (Wall Street Journal, January 21, 2011)" who are individually small but could collectively counteract the large institutional investors. Japanese companies seem to be

⁷ There are active market for some benefits such as discount coupon for transportation fare, gift card that can be used throughout Japan, and meal coupons for dining at franchised restaurants.

⁸ The Investment Trusts Association, Japan and the Pension Fund Association refer to the treatment for the shareholder benefit in their guidelines that the shareholder benefit from the stocks held in a fund should be sold when possible and the proceeds have to be added to the fund (summarized in <http://www.daiwair.co.jp/topics-old.cgi?filename=20031114&num=199>, accessed on August 2012).

utilizing the shareholder benefit program to reach out to these individual investors and maintain close relationships with them.⁹

This is one of the first academic studies that investigate the economic impact of the shareholder benefit program in Japan. We first present a detailed description of the shareholder benefit program which is designed to attract individual investors. We then examine how the introduction of the shareholder benefit affects the shareholder base and the ownership structure. Our analyses show that the firms that employ the shareholder benefit program experience a significant increase in the number of individual investors not only in the year of the initiation but also in years after the initiation. The average number of shares held by each individual investor becomes significantly smaller over time after the introduction of the shareholder benefit, which indicates more diffused ownership by individual investors. We do not see such significant relation between the shareholder benefit program and the ownership structure among different types of investors on average, but this could be due to the varying impacts on the proportional ownership among firms and over time which might cancel out, rather than stable ownership structure for all firms over time.

Building on to these findings that the shareholder benefit program induces individual investor clientele, we further explore the valuation of the shareholder benefit. Specifically,

⁹ Tokyo Stock Exchange promoted participation of individual investors in the stock market by establishing “Award for Broadening of Individual Shareholder Base.” There were over 30 companies that received this award from 2003 to 2009.

we investigate whether the noncash, inequitable shareholder benefit affects the stock price and trading volume around the ex-shareholder benefit day which coincides with the ex-dividend day for stocks that also pay dividend. Our empirical analyses show that stocks with both cash dividend and noncash shareholder benefit experience greater price drop and larger trading volume than stocks with cash dividend only around the ex-dividend/benefit day, controlling for dividend yield and risks associated with trading. We also show that the degree of the price drop and excessive trading volume are explained by our estimates of the per share value of the shareholder benefit. The extra price movement and trading volume for stocks with shareholder benefit provide evidence of an existence of the shareholder benefit clientele for whom the noncash benefit provides value.

Shareholder benefit programs also provide a unique opportunity to test the relation between investor recognition and firm value predicted by Merton's (1987) investor recognition hypothesis and the hypothesis on the trade-off between recognition by individual investors and agency problem suggested by Amihud, Mendelson and Uno (1999). Merton's general equilibrium asset pricing model of incomplete information assumes that investors are not aware of all stocks in the market, and investors invest in a stock only if they know about the firm. According to this investor recognition hypothesis, a lack of recognition among investors leads to higher risk premium and discount on firm value because an insufficient breadth of shareholder base fails to diversify away idiosyncratic risks. It is therefore

rational for firms to engage in investor relations activities that expand the shareholder base, as risk premium will be reduced and firm value will increase.¹⁰ An improvement in investor recognition among individual investors, however, could also negatively impact the firm value. Individual investors are likely to have less incentive to bear the cost of monitoring the management because of the small ownership by each of them, while institutional investors are considered to provide effective monitoring on corporate governance. An improvement in recognition by individual investors and resulting increase in individual shareholders therefore may lead to lower firm value due to increased agency problem. Amihud et al (1999) examine the reduction in the number of minimum trading unit in Tokyo Stock Exchange and refer to this possible trade-off between improved liquidity and deterioration in effective monitoring due to the higher ownership by individual investors. Several studies on Japanese corporate governance indeed find a negative relation between the firm value and proportional ownership by individual investors relative to institutional investors (Sasaki and Yonezawa (2000), Nishizaki and Kurasawa (2003)).

¹⁰ Extant studies provide empirical support for Merton's investor recognition hypothesis. Lehavy and Sloan (2008) show that changes in investor recognition proxied by institutional ownership are positively related to contemporaneous stock returns and negatively related to future stock returns. Richardson et al (2011) demonstrate that the investor recognition is as important as financial fundamentals in explaining the stock price movement. King and Segal (2011) looks at U.S. cross-listing of Canadian firms and find that firms that are successful in improving investor recognition among US institutional investors experience permanent increase in firm value. Bodnaruk and Ostberg (2009) confirm the positive relation between the shadow cost of incomplete information and the stock return on the basis of household stockholding data in Sweden. Chang and Guo (2010) report that changes in the breadths of ownership among retail investors are negatively associated with cost of capital.

The shareholder benefit program is an ideal investor relations activity to test this possible trade-off because it improves recognition among individual investors who are not likely to be aware of all of the stocks in the market, but these individual investors have less incentives and/or ability to discipline the management. We hypothesize that an increase in the number of individual shareholders have positive impact on firm value when firms suffer from lack of recognition, but the negative impact due to less effective monitoring outweigh the benefit when the proportional ownership by individual investors relative to institutional or other large scale investors exceed certain level. Our multivariate regression analyses show that there is a positive but diminishing relation between firm value and the number of individual investors and a negative relation between firm value and proportional ownership by individual investors. As we predict, the positive relation between firm value and the number of individual investors is significant and stronger in magnitude for firms that are young (age since listing is 10 years or less) and small (asset size is smaller than the median). Our analyses also show that the relation between the number of individual investors and firm value is positive only when the proportional ownership by individuals is less than 51%, but the relationship turns negative and insignificant when the proportional ownership exceeds 51%. The importance of the relative ownership structure suggests the presence of possible trade-off between the positive investor recognition impact and negative agency impact of increasing individual investors. When the majority of a company's share is held by

individual investors, further increasing the number of individual investors does not increase the firm value as the agency problem, due to less effective monitoring, offsets the benefit from improved recognition. These findings suggest that the shareholder benefit program could have both positive and negative impact on firm value through increasing the number of individual investors, depending on the importance on improving investor recognition and on the level of effective monitoring by its investors.

The remainder of this paper is organized as follows. The next chapter discusses related literature and the contribution of this study. Chapter 3 lays out a detailed description of the shareholder benefit program. In Chapter 4 we present the analysis on the impact of an initiation of the shareholder benefit program on shareholder base and ownership structure. We examine the price and volume movement around the ex-benefit day in Chapter 5. In Chapter 6, we investigate the relation between ownership structure and firm value. The final section, Chapter 7, concludes the study.

CHAPTER 2: Related Literature and contribution of this study

In spite of the increasing popularity of the shareholder benefit program in Japan, Isagawa and Suzuki (2008, published in Japanese) is the only academic research that examines the shareholder benefit program in Japan. Their study shows that the numbers of individual investors increase and the liquidity measures improve in the year of the initiation of the shareholder benefit program. Their event study on the announcement of the initiation of the shareholder benefit program reports a significantly positive abnormal return around the announcement. By conducting regression analyses of the cumulative abnormal return on the changes in the number of individual investors and liquidity measures around the announcement, they conclude that the positive abnormal return is attributed to improvements in investor recognition and liquidity. While Isagawa and Suzuki (2008) examine the short term announcement effect of the initiation of the shareholder benefit on stock returns, our study analyzes the impact of the shareholder benefit program on the shareholder base in the longer period and the valuation of the shareholder benefit that are reflected on the stock price movement around the ex-benefit day.

In addition to examining the investor recognition hypotheses by utilizing the data on the ownership data by individual investors and non-individual investors, our paper also relates to several strands of literature. One study related to ours examines the determinants of the stock ownership by investors. Grullon, Kanatas, and Weston (2004) show that

advertisement in the product market is positively associated with the size of the shareholder base. Huberman (2001) shows that familiarity is an important determinant of stock ownership, and Barber and Odean (2008) and Lou (2011), among others, argue that attention is an important source of investment decision to individual investors. Shareholder benefit program can be considered as an advertisement of the companies, and wide media coverage on the shareholder benefit makes the stocks with shareholder benefit attention-grabbing to individual investors. Although we do not have data on actual shareholdings data of each shareholder, the steady increase in the number of individual shareholders over years after the introduction of the shareholder benefit we show in the next chapter also implies that shareholder benefit program is successful in keeping its shareholders. This finding supports the hypothesis in Cohen (2009) that loyalty, which is an emotional tie between employees and a company in her study, explains the portfolio choice by investors. Keloharju, Knupfer, and Linnainmaa (2012) show that customer relationship also influences investment decisions. By attracting existing customers who are big fans of the company with special benefit, such as novelty goods exclusive for its shareholders, shareholder benefit program have an influence in converting loyal customers into loyal shareholders. Our study add to this new literature by showing that the noncash shareholder benefit can influence investment decisions by individual investors and firms actively employ such benefit program to achieve desired size and mix of its shareholder base.

This is the first study that analyses the effect of the shareholder benefit program on stock price and trading volume around ex-dividend/benefit day in Japan. Our findings that the noncash, disproportionate, non-standard payout induces individual investor clientele and its value is reflected on the stock price around the ex-benefit day illustrate that shareholders value returns in the form of consumption goods and services as much as cash income from investment. This supports Fama and French's (2007) argument that shareholders regard stocks as consumption goods rather than pure investment goods. Our results on the trading volume are consistent with the prediction of the model of investor heterogeneity in the preference on the form of payout by Michaelly and Villa (1995).

Finance literature on investor relations activity is relatively new and scarce, and empirical evaluation of such activities should be of great interest for both academic researchers and participants in the financial market. Brennan and Tamarowski's (2000) study is the first to show a possible link between the investor relations activity and firm valuation through liquidity improvement. They focus on the asymmetric information among investors and show that an increase in the number of analysts following a firm should reduce the asymmetric information cost and improve liquidity, resulting in lower cost of capital and higher firm valuation. Bushee and Miller (2012) conduct surveys and interviews with Investor Relations (IR) professionals in the United States, and find that the primary goal of IR activities is to increase institutional investors through management access and

increasing firm-visibility. They also note that IR professionals in the United States “felt a dedicated retail investor base would be beneficial, but many felt targeting these investors was too difficult.” Our study introduces an unique investor relations activity that targets individual investors in Japan and contributes to the understanding on the role of investor relations activity in shaping the ownership structure and affecting the stock price.

CHAPTER 3: Description of the shareholder benefit program

Our data on the shareholder benefit program is obtained from *Nikkei Kaisha Jyohou* for the years from 1996 through 2003 and from Daiwa Investor Relations' *Kabunushi Yutai Guide* for the years from 2003 through 2008. Accounting and return data are obtained from the PACAP database. Ownership data are taken from Nikkei Needs database. Appendix 1 provides some examples of the shareholder benefit program in Japan.

Table 1 reports the number of firms that have the shareholder benefit program among firms covered in Industrial Companies file in the PACAP database (firms listed on Tokyo Stock Exchange Section 1 and 2) during our sample period from 1996 to 2008. The percentage of firms that have the shareholder benefit program increased from 11.5% in 1996 to over 20% in 2002 and reached 30.5% in 2008 (shown in Figure I). In the "Increase" columns, we report the number of firms that start the shareholder benefit program among firms which have been listed on TSE but did not have the shareholder benefit program in the previous year ("Initiate"), and the firms that start the benefit program among those newly list on TSE ("New Listing with SHB"). We see that nearly half of firms that introduce the shareholder benefit program are newly listing companies. This is reasonable as firms are required to meet the listing standard at the TSE that includes minimum 2,200 shareholders for the first section and 800 shareholders for the second section. The "Decrease" columns report firms that terminated the SHB among those continue to be listed on TSE ("Terminate")

and firms that are delisted from the exchange which had the SHB in the last year of listing ("Delisted with SHB"). Total of 71 firms terminated the shareholder benefit program during our sample period, of which 15 firms re-started the benefit program during the rest of the sample period, and 36 firms were eventually merged, went bankrupt, or delisted due to reorganization or by other reasons. Only remaining 20 firms continued to exist but terminated the shareholder benefit program during our sample period. This fact implies that most firms continue to have the shareholder benefit program once they initiate, even after attaining their target number of investors or achieving whatever goals they have about the shareholder benefit. Figure 1 shows the increasing number of firms with the shareholder benefit program with industry breakdown. Manufacturing and Wholesale and Retail have been the main providers of the shareholder benefit program. These companies can offer their own products with relatively low costs and could also use the shareholder benefit as a marketing strategy to promote their products. Shareholder benefit in Transportation industry is one of the oldest and the most popular benefits, where shareholders get a deep discount on purchases of transportation tickets. These discount coupons are frequently traded in ticket shops and considered to be one of the most liquid shareholder benefits.

Table 2 reports the monetary value of the shareholder benefit as well as dividend information based on the data for the year 2008. Annual dividend yield is total annual dividend per share divided by the share price at the end of the fiscal year. Dividend payout

ratio is defined as the annual dividend divided by net income. The dividend payout ratio is missing when the net income is less than or equal to 0. Annual value of shareholder benefit per share is an annual value of the benefit divided by the minimum unit of shares to receive the benefit. Annual shareholder benefit yield is an annual value of the benefit per share divided by the stock price at the end of a fiscal year. As for the cost of the shareholder benefit to a firm, the actual cost is not explicitly reported in the financial statement. Assuming that firms give the minimum value of the shareholder benefit to all domestic investors, we estimate the cost of the shareholder benefit to a firm by multiplying the value of the benefit when the minimum number of shares to receive the benefit is held by the total number of shareholders excluding foreign investors.¹¹ We report this estimate as Total (minimum) cost of shareholder benefit (in millions Japanese Yen) and the per share value by dividing the total cost by number of shares outstanding. The annual cost of the shareholder benefit per share is obtained by dividing the total minimum cost by the number of shares outstanding.

To examine the possibility that shareholder benefit is employed as a substitute or complement to cash dividend, we report the values defined above for firms that pays dividend but do not have shareholder benefit (1,286 firms), for firms that have both dividend

¹¹ According to Tokyo Stock Exchange, foreign investors include entities incorporated based on the law in foreign county, foreign government, local government and organization in foreign country, and individuals whose nationality is not Japanese regardless the residence country. We assume that the foreign investors reside outside Japan and either do not receive the benefit or do not have opportunity to redeem the benefit.

payout and shareholder benefit (605 firms), and for firms that have shareholder benefit program but do not payout dividend (63 firm). There are total of 2,188 firms in our data for the year of 2008, of which 234 firms did not have dividend payout nor shareholder benefit program. We first compare the dividend between firms that have dividend payout only and firms that have both of dividend payout and shareholder benefit. The 25th, median, and 50th percentile dividend per share are larger for stocks with the shareholder benefit, with the difference in the median is statistically significant at the 1% level (table not reported). Dividend yield, on the other hand, is slightly lower for stocks with the shareholder benefit, with the difference in mean and median are statistically significant. The dividend payout ratios are at the same level (0.66 in mean for both groups, 0.40 in the median for stocks without the shareholder benefit and 0.41 for stocks with shareholder benefit), with no statistical significance for both for means and medians.

As for the value of the shareholder benefit for stocks that have dividend payout and shareholder benefit, the mean annual benefit value per share is 343 (Japanese Yen), and this value is larger than the annual dividend per share of 216. The median value is 20, the same as the dividend per share. In terms of yield, the mean is 2.8%, which is larger than the mean dividend yield of 2.3%, and the median is 1.5%, which is less than the median dividend yield of 2.1%. For firms that do not have dividend payout but have shareholder benefit, the value is much higher. The mean shareholder benefit yield is 11.6%, and the median is 5.7%.

These values are larger than the sum of dividend yield and the shareholder benefit for stocks that have both dividend payout and shareholder benefit. The actual annual value of the shareholder received for investors who hold larger number of shares could be larger than the value reported here since some firms provide additional benefits according to the number of shares owned.¹² On the other hand, the per share value and the annual yield could be lower than the reported because the benefit is not given proportionally to the number of shares held. The figures in Table II indicate that the monetary values of shareholder benefits are comparable to, or even larger than, dividend income for investors who hold minimum number of shares to receive the shareholder benefit. The fact that most of firms that have the shareholder benefit program (605 out of 668) pays dividend as much as the amount that firms without the shareholder benefit program pay suggest that the shareholder benefit is provided in addition to the cash dividend rather than as a substitute of the cash dividend for the majority of firms. The higher shareholder benefit value for stocks without dividend (63 firms), however, does indicate the possibility that there are some firms that use the shareholder benefit as a substitute for dividend payout in cash.

The estimated total minimum cost to the firm, ¥48 million in mean and ¥16 million in the median, is much less than the total dividend payout of ¥1.96 billion in mean and ¥549 million in the median for firms with dividend payout and shareholder benefit. Whereas the

¹² Some firms also provide additional benefit based on the number of years the stock is held.

value of the shareholder benefit is comparable to dividend income for investors who hold minimum number of shares to receive the benefit, the total cost of the shareholder benefits to the firm is much smaller than the total cash dividend payout. The actual costs associated with the shareholder benefit could be lower than the value perceived by investors (market price of the goods and services they receive as shareholder benefit) when the benefits are in the form of the company's own products and services. The shareholder benefits can also reduce before-tax income and, therefore, corporate tax because the cost of the shareholder benefit is expensed as sales discount, advertising cost, or social expense etc, whereas cash dividend is paid out of after-tax income. These characteristics of the shareholder benefit suggest that firms can use the shareholder benefit as a well-designed form of payout which can save cash while providing value equivalent to cash dividend to its shareholders. In addition, firms do not need a resolution at the shareholder general meeting to initiate, terminate, or modify the shareholder benefit program unlike the case for dividends. The tax advantage compared to dividend payout, the flexibility of the form of the shareholder benefit, and the managements' discretion seem to make the shareholder benefit program a convenient tool for firms to attract a particular group of investors: individual investors.

Before we test the effectiveness of the shareholder benefit in increasing the number of individual investors, we examine the characteristics of firms that have the shareholder benefit program by estimating logit regression in which the dependent variable is a binary

variable that takes the value of one for firms with the shareholder benefit program in a given year. The independent variables include asset size, market value to book equity ratio as a proxy for relative valuation, return on asset as profitability measure, sales growth as a proxy for future profitability, cash ratio and leverage for financial position, monthly stock return and volatility for risk measures, turnover for stock liquidity, dividend payout ratio, number of individual investors, percentage ownership by individual investors, and firm age with dummy variables for industry and year effect. Asset size is deflated to the 1990 price level. Return on asset is operating income scaled by total asset. Sales growth is the change in the logarithm of sales between two years before the current year and the current year. When the sales data for two years before is not available, the sales data one year before is used. Leverage is short term and long term loans scaled by total asset. Average monthly return is the annual average of the monthly return with dividend. Volatility is the standard deviation of the daily stock return over a calendar year. Average monthly turnover is an annual average of monthly trade volume scaled by the number of shares outstanding. Age is the years since listing on the TSE. The independent variables are measured for the year before the initiation.

We predict that industry and year effect are important as there are increasing trends for the shareholder benefit program for certain industries. We also expect that firms that have a smaller number of individual shareholders are more likely to start and continue the

shareholder benefit program. We estimate three pooled logit regressions: 1. for all stocks and for all period for the likelihood of having shareholder benefit program, 2. for stocks that did not have the shareholder benefit program in the previous year to estimate the likelihood of initiation, and 3. for stocks that had the benefit program in the previous year to estimate the likelihood of continuation. Coefficients for industry dummies (total of 28 industries) are suppressed for brevity but explained in the text for important results.

Table 3 reports the result of the logit regression analyses. The first column reports the regression estimate for all the stocks for all year. It shows that stocks that have large asset size, high market-to-book equity ratio, high stock return and percentage ownership by individual investors, and low sales growth, cash ratio, and return volatility in the previous year are likely to have the shareholder benefit program in the current year. Consistent with the increasing trend in the number of firms that have the shareholder benefit program, all coefficients on the year dummies are significant except for the year 2000 after which the signs on the year dummy coefficient turn from negative to positive. Foods, Other Manufacturing, Wholesale, Retail, Land Transportation, Shipping, Air Transportation, and Service industries have positive and significant coefficients. Coefficients on other industries are non-positive and mostly significant. Once we limit our samples to stocks that did not have the shareholder benefit program in the previous year to estimate the likelihood for initiation, only coefficients on the asset size, past stock return volatility and percentage

ownership by individual investors remains significant, as shown in the second column of Table 3. The coefficient on the number of individual investors becomes negative and significant, and the coefficient on the age becomes more significant compared to the first regression for all stocks all year, implying that firms that have small individual shareholder base employ the shareholder benefit to increase the number of individual investors. The positive coefficients on the past stock return and negative coefficient on the stock return volatility suggest that firms choose the timing of the initiation when the stock return is high with low volatility. For the estimation for the probability of continuation among stocks that had the shareholder benefit program in the previous year reported in the third column of Table 3, only the negative coefficients on the stock return volatility and the number of individual investors and the positive coefficient on the percentage ownership by individual investors remain significant. Consistent with the figures in Table 2, results of all of the three regressions show that the dividend payout ratio is not related to firms' decision to have the shareholder benefit program. While the negative coefficient on the number of individual investors suggests that firms employ the shareholder benefit to attract the individual investors, the positive coefficient on the percentage ownership by individual investors indicates that firms might employ the shareholder benefit to keep the ownership by individual investors.

Becker et al (2011) shows that firms choose dividend payout policy to respond to the demand by local senior investors who have a strong preference for dividends. Our study suggests an opposite direction that firms employ the shareholder benefit program to achieve a desired level and mix of its investor base. We next examine whether the shareholder benefit program is successful in increasing the number of individual investors.

CHAPTER 4: Impact of the initiation of the shareholder benefit program on ownership structure

Wide coverage by mass media as well as personal blogging by investors on attractive shareholder benefit such as “shareholder benefit ranking” illustrate that shareholder benefit programs have captured the attention and being popular among Japanese investors. For many individual investors whose asset size and investment knowledge are constrained, information on shareholder benefits serves as one of the good resources to learn about many companies that exist in the market. Since the shareholder benefits are offered as an Investor Relations activity in many cases, firms also often provide disclosure materials to update their business with shareholders. It is naturally expected that the shareholder benefit program improves recognition of many companies that could otherwise be unknown to investors and serves as an important communication tool between the investors and the management. The reward in the form of noncash gift, however, could be valued differently among different types of investors, whereas the monetary valuation of cash dividends per share is uniform among all investors regardless the number of shares held. As mentioned earlier, the value of such noncash benefits are minimal for institutional investors and zero for investors residing in foreign countries. To examine the impact of the shareholder benefit program on stock ownership, we look at the levels as well as changes in the number of individual and non-individual investors, and proportional ownership of individual investors relative to

non-individual investors around the initiation of the benefit program. We also investigate whether the shareholder benefit program induces more diffused ownership among individual investors by looking at the average number of shares held by an individual investor.

There are 807 firms that have shareholder benefit program in any year during the period from 1996 to 2008, among which 178 firms had the shareholder benefit program from 1996, 329 firms initiated the benefit program sometime during 1997-2008 at least one year after the listing year, and 296 firms had the benefit program from the first year of new listing during the 1997-2008 period. To investigate the effect of the initiation of the shareholder benefit program on the ownership measures controlling for firm characteristics before the initiation that are likely to affect the ownership structure, we employ sample-control matching method using the firms that initiated the shareholder benefit program after 1997 and at least one year after the listing as our sample firms and firms that did not have the shareholder benefit program during the same period as our control firms. Our matching process follows Isagawa and Suzuki (2008) that analyzes the announcement effect of an initiation of the shareholder benefit program on the ownership measures. We first limit our samples to firms that initiate the shareholder benefit program during the period from 1997 to 2008, whose age (year since listing) is one year or older to have data for at least a year before the initiation, and firms that have the same number of shares outstanding and the same

number of minimum trading unit between the year before and the year of the initiation.¹³

For each sample firms, we find a control firm that never had the shareholder benefit program during our sample period, listed on the same section (1 or 2) in Tokyo Stock Exchange, has the same 33 PACAP industry code, whose annual average end-of month closing stock price is within the 20% range of that of the sample firm, and that has the closest average trading value with the sample firm over the fiscal year before the initiation. This method yields 166 firms each for our sample and control groups for the year of the initiation. Table 4 presents the summary statistics of firm characteristics for our sample firms that initiated the shareholder benefit program during 1997-2008 period and control firms that did not have the shareholder benefit program during the same period. The last column reports the t-test statistics for the difference between the means for the sample and the control firms for each variable. To remove the influence of extreme outliers, we winsorize all variables in Table 4 at the 1% and 99% levels. The number of individual investors, number of non-individual investors, percentage ownership by individual investors, average number of shares held by an individual investor and their changes (which are dependent variables in the difference-in-difference regressions) in Table 5 and 6 are also winsorized similarly. We confirm that firm characteristics such as asset size, market value, Tobin's Q, return on asset, sales growth, cash holding, leverage, average stock price, average monthly return, and

¹³ Amihud, Mendelson, and Uno (1999) report that a reduction in the minimum trading unit is associated with an increase in the number of investors and a decrease in the average number of shares held by individual investors.

turnover are not statistically different between our sample and control firms for the year before the initiation.

Panel A in Table 5 presents the number of individual investors around the year of initiation of the shareholder benefit program and changes in the log of 1 plus the number of individual investors since to the year before the initiation. The distribution of the number of investors is highly dispersed with positive skewness, from the minimum of 750 to the maximum of 74,314 investors, with 19 sample firms and 9 control firms have 30,000 individual investors or more after winsorizing for the year before the initiation. We therefore report the values for the 25%, the median, the 75% percentile and the mean value. The significance of the test statistics for the difference in the medians between the sample and the controls are also reported. The sample firms have smaller number of individual investors up to the 50th percentile compared to the control firms in the year before and the year of the initiation. The larger numbers of individual investors for the sample firms at the 75th percentile as well as the higher mean value indicate that some firms with large existing individual investors also initiate the shareholder benefit program. For these firms which are less likely to suffer from lack of investor recognition, the reason for initiating the benefit program could be to keep these individual investors rather than to attract new individual investors.

At the end of the year after the initiation (t+1) and two years after the initiation (t+2), the number of individual investors become larger for the samples at the 25th, 50th, and the 75th percentiles. The median changes in the number of individual investors in year t, t+1, and t+2 from year t-1 for the sample firms are 0.76%, 9.42%, and 12.67%, respectively, whereas the median changes are -3.19%, -4.28%, and -2.18% for the control stocks. These figures illustrate that the shareholder benefit program successfully increase the number of individual investors not only in the year of initiation but also in years after the initiation.

Panel B Table 5 reports the distribution of the number of non-individual investors. The shareholder benefit program has minimum or no value for non-individual investors, so the initiation of the benefit program could lead to a reduction in the number of non-individual investors if these non-individual investors consider the shareholder benefit program negatively. On the other hand, non-individual investors might accept the shareholder benefit program favorably if the increase in the number of individual investors leads to lower cost of capital or higher firm value due to improved investor recognition as predicted by Merton's (1987), improved liquidity, or by other reasons. The small total cost of the shareholder benefit program to the firm might also make the non-individual investors indifferent about the shareholder benefit, leaving the ownership by non-individual investors unaffected. Panel B in Table 5 shows that our sample firms experience 6.8% increases in mean and 3.5% increase in median in the number of non-individual investors in three years, in contrast to the

0.9% increase in mean and 3% decrease in median for our control firms over the same period.

The fact that the number of non-individual investors does not decrease suggests that the shareholder benefit program is not necessarily considered unfavorable by investors who do not profit from the inequitable benefit. Shareholder benefit program seems to be effective in increasing the number of individual investors without reducing the number of institutional investors.

Although the number of individual investors increases significantly for stocks that initiate the shareholder benefit program, we do not find clear impact on the percentage ownership by individual investors and non-individual investors. Panel C Table 5 shows that the mean percentage ownership slightly decreases from 37.9% in the year before the initiation to 35.4% in two years after the initiation, but the difference between the sample and the control remain insignificant throughout the three year period. The medians also exhibit no significant pattern. The mean change in the percentage ownership is negative for the sample stock in the year of the initiation while the mean change for the control stocks is 1.5% increase, but the differences between the sample and the control are not statistically different for other years in means and for all years in the medians. The non-positive changes in the median in all year indicate that 50% of firms have a lower percentage ownership by individual investors. We saw that an initiation of the shareholder investors attracts a large number of individual investors, but the stable percentage ownership between individual

investors and non-individual investors indicates that shares are transferred from existing individual investors to new individual investors rather than from non-individual investors to individual investors, leading to a diffused ownership among individual investors.

We also investigate whether the shareholder benefit program induces individual investors to hold smaller number of shares as the amount of the benefit, or return from the shareholder benefit, are higher when smaller number of shares are held. Investors might also allocate their asset over different stocks rather than investing a large amount in one company so that they can receive shareholder benefits from multiple companies. Panel D of Table 5 reports the average number of shares held by an individual investor, calculated from the total number of shares held by all individual investors divided by the number of individual investors. It shows that individual investors in our sample firms reduce the average number of shares they hold by 31.7% in mean and 12.6% in the median in three years, as opposed to the 0.2% decrease in mean and 3.2% increase in the median for the individual investors of the control firms. The increase in the number of individual investors whose average shareholding is smaller is consistent with the relatively stable ownership by individual versus non-individual investors found above. It seems that the new investors who become aware of the stock and/or are attracted by the shareholder benefit hold a small number of shares to receive the shareholder benefit.

To verify the impact of the initiation of the shareholder benefit on the ownership measures controlling for factors other than the shareholder benefit, we also conduct regression estimates for the effect of an initiation of the shareholder benefit program by our sample firms. Specifically, we create a binary variable “Sample” that takes the value of one for the sample firms and zero for the control firm. We regress the changes in the ownership measures on the “Sample” dummy together with the changes in the control variables between the year before the initiation ($t-1$) and one year after the initiation ($t+1$). The coefficient on the “Sample” dummy is our main interest, which captures the treatment effect of the initiation of the shareholder benefit program controlling for the other variables. We include the following control variables that are reported to be important in Grullon, Kanatas, and Weston (2004) in their study on the relation between advertisement and ownership: asset size, return on asset, monthly return, turnover, return volatility, and minimum trading cost.¹⁴ We replace the reciprocal stock price in Grullon et al (2004) with minimum trading cost, which is the minimum trading unit multiplied by the average stock price over a fiscal year. Smaller trading costs enable individual investors to hold shares of the company as these individual investors are more constrained with their budget for investment. All continuous variables are log-transformed, and ratios are in percentage unit. Year and industry dummies are also included. We use observations for the year before the initiation and one year after the

¹⁴ Bodnaruk and Ostberg (2009) also follow Grullon et al (2004) in their analyses of the determinants of the shareholder base. King and Segal (2009) include sales growth, leverage, and dividend yield in their regression of the number of US investors on Canadian stocks listed in the United States.

initiation for this regression so that investors have enough time to learn about the benefit program.

Table 6 reports the results of the difference-in-difference regression. The first column reports the regression of the number of individual investors. The coefficient on the Sample dummy is positive 0.216 and significant at the 1% level (t-statistics = 5.51), showing that the firms that initiate the shareholder benefit program increases the number of individual investors 21.6% more than the control firms holding other variables constant. The positive and significant coefficients on the asset size and the negative and significant coefficient on the minimum trading unit are consistent with the results in Grullon et al (2004), indicating that stocks of large company with relatively small cost to purchase its shares can attract individual investors. Turnover ratio is also positively related to the size of the shareholder base.

The second column reports the regression for the number of non-individual investors. The coefficient on the Sample dummy is positive 0.064 and statistically significant at the 1% level (t-statistics = 3.58). Consistent with the result in Table 5 Panel B, the number of non-individual investors increases slightly despite the little value of the shareholder benefit to these investors. The coefficient on the minimum trading cost is negative but only -0.032 compared to the estimate of -0.280 for the regression for the number of individual investors. This is reasonable as non-individual, large scale investors are less constrained to purchase

stocks.

The third column reports the results for the percentage ownership by individual investors. The coefficient on the Sample dummy is -0.001 and not significant (t-statistics = -0.08), consistent with the result in Table 5 Panel C. The initiation of the shareholder benefit increase the number of individual investors but the percentage ownership is not affected, suggesting the transfer of shares among individual investors. The result also shows that ownership by individual investors is negatively related to asset size and trading cost.

The last column reports the regression estimate for the average number of shares owned by an individual investor. The multivariate regression verifies the negative effect of the initiation of the shareholder benefit program on the average number of shares held by an individual investor shown in Table 5 panel D. The positive coefficient on the minimum trading cost is consistent with the result in Amihud, Mendelson, and Uno (1999) that a decrease in the minimum trading unit (which reduces the minimum trading cost) results in an increase in the number of individual investors who hold smaller number of shares.

We also examined the ownership measures for stocks that newly listed during the 1997-2008 period. Since the data for the year before the listing is not available to many firms and therefore we cannot use the difference-in-difference method for these newly listed stock, we simply compare the ownership measures for stocks that had the shareholder benefit

program from the listing year (295 firms) and firms that newly listed but did not have the shareholder benefit program throughout the 1997-2008 period (638 firms). The results are reported in Table 7. Panel A shows that the distribution of the number of individual investors are similar between the stocks with and without the shareholder benefit program in the year of listing, but the stocks with the shareholder benefit program increase the number of individual investors at the greater rate in the years after the listing. By the third year after the listing, stocks with the shareholder benefit program increases by 62.76% in the median from the year of listing, while the increase is 25.36% for the stocks without the shareholder benefit program. The number of non-individual investors, on the other hand, does not increase for the stocks with the shareholder benefit program as much as the stocks without the shareholder benefit program (the median increases in the three years are 9.35% for the stocks with the shareholder benefit and 13.32% for the stocks without the benefit program). The percentage ownership by individuals and non-individuals do now show much difference between the two types of stocks. The number of shares held by an individual investor exhibits significant difference, where the median changes for the stocks with and without the shareholder benefit in three years are -46.72% and 1.19%, respectively. These findings provide additional evidence that the shareholder benefit program attracts individual investors who hold small number of shares, and the effect is more pronounced for young, newly listed firms.

Overall, we find that shareholder benefit program is successful in achieving larger shareholder base by increasing the number of individual investors, and it promotes more diffused ownership among individual investors. Proportional ownership by individuals and non-individuals are not affected on average, but this could be due to the cases of both increase (decrease) and decrease (increase) in ownership by individual (non-individual) investors that cancel out on average. We also find that the increase in the number of individual investors and the decrease in the average number of shares held by these investors are not limited to the year of the initiation but continue in the years that follow. The increase in the number of investors who are attracted by the shareholder benefit suggests the formation of a shareholder benefit clientele. We investigate whether the presence of this shareholder benefit clientele affects the valuation of stocks with the shareholder benefit in the next chapter.

CHAPTER 5: Price and volume movement around the ex-benefit day

Our analyses on the impact of the shareholder benefit program on stock ownership show that firms that initiate the benefit program experience a significant increase in the number of individual investors and this impact is not confined to the year of initiation. Although the benefit is distinct from cash dividend distribution, the presence of the investors who consider the shareholder benefit to be valuable should affect the stock price around the ex-benefit day in the way the price of a stock with dividends changes when the stock goes ex-dividend. In this section, we investigate the valuation of the shareholder benefit program by looking at the stock price movement and trading volume around the ex-benefit day. Since most firms that have the shareholder benefit program also have cash dividend payment (as reported in Table II) with the same cum-dividend and cum-benefit day, we focus on the stocks that pay cash dividend only and stocks that have both cash dividend and the shareholder benefit and compare their price and volume movement around the ex-dividend/benefit day.

According to the classical dividend irrelevance theorem of Miller and Modigliani (1961), the price drop on ex-dividend day should equal to the amount of dividend so that the total return from dividend and capital gains to investors buying or selling the stock before or after the ex-dividend day is constant under the rational and perfect economic environment. Empirically, observed price drops around the ex-dividend day is not equal to the amount of

the dividend, and there have been extensive literature that explain the price movement and trading around the ex-dividend day. Elton and Gruber (1970) provides a model where the price drop on the ex-dividend day is determined by the tax rate on dividend and capital gains faced by the marginal investors. Michaely and Vila (1995) introduce the heterogeneity of investors in terms of their relative preferences of dividend to capital gains due to the differences in the tax rates faced by each investor. In their dynamic equilibrium model, (i) the price drop on ex-dividend day depends on the average preference for dividends to capital gains weighted by tax-adjusted risk tolerance of each investor as well as the risks involved in the trading, and (ii) the more heterogeneous the tax structure is, the larger the trade volume around the ex-dividend day because of the gains from trade among investors with different levels of preferences for dividend to capital gains. If we consider the shareholder benefit to be a form of payout in addition to cash dividend and include the shareholder benefit to the framework of Michaely and Vila (1995), the price drop after the stock goes ex-benefit should be explained by the value of the shareholder benefit and the average preference of the shareholder benefit among all investors. Although the shareholder benefit is noncash, inequitable benefit and its value faced by each agent varies, the presence of at least some investors who value the shareholder benefit should cause the stock price to drop in addition to the price drop due to dividend after the stock goes ex-dividend and ex-benefit. We also suspect that the variation in the value of shareholder benefit perceived by each investor leads

to active trading around the ex-benefit day. If the price of the stock with shareholder benefit drops by the average valuation by all investors on the ex-benefit day, those who value the shareholder benefit higher than the average, such as individual investors who hold small number of shares, would like to buy (sell) the stock with shareholder benefit on or before (after) the cum-day, while others who value the shareholder benefit lower than the average, such as institutional investors and foreign investors, prefer to sell (buy) the stock on or before (after) the cum-day. Such trading among investors with heterogeneous valuation of the shareholder benefit should make trading volume around the ex-benefit day higher than the normal trading volume during the other days (where there is no motivation for buying or selling because of the shareholder benefit). To test our hypothesis that the shareholder benefit causes excess price movement and trading volume around ex-benefit day, we first compare the price movement and trading volume for stocks with and without the shareholder benefit. We then examine whether the excessive price movement and trading volume are explained by our proxy for the value of the shareholder benefit.

A. Data

Dividend and shareholder benefit are distributed annually or semi-annually by most companies in Japan. Since fiscal year starts in April and ends in March for the majority of companies in Japan, we focus on the ex-dividend/benefit day at the end of March in this study. We exclude observations for stocks with dividend/bonus issue, stock split, rights

offering, reverse split/consolidation, or decrease/reduction of capital from our sample. Banks, securities, and insurance companies (INDID=511, 512, 513 in the PACAP database) are also excluded. There were several changes in tax rate on dividend and capital gains for individual investors, companies, and foreigners around 2003-2004. To take these changes in tax rate in consideration, and to have balanced observation before and after these changes, we focus on the 1999-2008 period, which is 5 years before the changes (until 2003) and 5 years after the changes (from 2004 to 2008).

We estimated cost of the shareholder benefit to a firm by multiplying the value of the benefit when the minimum number of shares to receive the benefit is held by the total number of shareholders excluding foreign investors, and then dividing by the number of shares outstanding.¹⁵ We denote this measure of the value of the shareholder benefit as SHB1. We also estimate the per share value faced by investors who hold the minimum number of shares by dividing the value of the benefit by the number of shares required to receive this amount of the benefit. This measure is denoted as SHB2. We consider this value as the maximum value of the shareholder benefit per share, because holding shares more than this minimum level reduces the per share value as the amount of the shareholder benefit does not increase proportionally. The two measures are rough estimates, but they capture the cross sectional variation in the value of the shareholder benefit per share.

¹⁵ The Annual shareholder benefit cost per share in Table II is the sum of the SHB1 over a fiscal year. Similarly, the Annual value of shareholder benefit per share in Table II is the sum of the SHB2 over a fiscal year.

The dividend amount that causes the price to drop on the ex-day should be the expected amount around the ex-dividend day, but the actual dividend payment is usually announced after the fiscal year-end in Japan. We therefore use the dividend paid in the previous fiscal year-end as the expected dividend for the current fiscal year-end. For the value of the shareholder benefit, we use the value of the shareholder benefit for the current year, assuming that the initiation, modification, or termination of the shareholder benefit are announced well before the ex-dividend/benefit day. The dividend yield and the shareholder benefit yield are calculated by dividing the expected dividend and the shareholder benefit value by the closing price on the cum-dividend/benefit day.

To calculate the percentage price change between the cum-dividend/benefit day and the ex-dividend/benefit day, we use closing price on each day. To control for the price movement during the ex-day for reasons other than the dividend payment and shareholder benefit, we discount the closing price on the ex-dividend day by the expected return for the ex-dividend day. The adjusted closing price is expressed as $\tilde{P}_{i,t} = \frac{P_{i,t}}{1+E[r_{i,t}]}$, where the expected return $E[r_{i,t}]$ is estimated from the market model over the 60 days period between 70 days before to 11 days before the ex-dividend day using the return on the TOPIX as the market index return.¹⁶ Similarly, we divide dividend yield and shareholder benefit yield by one plus the expected return to calculate the price drop ratios and for the regression analyses.

16 Elton, Gruber, and Blake (2005) calculate the price movement as the difference in the closing price as ((cum-day price multiplied by one plus expected return) minus raw closing price on ex-dividend day) instead of dividing the ex-dividend day price and dividend by one plus expected return. They report that the results are similar in both methods.

Michaely and Vila (1995) and other related studies include the risks associated with trading in their analyses of the price movement and trading volume around the ex-dividend/benefit day. Following these studies, we use the market risk and idiosyncratic risk (denoted by $\theta_{i,t}^M$ and $\theta_{i,t}^{IV}$ respectively) as our proxy for the risks associated with the trading. The market risk is the CAPM beta estimated from the standard market model over the 60 days period from 70 days to 11 days before the ex-dividend/benefit day. The idiosyncratic risk is defined as the log of the standard deviation of the residual from the market model divided by the standard deviation of the returns of the market index over the same estimation period.

For the excess trading volume around the ex-dividend day, we define the abnormal trading volume during 5 days before and after the ex-dividend day as the percentage difference between the total daily trading volume during the 11 days (from day -5 to day+5) and the average daily trading volume during the 60 days period from 70 days to 11 days before the ex-dividend day multiplied by 11.¹⁷ Observations that have missing value for closing price, expected dividend, and trade volume on cum- day and ex-day defined above are removed from our sample. We also winsorize the rate of return between the cum- and the ex-day, dividend yield, shareholder benefit yield, abnormal trading volume in AV(5)

¹⁷ This abnormal trading volume measure over the (-5, +5) window is used in Dhaliwal and Li (2006), Michaely and Villa (1995,1996),Graham et al. (2003), Zhang and Farrell (2008), and Chen and Chow and Shiu (2011). We also used abnormal trading volume during the (-3, +3) window and obtained qualitatively and quantitatively similar results.

definition, market risk and idiosyncratic risk at the 0.5% and 99.5% levels to remove the influence of extreme outliers. Our final data consists of 10,597 observations from 1,725 firms, of which 8,667 observations from 1,476 firms are for the stocks that paid cash dividend only, and 1,930 observations from 409 firms are for the stocks that paid cash dividend and had shareholder benefit. The estimates of the value of the shareholder benefit are available for 1,211 observations.

B. Summary statistics

Table 8 provides the summary statistics for the variables defined above for all dividend paying stocks and for sub-samples of stocks that pay dividend only and that pay dividend and have shareholder benefit for the sample period from 1999 to 2008. The mean and the median dividend yields for all stocks are 1.15% and 0.93%, respectively. The rate of return between the cum-day and ex-day adjusted for the market movement on the ex-day is -0.79% in mean and -0.7% in the median. The ratio of price drop to dividend yield (which is also the rate of return standardized by the dividend yield) is 0.614 in mean and 0.677 in the median. These values are similar to the summary statistics reported in Hatakeda (2008) for the 2001 to 2006 period for his study on the ex-dividend day price movement in Japan and slightly lower than the estimated price drop ratio of around 0.7 for the US stocks in Elton and Gruber (1970), Graham and Kumer (2006), and Becker, Ivkovic, and Weisbenner (2011).

Once we divide our samples into the stocks with dividend only and stocks with dividend and shareholder benefit, the differences in the rate of return and the price drop to dividend ratios stand out. The mean (median) dividend yield for stocks with dividend only is 1.18% (0.96%), which is slightly higher than the mean (median) dividend yield of 1.03% (0.82%) for stocks with both dividend and shareholder benefit. Despite the higher dividend yields for stocks with dividend only, the mean rate of return for these stocks is -0.65%, which is much smaller in absolute value than the rate of return of -1.44% for stocks with the shareholder benefit. Consequently, the mean (median) price drop to dividend ratio of -0.349 (-0.56) for dividend only stocks is much lower than that for the stocks with shareholder benefit, -1.805 (-1.378). These statistics provide descriptive evidence that the price movement around the ex-dividend/benefit day is influenced by the noncash shareholder benefit.

The estimated yield of the shareholder benefit based on the total cost to firm (SHB1) is 0.08% in mean and 0.03% in the median. The estimated yield for investors who hold the minimum number of shares to receive the benefit is 1.32% in mean and 0.8% in the median. These numbers indicate that the value of the shareholder benefit is comparable to dividend income for small scale investors, but the average per share value among all investors, or the per share cost to the firm, is much smaller than the dividend payout. The ratio of the price drop to the sum of the dividend and the shareholder benefit is 1.62 in SHB1 definition and

0.805 in SHB2 definition. These ratios are higher than the price drop to dividend ratio for stocks that pay dividend only, suggesting greater valuation for the noncash shareholder benefit relative to dividend and capital gains in cash for some investors.

The abnormal trade volume during 5 days before and after the ex-day is 0.168 in mean and -0.031 in the median for all stocks. The stocks with dividend only have smaller abnormal trade volume (0.162 in mean and -0.044 in the median) than the overall average. For stocks with both dividends and shareholder benefit, the abnormal trading volume is larger and positive in both mean (0.193) and median (0.036). The positive and larger abnormal trading volumes for stocks with the shareholder benefit illustrate the possibility of active trading among investors with heterogeneous valuation for the shareholder benefit.

Our control variables for the risks associated with trading, the mean market risk ($\theta_{i,t}^M$) and idiosyncratic risk ($\theta_{i,t}^IV$) are higher for stocks with dividend only (0.782 and 0.559) than for the stocks with shareholder benefit (0.669 and 0.366). The size of the market value, calculated from the average closing price during the 60 days estimation period for the market model multiplied by the number of shares outstanding as of the fiscal year end (in billion Japanese yen), is also reported. The mean size is larger for stocks with dividend only, but the median size is larger for stocks with the shareholder benefit program.

C. Price drop around the Ex-dividend/benefit day

The summary statistics in Table 8 shows a greater price movement for stocks with shareholder benefit on the ex-benefit day. To examine whether the greater price movement is due to the shareholder benefit, we conduct univariate analyses of the relation between the shareholder benefit and the rate of return between the cum- and the-ex dividend/benefit days controlling for dividend yield. For each year observation, we sort our entire samples by dividend yield and form Low, Middle, and High dividend yield subsamples. We then compare the mean rate of returns for stocks with and without the shareholder benefit for each dividend yield subsample. Table 9 Panel A reports the results. The price drops by -0.65% on average for stocks with dividend payout but no shareholder benefit. The price drop for the stocks with both dividend payout and the shareholder benefit is -1.44%, and the 0.79% difference in the mean rate of returns for the two types of stocks with and without shareholder benefit is statistically significant at the 1% level. This significantly larger price drop for stocks with shareholder benefit holds for each dividend yield subsample, with the difference being the largest (1.05%) for stocks in the Low dividend yield subsamples. To investigate whether the larger price drop for stocks with shareholder benefit is explained by our estimate of the value of the shareholder benefit, we further sort the stocks with the shareholder benefit by the shareholder benefit yield in SHB1 and SHB2 definition to form 9 subsamples of Low, Middle, and High dividend yield-shareholder benefit yield combination.

Table 9 Panel B reports the mean rate of return for each subsample in SHB1 measure on the left and in SHB2 measure on the right for stocks with the shareholder benefit. The first row shows that the price drop increases monotonically, from -0.73%, -1.48%, to -2.29% as the shareholder benefit yield in SHB1 definition increases. The monotonic increase in the price drop with the increase in the shareholder benefit yield also holds in each of the dividend yield subsample. The price drop also increases as the dividend yield increases for each of the shareholder benefit yield subsample, suggesting that the price drop is related to both dividend yield and the shareholder benefit yield. Similar monotonic relations between the price drop and shareholder benefit yield and between the price drop and dividend yield are found for the SHB2 subsamples.

To confirm the relation between the shareholder benefit and the price movement we found in our univariate analyses, we conduct multivariate analyses controlling for dividend yield and risks associated with trading. The first model is the baseline model without consideration for the shareholder benefit where the dependent variable is the rate of return and the independent variables are dividend yield, market risk, idiosyncratic risk and a constant for all stocks in our sample that have dividend payment, with or without the shareholder benefit. In the second model, a binary variable that takes the value of one for stocks with the shareholder benefit (SHB dummy) is added to the baseline model to test the difference in the mean price movement for stocks with and without the shareholder benefit.

In the third model, an interaction between the shareholder benefit dummy and the dividend yield is included to allow for differential preference for dividends for two types of stocks. Since the variables of our main interest, the dummy variable for the shareholder benefit, is time-invariant for many stocks, we use firm level random effect model throughout this section. Having confirmed the greater price movement for stocks with shareholder benefit compared to stocks without the shareholder benefit, we next investigate whether the estimated value of the shareholder benefit indeed explains the cross sectional price movement for these stocks with shareholder benefit. Specifically, we include our proxy for the shareholder benefit yield, SHB1/Price and SHB2/Price to the baseline model and estimate the coefficient which is the average valuation of the shareholder benefit among all investors. Since our measurement of the shareholder yield, in SHB1 and SHB2 definition, are both rough proxies for the actual yield, we focus on the signs and statistical significance of the estimated coefficients on the shareholder benefit yield rather than the size of the coefficient. We include dummy variables for each year to capture the factors other than the exogenous variables considered such as market wide movements and tax changes.

Table 10 reports the results of the regression analyses. The coefficient estimate on the dividend yield for the baseline model (model (1)) is -0.702, interpreted as stocks with 1% dividend yield experience 0.7% price drop on the ex-dividend day. The positive and significant coefficient on the market risk (0.004) and the idiosyncratic risk (0.002) are

consistent with the model in Michaely and Vila (1995) and the empirical estimation result for stock in Japan in Hatakeda (2008) that the higher the risks involved in trading, the smaller the price change between the cum- and the ex-dividend day. In the second model, the coefficient on the dividend yield increases in absolute value to -0.756. The coefficient on the SHB dummy is -0.009 and statistically significant at the 1% level (t-statistics = -12.96). This result suggests that the price of stocks with the shareholder benefit declines 0.9% more than the stocks without the shareholder benefit on average, holding the dividend yield and the risks associated with the trading on the ex-day constant. This is consistent with our first hypothesis that the price drop for stocks with shareholder benefit is larger than the price drop for stocks with dividend only, because of the presence of at least some investors who value the shareholder benefit. The magnitude of almost 1% additional price drop is economically significant considering the average shareholder yield is 0.08% only in the SHB1 definition and 1.32% in the SHB2 definition. The result suggests that price drops by almost the amount of the shareholder benefit yield faced by investors who receive the maximum benefit by holding the minimum number of shares. In model 3, we allow for possible difference in the average preference for dividends between stocks with and without the shareholder benefit by including the interaction term between the shareholder benefit dummy and the dividend yield. The coefficient on the shareholder benefit dummy is still negative, -0.01, and significant at the 1% level (t-statistic = -8.57). The coefficient estimate on the interaction

term is positive 0.056, making the total estimated preference for dividends smaller ($-0.764+0.056 = -0.708$), but this estimate is statistically insignificant. This indicates that the larger price movement for stocks with shareholder benefit comes from the positive valuation of the shareholder benefit by some investors rather than stronger preference for dividends for these stocks. The overall R squared are higher for the second and the third models (11.3% for both) than the baseline model (9.3%), suggesting the importance of the shareholder benefit in explaining the price movement around the ex-dividend/benefit day.

The last two columns report the regression result for stocks that have both dividend and shareholder benefit. The first model includes the shareholder benefit yield in SHB1 definition, which is based on the estimated total cost of the shareholder benefit to firms. The coefficient on this variable is -3.349 and statistically significant at the 1 % level (t-statistic = 2.14). The second model includes the shareholder benefit yield in the SHB2 definition. Since the shareholder benefit yield in this definition is possibly the maximum yield faced by individual investors who hold minimum level of stocks, the average valuation among all investors is expected to be smaller than the coefficient on the shareholder benefit yield in the SHB1 definition. As such, the estimated coefficient on this variable is -0.084, but still significant at the 5% level (t-statistic = 5.67). Overall, our results demonstrate that the shareholder benefit does affect the price movement around the ex dividend/benefit day in addition to dividend yield and risks associated with trading, although the benefit is noncash

and its value faced by each investors varies considerably. This price movement suggests an existence of a clientele for whom the noncash shareholder benefit provides value.

D. Trade volume around the Ex-dividend/benefit day

The presence of investors who value the noncash shareholder benefit implied from the larger price movement for stocks with shareholder benefit motivates us to investigate the active trading caused by the shareholder benefit around the ex-benefit day. According to Michaely and Vila (1995), the more heterogeneous the preferences for dividend among investors are, the higher the trade volume around the ex-dividend day because of the gains from trade between the investors with different preference for the after-tax dividend income relative to after-tax capital gains. While the heterogeneity in the preference for dividends is induced by differential relative tax rates on dividends and capital gains and attitude toward risk, the heterogeneity in the valuation of the shareholder benefit comes from how each investor perceives the value from the noncash benefit. We expect the heterogeneity in the valuation of the shareholder benefit to be larger than the heterogeneity in the preference for dividends, leading to higher trading volume around the ex-dividend/ex-benefit day for stocks with the shareholder benefit. Furthermore, higher shareholder benefit yield should make trading among investors with heterogeneous valuation more profitable, causing larger abnormal trading volume.

We first examine the effect of shareholder benefit on trading volume around the ex-dividend/benefit day in the univariate analyses. Table 11 Panel A reports the mean trading volume for stocks with dividend only and for stocks with dividend and the shareholder benefit. Both types of stocks have positive and significant trading volume in excess of the benchmark average trading volume during the 60 days period from 70 days to 11 days before the ex-dividend day. The mean daily trading volume during five days before and after the ex-dividend day for stocks with shareholder benefit is 19.3% higher than the benchmark daily trade volume, with t statistic of 12.27. The mean abnormal trading volume for stocks with dividend only is 16.2% higher than the benchmark trading volume, with t statistic of 17.81. The difference between the two types of stocks, reported in the “Difference” column, is 3.1% and statistically significant at the 10% level (t statistic=1.69). The higher abnormal trade volume for stocks with shareholder benefit also holds for dividend yield subsamples, with the greatest and most significant difference for the Low dividend yield subsample. To test whether the higher trading volume for stocks with the shareholder benefit is related to the shareholder benefit yield, we further examine the relation between the abnormal trade volume and shareholder benefit yield. The first row in Table 11 Panel B reports the mean abnormal trading volume for Low, Middle, and High shareholder benefit yield subsamples in the SHB1 and SHB2 definitions respectively. In both measures, the abnormal trading volume increase monotonically as the shareholder benefit yield increases.

The lower part of Panel B reports the mean abnormal trading volume for nine subsamples of Low, Middle, and High dividend yield and shareholder yield subsamples. The table shows that the mean abnormal trading volume increases as the shareholder benefit yield increases in each dividend yield subsample. These results are consistent with our hypothesis that the gains from trade between investors who have different valuations for the benefit increase as the shareholder benefit increases, leading to higher trading around the ex benefit day.

Table 12 reports the multivariate regression analysis of the abnormal trading volume around the ex-dividend/benefit day. The first model is the baseline model without consideration for the shareholder benefit for all stocks in our sample. Consistent with the prediction in Michaely and Vila (1995) and the empirical estimation result in Hatakeda (2008), there is a positive relation between the abnormal trading volume and dividend yield and negative relation between the abnormal trading and risks. The coefficient on the dividend yield is 3.165 and significant at the 1% level (t-statistic = 3.05). This positive and significant coefficient suggests that there is heterogeneity in investors in their preference for the dividend that makes the trading around the ex-dividend day beneficial. In model 2 for all stocks, we include the dummy variable for the shareholder benefit. As we predict, the coefficient on the shareholder benefit dummy is positive (0.058) and significant at the 1% level (t-statistic = 4.21). The abnormal trading volume is 5.8% higher for stocks with shareholder benefit compared to stocks without the shareholder benefit, holding the dividend

yield, market risk and idiosyncratic risks constant. When we add the interaction between the shareholder benefit dummy and dividend yield in model 3, the coefficient on the shareholder benefit dummy is still positive but become less significant, and the interaction term is positive but insignificant as well.

We repeat the base model regression for sub-samples of stocks with dividend only and with dividend and shareholder benefit in the last two columns. The coefficient on the shareholder benefit yield in SHB1 definition is 48.817 with significance at the 1% level (t-statistics = 2.69). The coefficient on the SHB2/P reported in the last column is much smaller, 0.419 and less significant (t-statistics = 0.35). Since the two measures of the shareholder benefit yield are approximate values for all investors on average (SHB1) and for investors who receive the maximum benefit (SHB2), we suspect the true size of the coefficient on the shareholder benefit to be somewhere between the two estimates in our regression results. The positive coefficient for both measures, although not significant for the SHB2/P measure, are consistent with our prediction that the shareholder benefit causes extra trading among investors with heterogeneous valuation of the shareholder benefit. The smaller coefficient on the dividend yield when the shareholder benefit is included also suggests that the heterogeneity in the preference for dividends is overestimated for stocks with the shareholder benefit when the shareholder benefit is omitted from the regression analyses.

Altogether, we verify that the stocks with the shareholder benefit have higher abnormal trading around the ex-dividend/benefit day than stocks with dividend only, and the estimated heterogeneity in the preference for the shareholder benefit is positive and significant. These results are consistent with our hypotheses that the heterogeneity in the valuation of the shareholder benefit among investors makes the trading around the ex-benefit day profitable and lead to larger trading volume.

The significant price movement between the cum- and ex-benefit day and the excessive trading around the ex-benefit day found in this chapter provide an evidence of the shareholder benefit clientele for whom the shareholder benefit is an important part of their investment income. This positive valuation of the stocks with shareholder benefit supports Fama and French's (2007) argument that shareholders regard stocks as consumption goods rather than pure investment goods. Investors seem to consider the total return from their investment that includes the consumption of the non-cash benefit. This is new to the literature on the valuation of stocks.

CHAPTER 6: The relation between ownership structure and firm value

Higher investor recognition by individual investors should lead to lower risk premium and higher firm value according to Merton (1987). Increase in individual investors, on the other hand, could also lead to more severe agency problem and lower firm value due to a lack of effective monitoring (Amihud et al (1999), Fernando et al (2004)). To investigate the relation between shareholder base and firm value, we use the number of individual investors as proxy for the investor recognition and use the proportional ownership by individual investors to control for the level of (lack of) effective monitoring due to diffused ownership.

We utilize panel data on all firms listed on Tokyo Stock Exchange during the 1996-2008 period. The data includes information of companies that have shareholder benefit program for different length of years. There are two advantages of using Japanese data to test the investor recognition hypothesis. One is the availability of ownership data by different types of investors, both the number of shareholders and the proportional ownership among the different types of investors. Most studies on investor recognition hypothesis use ownership by institutional investors. The assumption in Merton (1987) is that investors are not aware of all stocks in the market and their investment choice sets are limited to only the firms that they know. This description applies better to individual investors than institutional investors, as the latter have much better ability in collecting and analyzing

information on stocks in the market and they must deliberately chose their investment stocks from much wider sets of companies that they are aware of. Change and Guo (2010) uses data on retail investors in the United States as a proxy for individual investors, but the data is the number of brokerages so if multiple investors use one brokerage, they are counted as one. Another advantage is the variation in the number of investors both across firms and over time. Bodnaruk and Ostberg (2009) uses semi-annual individual stockholdings data on Sweden for 5 years from June 1995 to December 2000. Our data is annual data for 11 years from 1996 to 2008 so time points per firm are similar, but our data includes firms that experience considerable changes in the number of investor during the sample period.

We first hypothesize that an increase in the number of individual investors have a positive impact on firm value but its marginal impact to be diminishing as an improvement in investor recognition should be more important at the lower level of the number of investors. We also predict a negative (positive) relation between the proportional ownership by individual (institutional) investors and firm value because institutional investors provide effective monitoring. To test this hypothesis, we conduct a multivariate regression analysis in which Tobin's Q ratio is regressed on the number of individual investors, its square term, the proportional ownership by individual investors, and a set of control variables that include asset size, sales growth, leverage, return on asset, turnover, and years since listing.¹⁸ We also

¹⁸ These control variables are reported to be associated with firm value measured by Tobin's Q in studies on investor recognition and firm value such as King and Segal (2009), Lang, Lins, and Darius

include the binary variable that takes the value of one if a firm has the shareholder benefit program in a given year. We expect the sign on the coefficient on the number of individual investors to be positive, the coefficient on the square term of the number of individual investors to be negative, and the coefficient on the proportional ownership by individual investors to be negative. In our firm fixed effect regression framework, the coefficient on the shareholder benefit dummy indicates a within change, or the effect of an initiation of the shareholder benefit program, after controlling for its impact on the number of individual investors. The coefficient on this shareholder benefit dummy could be positive if the shareholder benefit program increase firm value by reasons other than its impact on investor recognition. Since our focus in this chapter is on the relation between the investor recognition and firm value, we do not form our expectation on the sign of the coefficient on the shareholder benefit dummy in this study. We further hypothesize that the positive (but diminishing) relation between investor recognition and firm value is more pronounced for firms with smaller asset size and young firms because these firms are more likely to suffer from lack of investor recognitions. For this analysis, we conduct the regression analysis above for sub-samples of firms based on the asset size (smaller than the median and larger or equal to the median value) and years since listing (10 years or younger and above 10 years). Finally, we investigate the relation between the number of individual investors and firm value

(2003), and Doidge, Karolyi, and Stulz (2004).

at various levels of the proportional ownership by individual investors. We expect that the positive impact of investor recognition is more pronounced when the proportional ownership by individual investors is smaller, because the agency problem is less severe for these firms with higher ownership by non-individual investors. On the other hand, we expect that an increase in the number of individual investors does not lead to higher value when the large proportion of shares are held by individual investors who have less motivation to monitor the management. For these firms, the agency problem of increasing individual investors might outweigh the benefit of improved investor recognition. We test this hypothesis by splitting our sample to those whose ownership share by individual is less than 33.4% , between 33.4% to less than 51%, and above 51% and run the same regression model.

Table 13 summarizes the descriptive statistics for our analyses on the relation between the ownership base and firm value for all firms, and firms with and without the shareholder benefit program. Table 13 Panel A reports the firm characteristics. It shows that firms with the shareholder benefit program have higher Tobin's Q ratio, market to book ratio, and returns on asset and smaller asset size, less leverage and turnover compared to firms without the shareholder benefit program. The younger firm age for firms with the shareholder benefit program (21.3 years compared to 29.3 years in means) suggests that the shareholder benefit programs are employed by young firms for whom improving recognition among investors should be important.

Table 13 Panel B describes the ownership structure for all firms and for each group of firms. Firms with the shareholder benefit program have significantly higher number of total investors and individual investors, and slightly higher proportional ownership by individual investors. As we saw in Chapter 3, the average number of shares held by an individual is smaller. The changes in the number of individual shareholders (9% in mean and 3% in median) are economically and statistically different from the control group (3% and -1%, respectively). The proportion of ownership by individual investors for firms with the shareholder benefit program (37% in mean and 35% in median) are slightly higher than the control group (35% and 32%), but the changes (0.2% for both mean and median) is lower than the control (0.4% mean and median).

Table 14 reports the results of our panel regression analyses with a control for firm fixed effect. The first column reports the results of the regression for all firms in our data. Since we use the fixed-effect (within-firm) model for our regression, the coefficient on the shareholder benefit program dummy indicates the within changes in Tobin's Q before and after the initiation of the benefit program. The coefficient on the shareholder benefit program is positive and significant (0.059), suggesting that there is a positive impact of an initiation of the shareholder benefit program controlling for its impact on the number of individual investors and other variables. The coefficient on the number of individual investors is positive 0.4135 and significant at the 1% level (t-statistics = 5.61), and the coefficient on the

square of the number of individual investors is negative 0.0211 and significant at the 1% level (t-statistics = -5.09). Consistent with our hypothesis, the valuation benefit of wider investor recognition is positive but its marginal impact becomes smaller as the level of the number of individual investors increases. The coefficient on the proportional ownership by individual investors is negative 0.0167 and significant (t-statistics = -31.86), supporting our hypothesis that a more diffused ownership by individual investors has negative impact on firm value. The second column reports the regression result for the subset of firms that had the shareholder benefit program during any period between 1996 and 2008, and the last column reports the results for another subset of firms that did not have the shareholder benefit program throughout the same period. The results are similar between the two subsets of the samples.

Table 15 reports the results of the regression analysis of the relation between the ownership and firm value by asset size. We split our samples at the median of the total asset for each year, and conduct the same regression analysis for each size group among all firms, among firms with the shareholder benefit program, and among firms that never had the shareholder benefit program. Consistent with our hypothesis, the sign of the coefficient on the number of individual investors is positive (but not significant) for the smaller size group among all firms, and the coefficient becomes negative (not significant) for the larger size group. When we limit our samples to firms that have the shareholder benefit program, the

coefficient on the number of individual investors is positive (0.7673) and significant at the 1% level for smaller size group and less positive (0.1318) and insignificant (t-statistics = 0.79) for larger size group. Among firms that did not have the shareholder benefit program throughout the sample period, the coefficients on the number of individual investors are negative and significant for both the smaller and larger firms. The result here suggests that increasing the number of investors have positive impact on firm value among smaller firms that are more likely to suffer from investor recognition compared to large firms.

Table 16 reports the results of the regression analysis of the relation between the ownership and firm value for sub-samples of young firms and old firms (under 10 years or less and over 10 years). As we predict, the coefficients on the number of individual investors are positive and significant for firms under 10 years since listing among all firms, among firms with the shareholder benefit program, and among firms without the shareholder benefit program. The coefficient on the proportional ownership by individuals is consistently negative and significant. The results in Table 15 and 16 suggest that the investor recognition is more important for younger and smaller firms, and the shareholder benefit program should lead to higher firm value through its impact on the number of individual investors when employed by smaller and younger firms.

Table 17 shows the results of the regression analyses for subsets of firms based on the proportional ownership by individual investors. Among all firms and among firms that

have the shareholder benefit program, the number of individual investors has significantly positive relation with firm value when the percentage ownership by individual investors is less than 33.4% or between 33.4% to 50%, but the relationship turns negative when the proportional ownership is above 51%. For firms without the shareholder benefit program, the coefficient on the number of individual investors is positive and significant only when the proportional ownership by individuals is less than 33%, and turns negative and significant when the ownership is above 51%. These results support our hypotheses that the positive impact of investor recognition is more pronounced when the agency problem is less severe, but the agency problem of increasing individual investors outweighs the benefit of improved investor recognition when the large proportion of shares are held by individual investors who have less motivation to monitor the management.

Overall, our results show that there is a positive but diminishing relation between the individual shareholder base, our proxy for investor recognition in this study, and firm value, consistent with the investor recognition hypothesis. This positive relation is stronger for small and young firms for whom broader investor recognition is important, but when the majority (over 51%) of shares are held by individual investors, the relation become negative and insignificant. This trade-off between investor recognition and deterioration in effective monitoring is consistent with Amihud et al (1999) and Fernando et al (2004). Fernando et al (2004) argues that firms target higher stock price after stock split to increase institutional

ownership when they benefit more from better monitoring by institutional investors than wider shareholder base by individual investors. Our result suggest that when the benefit from wider investor base outweighs the reduction in effective monitoring, or when the ownership by individual and institutional investors at kept at certain level, shareholder benefit program can increase firm value by increasing individual shareholder base.

CHAPTER 7: Conclusion

We provide detailed description of the shareholder benefit program in Japan which is employed by firms to attract individual investors. We show that the value of the shareholder benefit is as much as the dividend income for investors who hold a small number of stocks. We also show that cash dividend payout of stocks with shareholder benefit is about the same level as for the dividend payout of stocks without shareholder benefit, suggesting that the shareholder benefit is provided in addition to cash dividend rather than as a substitute for dividend in most cases.

Our investigation on the effect of the shareholder benefit program on the shareholder base revealed that the number of individual investor increases significantly after an initiation of the shareholder benefit program, but the proportional ownership by individual investors does not change significantly on average. This implies that individual investors trade their shares among themselves, making share ownership by each of them smaller. We indeed confirm that ownership by individual investor become more diffused as a result of an increase in individual investors who hold smaller number of shares.

Shareholder benefit is a noncash gift or services provided to shareholders, and it is (technically) not a form of dividend. Yet, the significant increase in the number of individual investors after an initiation of the shareholder benefit program found in our study suggests an existence of an investor clientele for whom the shareholder benefit is valuable.

We hypothesize that the presence of this shareholder benefit clientele affects the stock price and trading around the ex-benefit day, causing greater price drop and larger trading volume for stocks with shareholder benefit compared to stocks without the shareholder benefit. Building on the dynamic general equilibrium model for the price movement and trade volume around the ex-dividend day in Michaely and Vila (1995), we test these hypotheses using the data on stock price and trade volume around ex-dividend/benefit day for stocks that go ex-dividend/benefit during the 1999-2008 periods. We confirm that the price drop for stocks with shareholder benefit is larger than the price drop for stocks without shareholder benefit holding the dividend yield and risks associated with trading constant. We further find that our proxies for the shareholder benefit yield explain the stock return around the ex-dividend/ex-benefit day. These results provide an evidence of the shareholder benefit clientele for whom the shareholder benefit is an important part of their investment payoff. We also find that the noncash, non constant nature of the shareholder benefit induces heterogeneity in the valuation of the shareholder benefit, resulting in active trading around the ex-benefit day. This result is consistent with the prediction by the dynamic general equilibrium model of Michaely and Vila (1995) that heterogeneity in the preference for dividends (shareholder benefit in our case) induces active trading around the ex-benefit day.

We also find that an increase in the number of individual investors has positive relation with firm value, consistent with the investor recognition hypothesis, but this positive

relationship is limited to the cases where the asset size is smaller, firm age is young, and the proportional ownership by individual investors is under 51%. Our analyses show that there is a trade-off between the investor recognition and the lack of effective monitoring due to an increase in individual investors who have less incentive and ability to discipline the management. While shareholder benefit program is successful in achieving wider recognition among individual investors, our analyses suggest that its impact on firm value depends on the balance between the investor recognition and agency problem.

Aside from improving recognition and expanding the shareholder base, there could be other impacts that are favorable to both (or either) shareholders and the management. For example, some firms consider the shareholder benefit program not only as an investor relation activity but also as a marketing strategy to make investors their loyal customer.¹⁹ Considering the fact that the costs associated with the shareholder benefit program is increasing in the number of shareholders, firms might also balance the costs and benefits of the shareholder benefit program, and terminate the shareholder benefit program when the cost outweighs the benefit. In fact, several firms terminate the benefit program because of the high cost.²⁰ There are also firms that terminate the benefit program and increase cash

¹⁹ Japan Air Line announced that it would continue providing the loyalty benefit to its shareholders, a 50% discount for its air ticket, in spite of the reduction of equity by 100 % in their restructuring process under the Corporate Rehabilitation Law (equivalent of the chapter 11 in the US) on January 19, 2010. On June 3rd, the company withdrew their decision of continuing the loyalty program. JAL seems to have regarded the loyalty program as an important marketing strategy, but there were strong opposition for rewarding shareholders who should be responsible for the failure of the company. (*Nikkei Sangyo Shinbun*, June 4, 2010 issue)

²⁰ *Nikkei Shinbun*, December 17, 2005 issue reports the cases where firms terminate the benefit program due to cost reasons.

dividends payout in response to the demand for equal treatment of all investors. To understand the motivation for firms to initiate, continue, or terminate the shareholder benefit program, further analysis on the benefits of expanding the shareholder base is needed. While our focuses in this study are on the impact on ownership structure and firm value, we also plan to conduct additional analysis on the relation between the shareholder base and stock liquidity, cost of capital, and investment activities in further studies.

REFERENCES

- Allen, Franklin, Antonio E. Bernardo, and Ivo Welch, 2000, A theory of dividends based on tax clienteles, *Journal of Finance* 55, 2499–2536.
- Allen, Franklin and Roni Michaely, 2003, Payout policy, in Constantinides, George, Milton Harris, and Rene M. Stultz, ed.: *Handbook of the Economics of Finance* (Elsevier, Amsterdam).
- Amihud, Yakov, Haim Mendelson and Jun Uno, 1999, Number of shareholders and stock prices: Evidence from Japan, *Journal of Finance* 54, 1169-1184.
- Barber, Brad M. and Terrance Odean, 2000, Trading is hazardous to your wealth: The common stock investment performance of individual investors, *Journal of Finance* 55, 773-806.
- Barber, Brad, and Terrance Odean, 2008, All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors, *Review of Financial Studies* 21,785-818.
- Becker, Bo, Zoran Ivković And Scott Weisbenner, Local dividend clienteles, *Journal of Finance*, forthcoming.
- Bell, Leonie, and Tim Jenkinson, 2002, New evidence of the impact of dividend taxation and on the identity of the marginal investor, *Journal of Finance* 57, 1321–46.
- Bodnaruk, Andriy and Per Ostberg, 2009, Does investor recognition predict returns? *Journal of Financial Economics* 91, 208-226.
- Brav, Alon, John R. Graham, Campbell R. Harvey, and Roni Michaely, 2005, Payout policy in the 21st century, *Journal of Financial Economics* 77, 483-527.
- Brennan, M., and C. Tamarowski, 2000, Investor relations, liquidity, and stock prices, *Journal of Applied Corporate Finance* 12, 26-37.
- Bushee, Brian J. and Gregory S. Miller, 2012 Investor relations, firm visibility, and investor following, *Accounting Review* 87, 867-897.

Chemmanur, Thomas and An Yan, 2009, Advertising, attention, and stock returns, Working paper.

Cohen, Lauren, 2009, Loyalty-based portfolio choice, *Review of Financial Studies* 22, 1213-1245.

Dhaliwal, Dan, and Oliver Zhen Li., 2006, Investor tax heterogeneity and Ex-dividend day trading volume, *Journal of Finance* 61, 463-90.

Doidge, Craig, G. Andrew Karolyi, and Rene M. Stulz, 2004, Why are foreign firms listed in the U.S. worth more? *Journal of Financial Economics* 71, 205-238.

Dong, Ming, Chris Robinson, and Chris Veld, 2005, Why individual investors want dividends, *Journal of Corporate Finance* 12, 121-158.

Elton, Edwin J., and Martin J. Gruber, 1970, Marginal stockholder tax rates and the clientele effect, *Review of Economics and Statistics* 52, 68-74.

Elton, Edwin J., Martin J. Gruber, and Christopher R. Blake, 2005, Marginal stockholder tax effects and ex-dividend day price behavior: Evidence from taxable versus nontaxable closed-end funds, *Review of Economics and Statistics* 87, 579-86.

Fama, Eugene F. and Kenneth R. French, 2007, Disagreement, tastes, and asset prices, *Journal of Financial Economics* 83(3), 667-689.

Fang, Lily and Joel Peress, 2009, Media coverage and the cross-section of stock returns, *Journal of Finance* 64, 2023-2052.

Foerster, Stephen R., and G. Andrew Karolyi, 1999, The effects of market segmentation and investor recognition on asset prices, *Journal of Finance* 54, 981-1013.

Frank, Murray, and Ravi Jagannathan, 1998, Why do stock prices drop by less than the value of the dividend? Evidence from a country without taxes, *Journal of Financial Economics* 47, 161-188.

Franks, R. Julian, Colin Mayer, and Hideaki Miyajima, 2009, Equity market and institutions: The case of Japan, Working paper.

Graham, John R., Roni Michaely, and Michael R. Roberts, 2003, Do price discreteness and transactions costs affect stock returns? Comparing ex-dividend pricing before and after decimalization, *Journal of Finance* 58, 2611–35.

Graham, John R. and Alok Kumar, 2006, Do dividend clientele exist? Evidence on dividend preferences of retail investors, *Journal of Finance* 61, 1305-1336.

Grinblatt, Mark S. and Matti Keloharju, 2001, How distance, language, and culture influence stockholdings and trades, *Journal of Finance* 56, 1053-1073.

Grullon, Gustavo, George Kanatas and James Weston, 2004, Advertising, breadth of ownership, and liquidity, *The Review of Financial Studies* 17, 439-461.

Hatakeda, Takashi, 2008, Zei to haitou ochibi no zegoni okeru kabuki oyobi baibaidaka no kankei nit suite-Nihon no data niyoru kenshou- (Tax and stock price and trade volume around the ex-dividend day--an examination of Japanese data--), Kobe University Discussion Paper Series.

Hong, Harrison, and Ming Huang, 2005, Talking up liquidity: Insider trading and investor relations, *Journal of Financial Intermediation* 14, 1-31.

Huberman, Gur, 2001, Familiarity breeds investment, *Review of Financial Studies* 14, 659-680.

Jain, Pankaj K., and Jang-Chul Kim, 2006, Investor recognition, liquidity, and exchange listings in the reformed markets, *Financial Management* 35, 21-42.

King, Michael R. and Dan Segal, 2009, The long-term effects of cross-listing, investor recognition, and ownership structure on valuation, *Review of Financial Studies* 22, 2393-2421.

Lehavy, Reuven and Richard G. Sloan, 2008, Investor recognition and stock returns, *Review of Accounting Studies* 13, 327-361.

Lang, Mark H, Karl V. Lins, and Darius P. Miller, 2003, ADRs, analysts, and accuracy: Does cross listing in the United States improve a firm's information environment and increase market value? *Journal of Accounting Research* 41-2, 317-345.

Merton, Robert C., 1987, Presidential address: A simple model of capital market equilibrium with incomplete information, *Journal of Finance* 42, 483–510.

Michaely, Roni, and Jean-Luc Vila, 1995, Investors' heterogeneity, prices, and volume around the ex-dividend day, *Journal of Financial and Quantitative Analysis* 30, 171–198.

Michaely, Roni, and Jean-Luc Vila, 1996, Trading volume with private valuation: Evidence from the ex-dividend day, *Review of Financial Studies* 9, 471–509.

Michaely, Roni, Jean-Luc Vila, and Jiang Wang, 1996, A model of trading volume with tax-induced heterogeneous valuation and transaction costs, *Journal of Financial Intermediation* 5, 340–371.

Miller, M., and F. Modigliani, 1961, Dividend policy, growth, and the valuation of shares, *Journal of Business* 34, 411-433.

Miyajima, Hideaki and Kuroki Fumiaki, 2005, The unwinding of cross-shareholding: Causes, effects, and implications, RIETI Discussion Paper Series 05-E-006.

Odean, Terrance, 1999, Do investors trade too much? *American Economic Review* 89, 1279-1298.

Richardson, Scott, Richard Sloan, and Haifeng You, 2011, What makes stock prices move? Fundamentals vs. investor recognition, Working paper.

Suzuki, Katsushi and Nobuyuki Isagawa, 2008, Kabunushi Yutai Donyu no Tankiteki Eikyo-Kabushiki Ryudosei to Announcement koka no kensho (Short-term Impact of an Introduction of Shareholder Loyalty Program: A Test on stock liquidity and announcement effect), *Shoken Analyst Journal* 7, 107-121.

Tetlock, Paul C., 2007, Giving content to investor sentiment: The role of media in the stock market, *Journal of Finance* 62, 1139-1168.

Tokyo Stock Exchange, Fact book, various years

Wooldridge, Jeffrey M., 2002, *Econometric Analysis of Cross Section and Panel Data* (The MIT Press, Cambridge, MA).

Appendix

Example of the Shareholder Benefit Program

Company Name	Industry	Shareholder benefit description
Takashimaya	Department store	1,000 stocks or more: Shareholder benefit card (10% discount coupon)
Kabukiza	Theater	Invitation to Kabukiza performances
Yakuruto	Beverage	100 stocks or more: Select one of the products of the company (for the year 2008, select from "cosmetics", "juice set", or "dry noodle set").
Starbucks Coffee Japan	Coffee shop	Drink coupon (for any drink, size, and option) 1 stock or more: 2 coupons 5 stocks or more: 4 coupons etc.
Oriental Land	Theme park	One-day admission ticket to Tokyo Disney Land or Tokyo Disney Sea 100 stocks or more: 1 ticket 200 stocks or more: 2 tickets etc., twice a year.
Shiseido	Cosmetics	Shareholders who hold the stock for 1 year or more: Limited version of original perfume, or donation to environmental protection activities.
Honda	Automobile manufacturer	Admission ticket to "Twin-Link Motegi" or "Suzuka Circuit" (Up to 5 people. Include discount on the rides on vehicles and lodging within the facility.)
Keisei Dentetsu	Transportation (Railroad)	Shareholder benefit Ticket (1 free ride per 1 ticket) 5,000 stocks or more: 10 tickets 10,000 stocks or more: 30 tickets etc., twice a year.
All Nippon Airways	Airline	Shareholder benefit Coupon (50% discount for 1-way flight segment) 1,000 stocks or more: 1 coupon 2,000 stocks or more: 2 coupons 3,000 stocks or more: 3 coupons etc., twice a year.
Toys"R"Us	Toys	100 stocks or more: 1 Gift card for 3,000 yen value of the company's products. 200 stocks or more: 6 Gift cards (18,000 yen value).

Japan MacDonald Holdings	Fast food	Shareholder benefit Dining Coupon Booklet (1 coupon book contain 6 free meal coupon for a set of burger, side menu, and drink) 100 or 200 stocks: 1 coupon booklet, 300 or 400 stocks: 3 coupon booklets 500 stocks: 5 coupon booklets etc., twice a year.
Sekisui House	Construction	1,000 stocks or more: 5 kg of rice
Dr. Ci-labo	Cosmetics	1 stock or more: Company's product worth 10,000 yen 2 stocks or more: Company's product worth 20,000 yen 3 stocks or more: Company's product worth 30,000 yen

Table 1
Number of firms with Shareholder Benefit Program

This table presents the number of firms which have the shareholder benefit (SHB) program among firms listed on the Tokyo Stock Exchange (TSE) Section 1 and 2. Percentage of firms with the shareholder benefit program among all firms listed on the TSE for each year is also reported. "Increase" column reports the numbers of firms that initiate the SHB program among firms that have been listed on TSE but did not have the benefit program in the previous year ("Initiate") and the numbers of firms that start the SHB program among those newly list on TSE ("New Listing with SHB"). "Decrease" columns reports the number of firms that terminated the SHB among those continue to be listed on TSE ("Terminate") and firms that are delisted from the exchange which had the SHB ("Delisted with SHB").

Year	All firm	Firms with SHB	(%)	Increase		Decrease	
				Initiate	New Listing with SHB	Terminate	Delisted with SHB
1996	1,543	178	(11.5%)		-6		
1997	1,602	206	(12.9%)	16	18	4	1
1998	1,629	217	(13.3%)	5	8	3	0
1999	1,670	246	(14.7%)	13	19	2	0
2000	1,789	284	(15.9%)	11	35	4	5
2001	1,903	349	(18.3%)	24	49	3	5
2002	1,929	391	(20.3%)	28	26	6	6
2003	1,979	432	(21.8%)	36	24	16	4
2004	2,053	482	(23.5%)	29	31	9	1
2005	2,117	537	(25.4%)	51	26	14	11
2006	2,113	581	(27.5%)	48	23	4	23
2007	2,185	637	(29.2%)	47	19	6	5
2008	2,188	668	(30.5%)	43	17	-	12

Table 2
The value of the Shareholder benefit program and dividend payout

This table presents the monetary value of the shareholder benefit and dividend distribution for the year 2008. The stocks in our sample are divided into four groups: stocks that pays dividend only, stocks with dividend and shareholder benefit, stocks with shareholder benefit but without dividend, and stocks without dividend or shareholder benefit. Annual dividend per share is the total amount of dividend for a fiscal year. Annual dividend yield is annual dividend per share divided by the share price at the end of a fiscal year. Dividend payout ratio is defined as the annual dividend divided by net income. The value is missing when the net income is less than 0. Annual value of shareholder benefit per share is an annual value of the benefit divided by the minimum unit of shares to receive the benefit. Annual shareholder benefit yield is an annual value of the benefit per share divided by the stock price at the end of a fiscal year. Total (minimum) cost of shareholder benefit is calculated by multiplying the annual value of the shareholder benefit by the total number of shareholders excluding foreign investors. The annual cost of the shareholder benefit per share is obtained by dividing the total minimum cost by the number of shares outstanding.

	Mean	25 th Percentile	Median	75th Percentile	Std. Dev	N
Stocks that pays dividend only (N = 1286)						
Annual dividend per share (Japanese Yen)	234	8	15	33	812	1,286
Annual dividend yield	2.5%	1.7%	2.4%	3.2%	1.2%	1,286
Total dividend payout (Millions Yen)	2,738	224	579	1,860	6,704	1,286
Dividend payout ratio	0.66	0.26	0.40	0.62	0.96	1,168
Stocks with shareholder benefit and dividend (N=605)						
Annual dividend per share	216	10	20	37	767	605
Annual dividend yield	2.3%	1.4%	2.1%	2.8%	1.1%	605

Total dividend payout (Millions Yen)	1,961	254	549	1,464	5,279	605
Dividend payout ratio	0.66	0.27	0.41	0.67	0.84	547
Annual value of shareholder benefit per share	343	7	20	30	1,405	429
Annual shareholder benefit yield	2.8%	0.8%	1.5%	3.0%	4.3%	429
Total (minimum) cost of shareholder benefit (Millions Yen)	47.78	7.56	15.75	44.45	110.51	429
Annual shareholder benefit cost per share	39.04	0.27	0.59	1.84	226.50	429
Stocks with shareholder benefit but no dividend (N = 63)						
Annual value of shareholder benefit per share	1420	10	50	1000	2,649	37
Annual shareholder benefit yield	11.6%	2.5%	5.7%	9.9%	15.6%	37
Total (minimum) cost of shareholder benefit (Millions Yen)	55.58	7.08	14.81	47.69	138.42	37
Annual shareholder benefit cost per share	116.66	0.54	8.85	91.36	293.22	37
Stocks without shareholder benefit but no dividend (N = 234)						

Table 3
Determinants of the shareholder benefit program

This table presents results of the panel logit regression analysis of the shareholder benefit on firm characteristics over the period from 1997 to 2008 using firm level random effect. The dependent variable is a binary variable that takes the value of one for stocks with the shareholder benefit program and zero for stocks without the shareholder benefit program for a given year. The independent variables are as defined in the text. All regressions control for year and industry effects. Coefficients on the industry effects are suppressed but explained in the text for significant cases. *,**,*** indicate statistical significance at the 10%, 5%, and 1% level, respectively. The z-statistics are reported in parentheses.

	(1) Among All firm -all year	(2) Among firms without SHB in year t-1 (Initiate)	(3) Among firms with SHB in year t-1 (Continue)
Constant	-11.411 *** (-7.66)	-5.825 ** (-2.08)	7.644 *** (3.54)
Log (Assets)	0.309 *** (2.64)	0.653 *** (3.06)	0.076 (0.35)
Market-to-Book value of equity	0.203 *** (3.05)	-0.071 (-0.75)	0.014 (0.13)
Return On Asset	8.276 *** (3.16)	2.642 (0.81)	-1.079 (-0.25)
Sales growth	-0.158 (-0.88)	0.349 (1.31)	-0.653 (-1.50)
Cash	-3.866 *** (-3.88)	0.084 (0.07)	-1.537 (-0.88)
Leverage	-0.480 (-0.76)	-0.757 (-0.83)	-0.986 (-0.90)
Stock Return	4.518 * (1.93)	9.420 *** (3.01)	4.456 (0.98)
Volatility	-55.718 *** (-4.98)	-39.631 ** (-2.44)	-67.469 *** (-3.11)
Turnover	-6.164 *** (-4.42)	-2.729 (-1.42)	1.877 (0.53)
Dividend payout ratio	0.020 (0.26)	-0.066 (-0.59)	-0.116 (-0.93)

Log (# individual)	-0.132 (-1.16)	-0.623 *** (-3.18)	-0.368 * (-1.66)
% Individuals	2.046 *** (3.23)	1.500 * (1.68)	2.728 ** (2.41)
Age	-0.009 * (-1.71)	-0.023 *** (-2.75)	0.022 ** (2.02)
Year=1998	-1.935 *** (-4.58)	-1.095 * (-1.77)	0.810 (0.80)
Year=1999	-1.514 *** (-3.73)	-1.880 ** (-2.58)	1.920 (1.47)
Year=2000	-0.541 (-1.35)	-0.253 (-0.46)	0.893 (0.86)
Year=2001	1.001 *** (2.77)	0.866 * (1.74)	1.394 (1.33)
Year=2002	0.822 ** (2.40)	0.541 (1.11)	0.709 (0.80)
Year=2003	1.863 *** (5.44)	1.399 *** (2.86)	0.067 (0.08)
Year=2004	2.106 *** (6.19)	1.211 ** (2.41)	0.084 (0.11)
Year=2005	2.798 *** (7.50)	1.789 *** (3.40)	-0.485 (-0.62)
Year=2006	3.709 *** (9.33)	1.811 *** (3.26)	0.976 (0.99)
Year=2007	4.403 *** (10.97)	1.765 *** (3.11)	2.255 * (1.84)
Year=2008	4.792 *** (11.92)	2.094 *** (3.53)	-0.179 (-0.23)
N	16007	12695	3312
No. of firms	2413	1975	694
Wald chi-square	1020.23	96.3	89.63

Table 4

Summary statistics for the sample firms that initiated the shareholder benefit program and the control firms

This table presents the summary statistics of firm characteristics for our sample firms that initiated the shareholder benefit program during 1997-2008 period and control firms that did not have the shareholder benefit program during the same period. For each sample firms, we find a control firm that never had the shareholder benefit program during our sample period, listed on the same section (1 or 2) in Tokyo Stock Exchange, has the same 33 PACAP industry code, whose annual average end-of month closing stock price is within the 20% range of that of the sample firm, and that has the closest average trading value with the sample firm over the fiscal year before the initiation. “Difference” column reports t-test statistics for the difference between the means for the sample and the control firms. Definitions of the variables are as defined in the text.

	<u>Sample</u>				<u>Control</u>				Difference
	Mean	Median	Std. Dev.	N	Mean	Median	Std. Dev.	N	t-stat
Market Value (Millions JPY)	142,053	28,699	487,965	151	113,207	30,698	240,384	155	0.65
Assets (Millions JPY)	182,225	50,894	363,620	165	154,165	60,847	322,773	166	0.74
Return On Asset	4.53%	3.83%	5.58%	165	4.80%	3.93%	4.52%	166	-0.48
Sales growth	4.06%	2.38%	39.95%	164	-2.57%	2.36%	49.36%	166	1.34
Leverage	15.59%	11.28%	16.17%	165	16.77%	11.43%	17.55%	166	-0.63
Tobin's Q	1.27	1.07	0.72	151	1.26	1.06	0.72	155	0.14
Industry-adjusted Tobin's Q	0.12	-0.01	0.70	151	0.1	-0.03	0.67	155	0.29
Average Stock Price (JPY)	21,748	778	102,508	165	21,570	777	102,143	166	0.02
Average Monthly Return	1.88%	1.57%	4.05%	163	1.34%	1.43%	3.25%	165	1.34
Average Monthly Trade value	9,687	839	41,799	165	5,209	1,058	11,238	166	1.33
Average Monthly Turnover	7.15%	3.26%	14.44%	165	7.17%	2.78%	17.70%	165	-0.01
Average volatility	2.37%	2.21%	0.87%	158	2.44%	2.21%	1.00%	163	-0.65

Minimum Trading Cost (JPY)	472,965	308,375	491,916	156	545,365	336,917	605,059	157	-1.16
Age	22.55	17	20.83	165	24.7	25	19.22	166	-0.97

Table 5

The impact of the initiation of the shareholder benefit on ownership measures over time

This table presents the changes in the ownership measures for our samples of stocks that initiate the shareholder benefit program and our control stocks that did not have the benefit program during the 1997-2008 period. The sample stocks initiated the shareholder benefit program in year t. "Diff" column reports the statistical difference for the means and medians between the sample and the control stocks. "Change from t-1" reports the changes in the log of 1 plus the number of individual investors (Panel A), changes in the log of 1 plus the number of non-individual investors (Panel B), changes in the log of 1 plus the average number of shares held by an individual investor (Panel C), and changes in the percentage ownership by individual investors (Panel D) since year t-1. The average number of shares held by an individual investor is calculated from the total number of shares held by all individual investors divided by the number of individual investors. *,**,*** indicate significance of the test statistics for the median (Wilcoxon rank-sum test) at the 10%, 5%, and 1% level, respectively.

Panel A: Number of Individual Investors

Year	Sample					Control					Difference median- test
	25th Percentile	50th Percentile	75th Percentile	Mean	N	25th Percentile	50th Percentile	75th Percentile	Mean	N	
t-1	2,079	3,267	10,154	10,544	165	2,790	4,541	9,588	8,210	166	
t	2,281	3,704	11,576	10,964	166	2,795	4,666	10,007	8,493	166	
t+1	2,975	4,799	12,828	11,760	161	2,835	4,669	9,972	8,622	163	
t+2	3,397	6,083	14,670	14,279	129	2,963	5,091	10,924	9,557	132	*
Change from t-1											
t	-6.94%	0.76%	16.85%	10.6%	165	-8.88%	-3.19%	5.82%	2.9%	166	
t+1	-6.28%	9.42%	53.16%	27.3%	160	-16.32%	-4.28%	8.67%	1.1%	163	**
t+2	-11.04%	12.67%	65.41%	31.7%	128	-19.36%	-2.18%	14.82%	2.9%	132	***

Panel B: Number of Non-Individual Investors

Year	Sample					Control					Difference median- test
	25th Percentile	50th Percentile	75th Percentile	Mean	N	25th Percentile	50th Percentile	75th Percentile	Mean	N	
t-1	139	252	486	383	165	172	275	457	367	166	
t	146	253	486	386	166	166	267	461	365	166	
t+1	172	263	476	406	161	176	273	487	368	163	
t+2	201	301	491	449	129	183	298	518	399	132	
Change from t-1											
t	-5.57%	-1.00%	10.50%	3.4%	165	-5.68%	-2.62%	3.82%	0.4%	166	
t+1	-7.31%	1.67%	17.90%	7.8%	160	-9.10%	-3.26%	5.93%	-0.1%	163	*
t+2	-10.35%	3.51%	22.61%	6.8%	128	-11.15%	-3.04%	8.94%	0.9%	132	***

Panel C: Percentage Ownership by Individual Investors

Year	Sample					Control					Difference median- test
	25th Percentile	50th Percentile	75th Percentile	Mean	N	25th Percentile	50th Percentile	75th Percentile	Mean	N	
t-1	22.90%	34.30%	50.20%	37.9%	165	21.10%	33.70%	45.80%	35.5%	166	
t	22.00%	33.80%	47.60%	36.6%	166	21.70%	33.60%	47.00%	35.3%	166	
t+1	22.20%	34.90%	48.40%	37.3%	161	19.80%	33.30%	45.00%	35.0%	163	
t+2	21.80%	34.40%	46.90%	35.4%	129	20.60%	32.20%	43.95%	33.4%	132	
Change from t-1											
t	-3.90%	-0.40%	1.60%	-1.34%	165	-2.10%	-0.25%	1.70%	-0.17%	166	**
t+1	-4.20%	0.00%	2.95%	-0.72%	160	-3.20%	-0.10%	2.60%	-0.14%	163	
t+2	-5.20%	-1.15%	3.45%	-1.09%	128	-3.80%	0.05%	3.35%	-0.12%	132	

Panel D: Average Number of shares held by an individual investor

Year	Sample					Control					Difference median- test
	25th Percentile	50th Percentile	75th Percentile	Mean	N	25th Percentile	50th Percentile	75th Percentile	Mean	N	
t-1	2,498	3,250	4,348	3,947	156	2,288	3,280	4,203	3,410	157	
t	2,005	3,029	4,211	3,528	157	2,286	3,265	4,144	3,320	158	
t+1	1,490	2,803	4,013	3,075	154	2,183	3,211	4,246	3,327	157	**
t+2	1,478	2,715	3,889	3,118	128	2,300	3,305	4,313	3,470	131	**
Change from t-1											
t	-17.80%	-2.41%	4.50%	-12.6%	156	-3.21%	1.43%	5.85%	-1.3%	157	
t+1	-47.36%	-12.78%	5.67%	-28.7%	151	-1.45%	3.60%	10.88%	0.4%	154	***
t+2	-63.57%	-12.61%	6.22%	-31.7%	127	-5.29%	3.22%	14.10%	-0.2%	131	***

Table 6

The impact of the shareholder benefit on ownership measures: Difference-in-difference regression analyses

This table reports the result of the OLS regression estimate for the effect of an initiation of the shareholder benefit program on the ownership measures. We use the observations for the year before the initiation (t-1) and the year after the initiation (t+1) for this regression. Differences in the dependent variables between t-1 and t+1 are regressed on the "Sample" dummy variable and differences in other independent variables between t-1 and t+1. "Sample" is a dummy variable that equals one for our sample stocks and zero for our control stocks. Coefficients on year and industry dummies are suppressed for brevity. Standard errors allow for heteroskedasticity and clustered by firm. t-statistics are reported in parentheses. *, **, *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	Dependent variables: Ownership measures			
	Log No. of Individual Investors	Log No. of Non-individual investors	Percentage ownership by individuals	Log Av. No. of shares held
Intercept	0.057 (0.47)	0.002 (0.02)	0.100 (5.33) ***	0.441 (2.65) ***
Sample	0.216 *** (5.51)	0.064 *** (3.58)	-0.001 (-0.08)	-0.221 *** (-6.34)
Log (Asset)	0.046 (0.35)	0.180 *** (2.68)	-0.061 * (-1.90)	-0.084 (-0.74)
ROA (%)	0.016 ** (2.50)	0.008 *** (2.87)	-0.003 ** (-2.38)	-0.026 *** (-4.68)
Return (%)	-0.019 ** (-2.35)	-0.007 *** (-2.82)	0.000 (-0.34)	0.016 *** (2.71)
Turnover (%)	0.013 *** (3.37)	0.006 *** (3.02)	0.000 (0.27)	-0.009 *** (-3.30)
Volatility (%)	-0.028 (-0.78)	-0.006 (-0.41)	-0.019 (0.35)	0.029 (0.93)
Log (Minimum Trading cost)	-0.280 *** (-6.78)	-0.032 ** (-2.03)	0.002 *** (-3.56)	0.220 *** (6.20)
R-Sq	0.466	0.430	0.283	0.487
No. of obs.	297	297	297	297

Table 7

The impact of the shareholder benefit on ownership measures for stocks newly listed during 1997-2008

This table presents the changes in the ownership measures for stocks that newly listed on Tokyo Stock Exchange Section 1 and 2 during the 1997-2008 period. The sample stocks had the shareholder benefit program from the year of listing. The control stocks newly listed during the same period but did not have the shareholder benefit throughout the period. "Change from t- =0" reports the changes in the log of 1 plus the number of individual investors (Panel A), changes in the log of 1 plus the number of non-individual investors (Panel B), changes in the log of 1 plus the average number of shares held by an individual investor (Panel C), and changes in the percentage ownership by individual investors (Panel D) since the year of listing. *,**,*** indicate significance of the test statistics for the median (Wilcoxon rank-sum test) at the 10%, 5%, and 1% level, respectively.

Panel A: Number of Individual Investors											
Year	Sample					Control					Difference median- test
	25th Percentile	50th Percentile	75th Percentile	Mean	N	25th Percentile	50th Percentile	75th Percentile	Mean	N	
t=0	1,335	2,349	4,617	7,388	295	1,278	2,349	4,926	5,497	638	
t+1	1,877	3,405	5,890	8,626	276	1,604	2,960	5,773	6,371	583	
t+2	2,395	3,908	7,141	9,414	254	1,862	3,515	6,471	7,370	523	**
t+3	2,566	4,579	8,915	9,963	226	2,125	3,769	7,005	7,424	445	***
Change from t=0											
t+1	-1.00%	17.79%	53.1%	29.19%	276	-8.20%	6.44%	35.9%	19.30%	583	***
t+2	8.91%	40.15%	77.0%	50.69%	254	-6.76%	15.61%	59.2%	31.89%	523	***
t+3	19.66%	62.76%	113.0%	72.79%	226	-6.01%	25.36%	76.6%	42.67%	445	***

Panel B: Number of Non-Individual Investors

Year	Sample					Control					Difference median- test
	25th Percentile	50th Percentile	75th Percentile	Mean	N	25th Percentile	50th Percentile	75th Percentile	Mean	N	
t=0	90	133	239	220	295	72	115.5	208	194	638	***
t+1	97	160	263	233	276	82	136	227	211	583	***
t+2	109	188	274	245	254	85	150	244	220	523	***
t+3	111	186.5	281	250	226	94	163	249	223	445	**
Change from t=0											
t+1	-9.10%	1.50%	20.84%	8.7%	583	-4.32%	3.74%	20.95%	11.1%	276	**
t+2	-10.82%	5.06%	34.16%	13.7%	523	-3.67%	9.05%	34.27%	17.8%	254	**
t+3	-13.72%	9.35%	39.59%	16.8%	445	-3.10%	13.32%	39.30%	21.2%	226	**

Panel C: Percentage Ownership by Individual Investors

Year	Sample					Control					Difference median- test
	25th Percentile	50th Percentile	75th Percentile	Mean	N	25th Percentile	50th Percentile	75th Percentile	Mean	N	
t=0	34.80%	48.30%	64.10%	48.7%	295	26.60%	49.15%	67.40%	48.2%	638	
t+1	34.35%	46.50%	61.15%	47.8%	276	25.50%	47.00%	64.90%	46.8%	583	
t+2	32.30%	47.05%	61.60%	47.3%	254	26.50%	45.30%	63.90%	46.4%	523	
t+3	33.60%	46.55%	61.10%	46.6%	226	28.30%	44.40%	61.70%	45.7%	445	
Change from t=0											
t+1	-3.35%	-0.05%	2.20%	-0.93%	276	-4.00%	-0.10%	2.40%	-1.08%	583	
t+2	-6.10%	-0.05%	3.40%	-1.15%	254	-5.10%	-0.20%	3.80%	-0.87%	523	
t+3	-6.70%	-0.55%	4.00%	-1.42%	226	-6.00%	-0.10%	4.70%	-0.58%	445	

Panel D: Average Number of shares held by an individual investor

Year	Sample					Control					Difference median- test
	25th Percentile	50th Percentile	75th Percentile	Mean	N	25th Percentile	50th Percentile	75th Percentile	Mean	N	
t=0	1,417	2,708	4,584	3,383	243	1,304	2,572	4,102	3,101	417	
t+1	1,198	2,135	3,827	2,779	229	1,227	2,377	3,950	2,897	393	
t+2	1,045	1,883	3,466	2,554	211	1,138	2,218	3,741	2,872	361	
t+3	897	1,625	3,077	2,289	190	1,109	2,108	3,637	2,803	330	**
Change from t=0											
t+1	-40.39%	-11.68%	2.23%	-21.9%	229	-15.95%	1.19%	10.21%	-6.2%	389	***
t+2	-64.65%	-22.91%	-0.86%	-36.3%	210	-26.21%	1.84%	16.42%	-9.5%	355	***
t+3	-98.41%	-46.72%	-10.37%	-54.1%	188	-43.08%	1.19%	19.12%	-13.3%	323	***

Table 8
Ex-dividend/benefit day price movement and trade volume: Summary statistics

This table reports the summary statistics for the variables defined in Chapter 5 for all dividend-paying samples and for sub-samples of stocks that pay dividend only and that pay dividend and have shareholder benefit for the sample period from 1999 to 2008. The definition of each variable is provided in the text.

Variable	ALL dividend payer No. of firms=1,725				Dividend Only No. of firms=1,476				Dividend + Shareholder benefit No. of firms=409			
	Mean	Median	Std Dev.	No. of obs.	Mean	Median	Std Dev.	No. of obs.	Mean	Median	Std Dev.	No. of obs.
Dividend/Price	1.15%	0.93%	0.81%	10,597	1.18%	0.96%	0.82%	8,667	1.03%	0.82%	0.72%	1,930
Rate of Return	-0.79%	-0.72%	2.45%	10,597	-0.65%	-0.60%	2.45%	8,667	-1.44%	-1.28%	2.35%	1,930
Price drop/Div	-0.614	-0.677	5.562	10,597	-0.349	-0.560	5.641	8,667	-1.805	-1.378	5.025	1,930
SHB1/P									0.08%	0.03%	0.12%	1,211
SHB2/P									1.32%	0.80%	1.91%	1,211
Price drop/(Div+SHB1)									-1.620	-1.331	3.926	1,211
Price drop/(Div+SHB2)									-0.805	-0.659	1.828	1,211
Abnormal Volume	0.168	-0.031	0.822	10,597	0.162	-0.044	0.847	8,667	0.193	0.036	0.696	1,930
Market risk (θ^M)	0.759	0.760	0.483	10,597	0.782	0.790	0.489	8,667	0.660	0.630	0.440	1,930
Idiosyncratic risk (θ^{IV})	0.524	0.540	0.450	10,597	0.559	0.571	0.435	8,667	0.366	0.366	0.479	1,930
MV (billions JPY)	177.890	36.264	439.240	10,597	180.436	34.629	450.157	8,667	166.457	43.994	386.334	1,930

Table 9
Price movement around Ex-dividend/benefit day: Univariate Analysis

This table reports the mean Rate of Return between the cum- and ex-day. For each year observation, we sort our entire samples by dividend yield and form Low, Middle, and High dividend yield subsamples. We also sort stocks with the shareholder benefit by the shareholder benefit yield in SHB1 and SHB2 definition to form Low, Middle, and High shareholder benefit yield subsamples. In Panel A, we report the mean rate of return for all stocks and for each dividend yield subsamples for stocks with dividend only and for stocks with both dividend and shareholder benefit. In Panel B, we report the mean rate of return for stocks with the shareholder benefit for each dividend yield-shareholder benefit yield subsamples. The “Difference” column in Panel A reports the difference between the stocks with and without the shareholder benefit, for all samples for each type and for each subsamples of dividend yield. We report t-statistic for the test for the mean (difference for the “Difference” column) to equal zero in parenthesis. Numbers of observations are reported in bracket.

Panel A: Rate of Return and Dividend Yield

		Dividend Only	Dividend + Shareholder benefit	Difference
Dividend Yield	All	-0.65%	-1.44%	0.79%
		(-24.64)	(-26.93)	(13.30)
		[8,667]	[1,930]	
	Low	0.09%	-0.96%	1.05%
		(2.02)	(-10.96)	(10.69)
		[2,776]	[749]	
	Middle	-0.51%	-1.37%	0.85%
		(-12.57)	(-16.25)	(9.13)
		[2,855]	[677]	
	High	-1.45%	-2.25%	0.81%
		(-31.21)	(-22.23)	(7.23)
		[3,036]	[504]	

Panel B: Rate of Return, Dividend Yield and Shareholder Benefit Yield for stocks with shareholder benefit

		Shareholder benefit Yield (SHL1/P)			Shareholder benefit Yield (SHL2/P)		
		Low	Middle	High	Low	Middle	High
All		-0.73%	-1.48%	-2.29%	-1.19%	-1.39%	-1.94%
		(-6.74)	(-13.55)	(-20.20)	(-10.19)	(-12.98)	(-16.50)
		[396]	[403]	[412]	[396]	[403]	[412]
Dividend Yield	Low	-0.57%	-1.09%	-2.18%	-0.88%	-0.71%	-1.76%
		(-3.43)	(-5.33)	(-8.40)	(-4.15)	(-4.20)	(-7.39)
		[207]	[128]	[89]	[146]	[158]	[120]
	Middle	-0.77%	-1.26%	-1.79%	-0.98%	-1.36%	-1.61%
		(-4.71)	(-7.64)	(-11.88)	(-5.96)	(-9.01)	(-9.39)
		[119]	[156]	[169]	[135]	[158]	[151]
	High	-1.14%	-2.19%	-2.90%	-1.83%	-2.67%	-2.44%
		(-4.83)	(-11.49)	(-14.81)	(-8.36)	(-12.18)	(-12.09)
		[70]	[119]	[154]	[115]	[87]	[141]

Table 10

Price movement around Ex-dividend/benefit day: Multivariate Analysis

This table reports the result of the regression analyses of the rate of return between cum-dividend/benefit and ex-dividend/benefit day. The first three models are for all stocks that have dividend payout. The last two models are for stocks with shareholder benefit and dividend payment. The dependent variable is the rate of return throughout the model. Coefficients on year dummies are suppressed for brevity. We report t-statistic in parentheses. *, **, *** indicate significance of the coefficient at the 10%, 5%, and 1% level, respectively.

	<u>All Dividend paying sample</u>			<u>Stocks with Dividend and SHB</u>	
	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(1)</u>	<u>(2)</u>
Constant	-0.004 *** (-3.89)	-0.001 (-1.27)	-0.001 (-1.16)	-0.008 * (-2.29)	-0.008 ** (-1.73)
D/P	-0.702 *** (-20.64)	-0.756 *** (-22.67)	-0.764 *** (-21.42)	-0.417 *** (-4.36)	-0.434 *** (-4.30)
SHB dummy		-0.009 *** (-12.96)	-0.010 *** (-8.57)		
SHB*D/P			0.056 (0.66)		
SHB1/P				-3.349 *** (-2.14)	
SHB2/P					-0.084 ** (-5.67)
θ^M	0.004 *** (3.14)	0.001 ** (2.16)	0.001 ** (2.14)	0.005 *** (2.87)	0.005 *** (2.73)
θ^{IV}	0.002 *** (5.15)	0.003 *** (4.14)	0.003 *** (4.15)	0.005 ** (2.89)	0.005 *** (2.23)
No. of obs.	10,597	10,597	10,597	1,211	1,211
No. of firms	1,725	1,725	1,725	290	290
R-squared					
within	0.024	0.026	0.026	0.044	0.039
between	0.201	0.268	0.268	0.279	0.256
overall	0.093	0.113	0.113	0.140	0.110

Table 11

Trade volume around Ex-dividend/benefit day: Univariate Analysis

This table reports the mean abnormal trade volume around the ex-dividend/benefit day. For each year observation, we sort our entire samples by dividend yield and form Low, Middle, and High dividend yield subsamples. We also sort stocks with the shareholder benefit by the shareholder benefit yield in SHB1 and SHB2 definition to form Low, Middle and High shareholder benefit yield subsamples. In Panel A, we report the mean abnormal trade volume for all stocks and for each dividend yield subsamples for stocks with dividend only and for stocks with both dividend and shareholder benefit. In Panel B, we report the mean abnormal trade volume for stocks with the shareholder benefit for each dividend yield-shareholder benefit yield subsamples. The “Difference” column in Panel A reports the difference between the stocks with and without the shareholder benefit, for all samples for each type and for each subsamples of dividend yield. We report t-statistic for the test for the mean (difference for the “Difference” column) to equal zero in parenthesis. Numbers of observations are reported in bracket.

Panel A: Abnormal Trade Volume and Dividend Yield

		Dividend Only	Dividend + Shareholder benefit	Difference
Dividend Yield	All	0.162 (17.81) [8,667]	0.193 (12.17) [1,930]	0.031 (1.69)
	Low	0.119 (8.47) [2,776]	0.195 (7.39) [749]	0.076 (2.54)
	Middle	0.146 (9.71) [2,855]	0.162 (6.28) [677]	0.016 (0.52)
	High	0.216 (12.33) [3,036]	0.232 (7.54) [504]	0.015 (0.43)

Panel B: Abnormal Trade Volume, Dividend Yield and Shareholder Benefit Yield

		Shareholder benefit Yield (SHL1/P)			Shareholder benefit Yield (SHL2/P)		
		Low	Middle	High	Low	Middle	High
All		0.133	0.188	0.305	0.164	0.188	0.275
		(4.05)	(5.30)	(8.44)	(5.29)	(5.22)	(7.35)
		[396]	[403]	[412]	[396]	[403]	[412]
Dividend Yield	Low	0.179	0.201	0.408	0.159	0.185	0.388
		(3.42)	(2.67)	(4.28)	(2.91)	(2.84)	(4.41)
		[207]	[128]	[89]	[146]	[158]	[120]
	Middle	0.040	0.151	0.242	0.123	0.127	0.215
		(0.86)	(2.93)	(4.75)	(2.50)	(2.65)	(3.90)
		[119]	[156]	[169]	[135]	[158]	[151]
	High	0.155	0.221	0.316	0.218	0.303	0.244
		(2.43)	(3.84)	(5.57)	(3.85)	(3.91)	(4.59)
		[70]	[119]	[154]	[115]	[87]	[141]

Table 12

Trade volume around Ex-dividend/benefit day: Multivariate Analysis

This table reports the result of the regression analyses of the abnormal trade volume around ex-dividend/benefit day. This table reports the result of the regression analyses of the abnormal trade volume around ex-dividend/benefit day. The first three models are for all stocks that have dividend payout. The last two models are for stocks with shareholder benefit and dividend payment. The dependent variable is the rate of return throughout the model. Coefficients on year dummies are suppressed for brevity. We report t-statistic in parentheses. *, **, *** indicate significance of the coefficient at the 10%, 5%, and 1% level, respectively.

	<u>All Dividend paying sample</u>						<u>Stocks with Dividend and SHB</u>			
	<u>(1)</u>		<u>(2)</u>		<u>(3)</u>		<u>(1)</u>		<u>(2)</u>	
Constant	1.108 ***		1.088 ***		1.093 ***		-0.747 ***		1.060 ***	
	(31.94)		(30.77)		(30.63)		(9.66)		(10.03)	
D/P	3.165 ***		3.435 ***		2.992 ***		3.072		3.841	
	(3.05)		(3.31)		(2.70)		(1.03)		(1.28)	
SHB dummy			0.058 ***		0.026					
			(2.68)		(0.72)					
SHB*D/P					3.074					
					(1.14)					
SHB1/P							48.817 ***			
							(2.69)			
SHB2/P									0.419	
									(0.35)	
θ^M	-0.115 ***		-0.109 ***		-0.110 ***		-0.103 *		-0.111 **	
	(-6.40)		(-6.07)		(-6.10)		(-1.95)		(-2.10)	
θ^{IV}	-0.182 ***		-0.175 ***		-0.175 ***		-0.246 ***		-0.266 ***	
	(-8.15)		(-7.83)		(-7.79)		(-4.45)		(-4.82)	
No. of obs.	10,597		10,597		10,597		1,211		1,211	
No. of firms	1,725		1,725		1,725		290		290	
R-squared										
within	0.191		0.191		0.191		0.153		0.147	
between	0.152		0.158		0.160		0.118		0.116	
overall	0.175		0.176		0.176		0.154		0.148	

Table 13
Ownership structure and Firm value: Summary statistics

This table reports the summary statistics for our analyses on the relation between ownership and firm value for all stocks listed on the Tokyo Stock Exchange Section 1 and 2 during the 1996-2008 period. *, **, *** indicate significance of the test statistics for the mean (two-sample t-test) and the median (Wilcoxon rank-sum test) at the 10%, 5%, and 1% level, respectively.

	<u>Firms with Shareholder Benefit Program</u>				<u>Firms without Shareholder benefit program</u>				Difference	
	Mean	Median	Std. Dev.	N	Mean	Median	Std. Dev.	N	Mean	Median
Panel A: Firm characteristics										
Tobin's Q	1.34	1.14	0.77	4,971	1.29	1.07	0.82	18,710	***	***
Market-to-Book value of equity	1.81	1.34	1.71	4,954	1.70	1.21	1.75	18,642	***	***
Market Value (Millions JPY)	126,130	32,120	310,294	4,971	142,949	26,042	378,600	18,710	***	***
Assets (Millions JPY)	171,007	53,676	369,509	4,971	191,083	56,453	431,738	18,710	***	**
Return On Asset	4.96%	4.03%	5.14%	4,971	3.79%	3.07%	4.92%	18,710	***	***
Sales growth	-0.52%	2.26%	43.36%	4,954	-0.11%	1.43%	36.65%	18,664		***
Leverage	49.63%	49.62%	22.03%	4,971	53.55%	54.36%	21.78%	18,710	***	***
Average Monthly Turnover	4.52%	2.34%	7.86%	4,971	6.23%	2.92%	10.85%	18,710	***	***
Age	20.3	10.0	19.8	4,971	29.3	35.0	18.5	18,710	***	***

Panel B: Ownership

No. of shareholders	15,149	5,706	34,248	4,971	14,560	5,340	48,968	18,710		***
Individual	14,738	5,401	33,853	4,971	14,115	5,037	48,348	18,710		***
ΔIndividual	11%	4%	26%	4,681	3%	-1%	21%	17,979	***	***
Non-individual	410	272	488	4,971	445	277	718	18,710	***	
Δ Non-individual	2%	-1%	12%	4,681	-1%	-2%	11%	17,979	***	***
% owned by individual investors	39%	36%	19%	4,971	35%	32%	18%	18,710	***	***
Δ % owned by individual investors	0.2%	0.2%	4.5%	4,681	0.4%	0.3%	4.3%	17,979	***	***
Av. # shares held by individual investor	2,918	2,591	2,027	4,681	3,369	3,148	1,672	17,829	***	***

Table 14
Ownership structure and firm value: Multivariate Analysis

This table presents the results of the panel regression estimate of the relation between ownership and firm value with firm level fixed effect and year effect. The first column reports the result for all firms listed on Tokyo Stock Exchange Section 1 and 2. The second column reports the result for firms that have the shareholder benefit program in any year during the 1996-2008 period. The last column reports the results for firms that did not have the shareholder benefit program throughout the sample period. The dependent variable is Tobin's Q ratio. SHB is a dummy variable that equals one if a firm has the shareholder benefit program in a given year. Other variables are as defined in the text. Coefficients on year dummy variables are not reported for brevity. We report t-statistic in parentheses. *, **, *** indicate significance of the coefficient at the 10%, 5%, and 1% level, respectively.

	All firms	Firms with SHB	Firms w/out SHB
Intercept	3.8432 *** (10.66)	4.0350 *** (6.53)	3.8955 *** (8.61)
SHB	0.0586 *** (3.20)	0.0189 (0.95)	-
Log # Individual	0.4135 *** (5.61)	0.3968 *** (3.35)	0.4121 *** (4.37)
(Log # Individual) ₂	-0.0211 *** (-5.09)	-0.0227 *** (-3.38)	-0.0205 *** (-3.89)
% Individual. Ownership	-0.0167 *** (-31.86)	-0.0141 *** (-14.41)	-0.0174 *** (-27.98)
Log (Asset)	-0.3349 *** (-21.63)	-0.3440 *** (-11.17)	-0.3324 *** (-18.48)
Sales growth (%)	0.0004 *** (3.04)	0.0005 ** (2.24)	0.0004 ** (2.48)
Leverage (%)	0.0048 *** (11.19)	0.0035 *** (4.19)	0.0052 *** (10.35)
ROA (%)	0.0391 *** (34.17)	0.0421 *** (17.74)	0.0385 *** (29.37)
Turnover (%)	0.0056 *** (13.19)	0.0100 *** (9.44)	0.0050 *** (10.79)
Log (Age)	-0.1927 *** (-17.07)	-0.1588 *** (-8.39)	-0.2210 *** (-15.48)

No. of observation	22,658	6,320	16,338
No. of firms	2,575	786	1,789
R-squared			
within	0.268	0.267	0.274
between	0.126	0.110	0.134
overall	0.107	0.102	0.108

Table 15

Ownership structure and firm value: Multivariate Analysis (by asset size)

This table presents the results of the panel regression estimate in Table 14 for sub-samples sorted by asset size. We run the regression for all sample, firms that have the shareholder benefit program in any year during the 1996-2008 period, and for firms that did not have the shareholder benefit program throughout the sample period separately. Coefficients on year dummy variables are not reported for brevity. We report t-statistic in parentheses. *, **, *** indicate significance of the coefficient at the 10%, 5%, and 1% level, respectively.

	<u>All firms</u>		<u>Firms with SHB</u>		<u>Firms w/out SHB</u>	
	Asset size	Asset size	Asset size	Asset size	Asset size	Asset size
	<median	>=median	<median	>=median	<median	>=median
Intercept	6.4878 *** (8.71)	4.7697 *** (9.56)	3.6209 *** (3.13)	4.7337 *** (5.20)	8.9131 *** (8.90)	5.3926 *** (8.96)
Shareholder Benefit	0.0462 (1.43)	0.0563 *** (2.77)	0.0196 (0.56)	0.0213 (0.98)		
Log # Individual	0.0057 (0.03)	-0.1176 (-1.23)	0.7673 *** (3.08)	0.1318 (0.79)	-0.6012 ** (-2.57)	-0.2859 ** (-2.47)
(Log # Individual)_ squared	0.0102 (0.98)	0.0019 (0.38)	-0.0471 *** (-3.07)	-0.0092 (-1.04)	0.0528 *** (3.68)	0.0093 (1.52)
% Individual Ownership	-0.0173 *** (-21.56)	-0.0152 *** (-22.03)	-0.0114 *** (-7.39)	-0.0166 *** (-13.15)	-0.0202 *** (-21.09)	-0.0146 *** (-17.65)
Log (Asset)	-0.4952 ***	-0.1591 ***	-0.4879 ***	-0.2795 ***	-0.5122 ***	-0.1196 ***

		(-19.11)		(-7.79)		(-9.41)		(-6.47)		(-17.06)		(-5.15)
Sales growth (%)		0.0011 ***		-0.0001		0.0010 **		0.0000		0.0012 ***		-0.0001
		(5.22)		(-0.83)		(2.57)		(-0.17)		(4.70)		(-0.73)
Leverage (%)		0.0059 ***		0.0032 ***		0.0052 ***		0.0040 ***		0.0067 ***		0.0029 ***
		(9.45)		(5.21)		(4.20)		(3.41)		(9.23)		(4.06)
ROA (%)		0.0338 ***		0.0442 ***		0.0349 ***		0.0444 ***		0.0330 ***		0.0446 ***
		(20.27)		(28.38)		(10.16)		(13.45)		(17.31)		(25.13)
Turnover (%)		0.0054 ***		0.0034 ***		0.0113 ***		0.0047 ***		0.0041 ***		0.0032 ***
		(9.20)		(5.33)		(7.49)		(3.14)		(6.35)		(4.62)
Log (Age)		-0.1952 ***		-0.1620 ***		-0.1347 ***		-0.1207 ***		-0.2210 ***		-0.2173 ***
		(-11.65)		(-9.84)		(-4.56)		(-4.79)		(-10.75)		(-9.84)
N		11,022		11,636		3,055		3,265		7,967		8,371
No. of firms		1,652		1,358		514		418		1,138		940
R-squared												
	within	0.279		0.303		0.273		0.305		0.293		0.311
	between	0.278		0.085		0.192		0.052		0.318		0.093
	overall	0.285		0.119		0.231		0.085		0.312		0.128

Table 16

Ownership structure and firm value: Multivariate Analysis (by age)

This table presents the results of the panel regression estimate in Table 14 for sub-samples sorted by firm age (years since listing). We run the regression for all sample, firms that have the shareholder benefit program in any year during the 1996-2008 period, and for firms that did not have the shareholder benefit program throughout the sample period separately. Coefficients on year dummy variables are not reported for brevity. We report t-statistic in parentheses. *, **, *** indicate significance of the coefficient at the 10%, 5%, and 1% level, respectively.

	<u>All firms</u>		<u>Firms with SHB</u>		<u>Firms w/out SHB</u>	
	Firm age	Firm age	Firm age	Firm age	Firm age	Firm age
	=<10	> 10	=<10	> 10	=<10	> 10
Intercept	3.8965 *** (4.03)	4.4374 *** (11.16)	6.4926 *** (4.92)	2.9278 *** (4.21)	1.2247 (0.84)	4.9686 *** (10.44)
Shareholder Benefit	0.0558 (1.14)	0.0412 ** (2.48)	0.0402 (0.89)	-0.0015 (-0.09)		
Log # Individual	0.8104 *** (4.31)	0.0762 (1.03)	0.4563 ** (2.00)	0.0976 (0.78)	1.3480 *** (4.44)	0.0552 (0.62)
(Log # Individual)_ squared	-0.0450 *** (-4.03)	-0.0028 (-0.70)	-0.0273 ** (-2.01)	-0.0052 (-0.77)	-0.0775 *** (-4.27)	-0.0017 (-0.34)
% Individual.	-0.0187 *** (-12.62)	-0.0156 *** (-33.28)	-0.0153 *** (-7.51)	-0.0122 *** (-14.02)	-0.0199 *** (-9.43)	-0.0163 *** (-29.64)
Log (Asset)	-0.5411 *** (-11.49)	-0.2454 *** (-17.99)	-0.6404 *** (-8.40)	-0.1943 *** (-7.41)	-0.4878 *** (-7.88)	-0.2520 *** (-15.91)

Sales growth (%)	0.0008 ***	-0.0001	0.0006	0.0003 *	0.0011 ***	-0.0003 *
	(2.83)	(-0.93)	(1.41)	(1.71)	(2.66)	(-1.76)
Leverage (%)	0.0040 ***	0.0053 ***	0.0032 *	0.0049 ***	0.0043 **	0.0053 ***
	(3.15)	(14.17)	(1.70)	(7.03)	(2.53)	(12.14)
ROA (%)	0.0489 ***	0.0325 ***	0.0491 ***	0.0360 ***	0.0476 ***	0.0324 ***
	(17.00)	(30.55)	(10.99)	(15.81)	(12.48)	(26.80)
Turnover (%)	0.0121 ***	0.0049 ***	0.0176 ***	0.0084 ***	0.0114 ***	0.0045 ***
	(8.73)	(14.05)	(7.11)	(10.14)	(6.49)	(11.61)
Log (Age)	-0.2767 ***	-0.1927 ***	-0.2302 ***	0.0655	-0.2776 ***	-0.2935 ***
	(-7.15)	(-3.59)	(-4.43)	(0.73)	(-4.99)	(-4.51)
N	6,352	16,306	2,764	3,556	3,588	12,750
No. of firms	1,276	1,577	523	362	753	1,215
R-squared						
within	0.284	0.321	0.270	0.366	0.304	0.317
between	0.144	0.002	0.106	0.015	0.143	0.001
overall	0.165	0.053	0.120	0.076	0.174	0.051

Table 17

Ownership structure and firm value: Multivariate Analysis (by percentage ownership by individuals)

This table presents the results of the panel regression estimate in Table 14 for sub-samples sorted by percentage ownership by individual investors. We run the regression for all sample, firms that have the shareholder benefit program in any year during the 1996-2008 period, and for firms that did not have the shareholder benefit program throughout the sample period separately. Coefficients on year dummy variables are not reported for brevity. We report t-statistic in parentheses. *,**,*** indicate significance of the coefficient at the 10%, 5%, and 1% level, respectively.

	<u>All Firms</u>			<u>Firms with SHB</u>			<u>Firms w/out SHB</u>		
	Individual <33.4%	33.4%< Individual <51%	51%<= Individual	Individual <33.4%	33.4%< Individual <51%	51%<= Individual	Individual <33.4%	33.4%< Individual <51%	51%<= Individual
Intercept	4.0565 *** (8.53)	3.5202 *** (4.89)	8.7570 *** (6.69)	3.6724 *** (4.74)	2.1447 (1.60)	8.9045 *** (4.40)	4.2722 *** (7.02)	6.5022 *** (7.17)	11.2732 *** (5.51)
Shareholder Benefit	0.0236 (0.99)	0.0724 *** (2.62)	-0.1278 ** (-2.05)	-0.0109 (-0.44)	0.0506 (1.43)	-0.1648 ** (-2.53)			
Log # Individual	0.3860 *** (4.20)	0.5279 *** (3.32)	-0.3098 (-1.14)	0.3479 ** (2.45)	1.2083 *** (4.41)	-0.0618 (-0.17)	0.3738 *** (3.12)	-0.3126 (-1.53)	-1.0457 ** (-2.27)
(Log # Individual) square	-0.0198 *** (-3.91)	-0.0295 *** (-3.17)	0.0351 ** (2.24)	-0.0182 ** (-2.28)	-0.0758 *** (-4.74)	0.0187 (0.91)	-0.0194 *** (-2.97)	0.0238 ** (1.98)	0.0799 *** (2.90)
% Individual	-0.0335 ***	-0.0137 ***	-0.0191 ***	-0.0294 ***	-0.0113 ***	-0.0233 ***	-0.0345 ***	-0.0150 ***	-0.0172 ***

Ownership	(-28.43)	(-11.81)	(-9.10)	(-13.96)	(-4.30)	(-6.17)	(-24.33)	(-12.06)	(-6.74)
Log (Asset)	-0.3137 ***	-0.3485 ***	-0.5972 ***	-0.2739 ***	-0.4703 ***	-0.6767 ***	-0.3167 ***	-0.3124 ***	-0.5632 ***
	(-13.17)	(-15.56)	(-11.55)	(-6.10)	(-8.20)	(-6.84)	(-11.23)	(-13.54)	(-9.14)
Sales growth (%)	0.0003	0.0004 **	0.0006 *	0.0007 **	-0.0003	0.0000	0.0001	0.0005 ***	0.0012 ***
	(1.62)	(2.00)	(1.84)	(2.44)	(-0.62)	(-0.06)	(0.62)	(2.79)	(2.83)
Leverage (%)	0.0044 ***	0.0042 ***	0.0084 ***	0.0038 ***	0.0054 ***	0.0070 ***	0.0042 ***	0.0040 ***	0.0096 ***
	(6.71)	(6.48)	(6.70)	(3.23)	(3.72)	(2.77)	(5.34)	(5.74)	(6.55)
ROA (%)	0.0399 ***	0.0241 ***	0.0476 ***	0.0404 ***	0.0329 ***	0.0505 ***	0.0404 ***	0.0212 ***	0.0457 ***
	(23.38)	(14.58)	(15.94)	(11.27)	(7.41)	(9.29)	(20.60)	(12.65)	(12.61)
Turnover (%)	0.0080 ***	0.0020 ***	0.0057 ***	0.0121 ***	0.0003	0.0120 ***	0.0075 ***	0.0025 ***	0.0045 ***
	(9.37)	(3.99)	(5.52)	(5.97)	(0.19)	(5.29)	(7.86)	(5.00)	(3.77)
Log (Age)	-0.1690 ***	-0.1679 ***	-0.2183 ***	-0.1602 ***	-0.1388 ***	-0.2409 ***	-0.1873 ***	-0.1844 ***	-0.2331 ***
	(-9.55)	(-10.11)	(-6.67)	(-5.57)	(-4.28)	(-4.25)	(-8.34)	(-9.43)	(-5.69)
N	11,694	6,999	3,965	3,042	1,900	1,378	8,652	5,099	2,587
No. of firms	1658	1,355	905	435	406	311	1223	949	594
R-squared									
within	0.2971	0.2713	0.3004	0.3070	0.2488	0.2912	0.2986	0.3076	0.3188
between	0.1435	0.1258	0.2729	0.1713	0.0612	0.1947	0.1371	0.2315	0.3069
overall	0.1057	0.1046	0.2814	0.1510	0.0482	0.1853	0.0970	0.1925	0.3289

Figure 1

Number of firms with Shareholder benefit program: Industry breakdown

This figure shows the number of firms with the shareholder benefit program and industry breakdown based on the 1-digit Industry code in the PACAP database. The bar indicates the number of firms with left axis. The line indicates the percentage of firms with the shareholder benefit among stocks listed on Tokyo Stock Exchange Section 1 and 2 with the right axis.

