РАЗДЕЛ 1
НАУЧНЫЕ ИССЛЕДОВАНИЯ
И КОНЦЕПЦИИ

SECTION 1
ACADEMIC
INVESTIGATIONS
& CONCEPTS

OWNERSHIP STRUCTURE AND THE RISK-RETURN PROFILES OF JAPANESE STOCKS

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Abstract

This paper empirically investigates how ownership structure of Japanese firms affects the risk-return profiles of their stocks. We find significant relationships between ownership and firms' operational performance, i.e., the ownership of financial institutions is associated with poor performance while the ownership of large shareholders is associated with the opposite. However, comparing the returns on portfolios sorted by ownership, we find no significant relationships between ownership and the rates of returns. Specifically, excess returns are insignificant after controlling for three risk factors (i.e., market, size, and value) while factor loadings are significantly different across portfolios, i.e., the ownership of financial institutions is associated with low-risk, low-return portfolios while the ownership of large shareholders is associated with the opposite.

Keywords: Corporate ownership, stock returns, risk factors

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1. Introduction

The relationship between stock ownership and firm performance has increasingly attracted attention of academicians and practitioners, given the global merger wave and the surge of activist funds and, especially in Japan, the dissolution of cross shareholdings and increase in the threat of hostile takeovers.

Without agency problems between shareholders and managers, there would be no systematic relationship between stock ownership and firm performance. However, many researchers have detected various violations of this ideal irrelevance principle since Berle and Means (1932) advocated the separation of ownership and control in modern corporations.

Existing literature explores the relationship between ownership and firms' profitability or market values measured by, e.g., Tobin's Q. However, to our knowledge, no prior studies extensively explore the relationship between ownership and another aspect of firms' performance, i.e., the risk-return profile of their stocks.

There are some reasons why ownership may be closely related to the risk-return profile of stocks. First, banks and other large creditors may intervene in management to make managers choose low-risk, low-

return projects. Banks can own a legally-limited portion of corporate stocks in many countries even if they are allowed to hold stocks. For instance, in Japan, the Anti-Monopoly Law restricts banks to own only 5 % of shares issued by non-financial companies at the maximum. (The maximum proportion was 10 % before March 1987.) Consequently, given relatively small stakes as shareholders as compared with those as debtholders, banks may control firms to protect their credit values rather than to increase their equity values. In addition, banks are endowed with franchise values accrued from entry restriction. This may lead them to prefer low-risk, low-return stocks in order to lessen their failure risks, although they could potentially prefer high-risk, high-return stocks due to high leverage and protection by deposit insurance.

Second, large shareholders, who can effectively overcome the free-rider problem associated with corporate control, may intervene in management to make managers choose high-risk, high-return projects. This is because by so doing they can enhance their equity values at the sacrifice of creditors' values under the limited liability.

This paper investigates the relationship between ownership structure and the risk-return profile of stocks. For this aim, we apply a Fama-French (1995) multi-factor model to Japanese stock portfolios sorted by ownership of financial institutions or that of large shareholders. The multi-factor model, which is a regression of the return of a portfolio on some systematic risks, or factors, tells us excess returns after controlling for factors as well as factor loadings of each portfolio.

Using monthly stock returns data of Japanese listed firms during the period of 1981-2003, we find the following facts. First, portfolios with high ownership of financial institutions have low risk loadings. Second, oppositely portfolios with high ownership of the ten largest shareholders have high risk loadings. Third, despite these differences in risk exposure, no portfolios can yield significant excess returns. These findings suggest that, consistent with the prediction of agency theory, creditor-dominance in corporate governance restrains risks at the cost of decreased returns while shareholder-dominance enhances returns at the cost of increased risks, but stock markets efficiently incorporate these effects of ownership into stock prices.

The rest of the paper is organized as follows. Section 2 reviews prior literature on the relationship between stock ownership and firm performance. Section 3 describes our dataset. Section 4 checks the relationship between ownership and firms' operating performance. Section 5 investigates the relationship between ownership and stock returns. Section 6 concludes.

2. Literature Review

There is vast literature on the effects of ownership structure on firms' performance. Despite a large number of empirical studies, especially for the US and UK firms, [they] *do not provide conclusive evidence either in support of, or in opposition to, the hypothesis that the ownership and control structures of firms materially affect their performance* (Short ,1994, pp. 227). The existence of non-linear relationships between ownership and performance may at least partly account for the mixed conclusions in the previous studies (Morck et al., 1998; McConnel and Servaes). However, lack of the adjustment for risk factors may also account for the mixed results.

There are a few studies that examine the relationship between ownership and performance of Japanese firms. Morck, Nakamura and Shivdasani (2000) used the data of Japanese listed firms as of 1986 and found that the relationship between the ownership of a firm's main bank and its Tobin's q is nonlinear, with a negative relationship for the low ownership of the main bank and a positive one for the high ownership. They also found a positive relationship between managerial ownership or large shareholders' ownership and Tobin's q. Matsuura (2003) investigated Japanese listed firms over the period of 1970-2001, finding that a firm' ROA is higher if the ownership of financial institutions is higher or if the ownership of non-financial firms is higher. However, these results were obtained without controls for risk factors.

Though no direct evidence has yet been found on the relationship between firms' ownership and the risk-return profiles of their stocks, some researchers have recently studied the effects of firms' corporate governance on their stock returns after controlling for risks. Gompers, Ishii and Metrick (2003) found for the period 1990 to 1999 that firms with strong shareholder rights have risk-adjusted returns that are 8.5% higher per year than those of firms with weak shareholder rights. Though Gompers et al.'s interpretation that weak governance causes poor stock returns is criticized by Core, Guay and Rusticus (2006), their approach using multi-factor models is very useful, which we adopt to examine the relationship between firms' ownership structure and their risk-return profiles. Aman and Nguen (2008), using Japanese firm data during 2000-2005, examined how the difference in corporate governance, especially in the firm's internal controls, affects stock returns. Though we focus on the difference in ownership structure and our sample covers a broader firm-year, our results and theirs have the same implication that the difference in ownership structure or governance results in the difference in risk factors but not in the difference in abnormal returns.

3. Data

Our main data sources are Corporate Financial Database and Stock Database published by *Nikkei Financial Quest* and Stock Returns published by *Japan Securities Research Institute*. This paper covers the period of 1981-2003 and the firms listed in any one of the stock exchanges in Japan. The number of firms changes from 1829 in 1981 to 3639 in 2003. We use the financial statements on unconsolidated bases, because financial statements on consolidated bases are available only from 2000 for most firms. We exclude the firm-year data whose book-to-market ratio of capital is more than 100 or less than 0.01.

We classify firms by the proportion of the stocks that financial institutions, including banks and insurance companies, own or by the proportion of the stocks that ten largest shareholders own.

Table 1 shows descriptive statistics. While the average share owned by financial institutions showed a declining trend from 30% in 1990 to 20% in 2003, the average share owned by 10 largest shareholders was stable around 50%.

4. Relationship between ownership and operational performance

This section examines the relationship between firms' ownership structure and their operating performance. Following Gompers et al., (2003), we apply median regressions, i.e., least absolute deviation regressions, to each year,.

$$ROE_t = \alpha + \beta_1 * G_t + \beta_2 * BM_t + \varepsilon_t \qquad (1),$$

where *ROE* is the ratio of current income to equity, *G* is the ownership index, *BM* is the logarithm of the book-to-market ratio of capital, and ε is a random error .We add BM to the regressors to control for expected returns following Gomeprs et al, (2003). We use two kinds of variables for *G*. The one is associated with the ownership of financial institutions. We use the share owned by financial institutions. We also use the following dummy variables: *Financial* which takes on the value of one if the share owned by financial institutions is larger than the largest 30 percentile and zero otherwise, and *Non-Financial* which takes on the value of one if their share is lower than the lowest 30 percentile and zero otherwise. The other is associated with the ownership of the ten largest shareholders. We use the share owned by the ten largest shareholders. We also use the following dummy variables: *Concentrated* for the share owned by the largest ten shareholders larger than the largest 30 percentile and *Diverse* for the share smaller than the lowest 30 percentile.

We use median regression instead of OLS regressions in order to avoid the influences of some abnormally large ROEs on our estimates.

Table 2 presents the results for the share owned by financial institutions (Column 1), *Financial* (Column 2) and *Non-Financial* (Column 3). The coefficients on the share owned by financial institutions are negative for most years and significant after 1987. The absolute values of the coefficients show an upward trend in the 1990s and 2000s. The coefficients on *Financial* are also negative for most years and significant after 1995, while the coefficients on *Non-Financial* are positive for most years and significant after 1986. Overall, our results suggest that in the 1990s and 2000s, the ownership of financial institution is a significant determinant of firms' operating performance, i.e., the performance became worse if a relatively large share of their stocks was owned by financial institutions.

Table 3 presents the results for the share owned by the largest ten shareholders (Column 1), *Concentrated* (Column 2), and *Diverse* (Column 3). The coefficients on the share owned by the largest ten shareholders are positive and significant after 1985. The coefficients on *Concentrated* are also positive and significant after 1985, while the coefficients on *Diverse* are negative and significant after 1993. Overall, our results suggest that in the 1990s and 2000s, the ownership of large shareholders is a significant determinant of firms' operating performance, i.e., the performance was better if a relatively large share of their stocks was owned by the largest ten shareholders.

5. Relationship between ownership and the risk-return profiles of stocks

5.1 Methodology

We have shown that firms' operating incomes are significantly affected by their ownership structures. This evidence, however, does not necessarily mean that stock returns differ depending on ownership structures. If investors well anticipate the difference in operating incomes across firms with different ownership structures, stock prices fairly reflect such anticipations but stock returns should not. Actually we find no significant differences in monthly stock returns between *Financial* stocks and *Non-Financial* stocks or between *Concentrated* stocks and *Diverse* stocks (Table 4). Furthermore, even if the difference in operating incomes is accompanied with the difference of operating risk, stock returns may not differ after controlling for risks.

We investigate whether there are significant differences in stock returns after controlling for systematic risks. If there is no significant difference in risk-adjusted returns, financial institutions must

intervene in management to make managers choose low-risk, low-return projects, or they prefer owning stocks of firms that voluntarily choose low-risk, low-return projects. If risk-adjusted returns are significantly low for firms whose stocks are owned by financial institutions by a relatively large proportion, financial institutions must intervene in management to choose risks that are not sufficiently compensated with returns, and investors must not anticipate such intervention.

We apply the following three-factor model using OLS, following Fama and French (1995) and Gompers et al., (2003).

$$R_t = \alpha_1 + \beta_1 * RMRF_t + \beta_2 * SMB_t + \beta_3 * HML_t + \varepsilon_t \quad (2),$$

where R_t is the excess return of a portfolio, i.e., its stock return minus the interest rate on safe assets as of period t, $RMRF_t$ is the excess return of the value-weighted market portfolio, SMB_t is the return of a hedge portfolio taking a long position in small-valued stocks (whose values are less than the smallest 30 percentile) and a short position in large-valued stocks (whose values are more than the largest 30 percentile), HML_t is the return of a hedge portfolio taking a long position in stocks with a high book-to-market ratio (whose ratio is more than the largest 30 percentile) and a short position in stocks with a low book-to-market ratio (whose ratio is less than the 30 smallest percentile).

If a portfolio yields low absolute values of β_1, β_2, and β_3 and negligible value of α_1, then it is a low-risk, low-return portfolio on the efficient risk-return frontier. On the other hand, if a portfolio yields low absolute values of β_1, β_2, and β_3 and negative value of α_1, then it yields inefficiently low risk-adjusted return.

In Japan, banks suffered from the non-performing loans in the 1990s and went through the severe banking crisis in the latter half of the 1990s. Banks and firms have begun to dissolve cross-shareholdings since the 1990s. These changes may have had impacts on the relationships between banks and firms. To take into consideration the possibility that the deteriorated bank health and the dissolution of cross-shareholdings changed the return of the stock that financial institutions had since the latter half of the 1990s, we add the 1995 dummy that takes the value of one after 1995 and zero before 1994.

$$R_t = \alpha_1 + \alpha_2 DUMMY95 + \beta_1 * RMRF_t + \beta_2 * SMB_t + \beta_3 * HML_t + \varepsilon_t \quad (3)$$

We use monthly stock return data and annual ownership data assuming that the ownership structure does not change throughout a year, because monthly ownership data is not available.

5.2 Results

Table 4 presents the results for the portfolios sorted by the share owned by financial institutions. Row 1 shows the result for the hedge portfolio taking a long position in *Financial* stocks and a short position in *Non-Financial* stocks. The estimated risk-adjusted excess return (α_1) is negative but not significant. The sensitivity to the return to the market portfolio (β_1) is not significant, either. The sensitivities to *SMB* and *HML* factors are negative and positive respectively, suggesting that these sensitivities are in the opposite directions between *Financial* stocks and *Non-Financial* stocks. Row 2 shows the result for the same portfolio with *Dummy 95* included. Though neither the constant nor the coefficient on *Dummy 95* is significant, the sum of the two is negative and significant at the 10% level, suggesting (weakly) that the risk-adjusted return was negative after 1995.

Comparing the results for the portfolios taking a long position in *Financial* stocks (Row 3) and in *Non-Financial* stocks (Row 5), we see that neither portfolio yields significant excess return and that the sensitivities to (i.e., the absolute values of the coefficients on) *SMB* and *HML* factors are larger for *Non-Financial* stocks than for *Financial* stocks. These results suggest that *Financial* stocks are low-risk, low-return while *Non-Financial* stocks are high-risk, high-return. Adding Dummy95, we find that for *Non-Financial* stocks (Row 6), the sum of the constant and the coefficient on Dummy95 is positive and significant at the 10% level, suggesting (weakly) that the risk adjusted return to *Non-Financial* stocks was positive after 1995.

Table 5 presents the results for the portfolios sorted by the share owned by the ten largest shareholders. Row 1 shows the result for the hedge portfolio taking a long position in *Concentrated* stocks and a short position in *Diverse* stocks. The estimated risk-adjusted excess return (α_1) is negative but not significant. The sensitivity to the return to the market portfolio (β_1) is not significant, either. The sensitivities to *SMB* and *HML* factors are positive and negative respectively, suggesting that these sensitivities are in the opposite directions between *Concentrated* stocks and *Diverse* stocks. Row 2 shows the result for the same portfolio with *Dummy 95* included. The coefficient on *Dummy 95* is positive and significant at the 10% level, suggesting (weakly) that the risk-adjusted return of this hedge portfolio increased after 1995.

Rows 3 and 4 show the results for the portfolio taking a long position in *Concentrated* stocks. The estimated risk-adjusted excess returns are not significant, except for the positive coefficient on Dummy95. Rows 5 and 6 show the results for the portfolio taking a long position in *Diverse* stocks. None of the estimated risk-adjusted excess return is

significant. Comparing the coefficients on the three factors between *Concentrated* stocks and *Diverse* stocks, we see that the absolute value of the coefficient on SMB is larger for *Concentrated* stocks than for *Diverse* stocks, while the absolute value of the coefficient on HML is larger for *Diverse* stocks than for *Concentrated* stocks.

4. Conclusion

This paper has investigated how ownership structure of Japanese firms affects the risk-return profiles of their stocks. We first examine the effects of ownership on firms' operating performances. We then construct portfolios sorted by ownership and, using the Fama-French three factor model, compare the risk-adjusted returns across portfolios. We find: the ownership of financial institutions decreases firms' operating performances while the ownership of large shareholders increases them; the ownership of financial institutions decreases risk loadings of portfolios (especially on size factor) while the ownership of large shareholders increases them; despite these differences in performance and risk exposure, no portfolios can yield significant excess returns. These findings suggests that, consistent with the predictions of agency theory, creditor-dominance in corporate governance restrains risks at the cost of decreased returns while shareholder-dominance enhance returns at the cost of increased risks, but stock markets well recognize these effects of ownership and efficiently form stock prices.

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Table 1 Descriptive Sample Statistics

Year	Variables	Obs	Mean	Std. Dev.	Min	Max
1981	ROE (%)	1,828	9.5	150.1	-3100.0	4222.7
	Monthly Stock Return (%)	796	-1.2	24.3	-97.8	334.5
	Book-to-Market Ratio	1,270	0.7	0.5	0.0	12.3
	Share of Financial Institutions (%)	105	0.3	0.1	0.0	0.6
	Share of the Ten Largest Shareholders (%)	109	0.5	0.1	0.0	0.9
1985	ROE (%)	2,105	11.8	200.3	-1269.2	8819.1
	Monthly Stock Return (%)	856	32.1	49.9	-98.4	418.0
	Book-to-Market Ratio	1,500	0.4	0.3	0.0	4.5
	Share of Financial Institutions (%)	1,563	0.3	0.1	0.0	0.7
	Share of the Ten Largest Shareholders (%)	1,588	0.5	0.2	0.2	1.0
1990	ROE (%)	2,529	7.6	32.0	-969.0	422.6
	Monthly Stock Return (%)	1,192	-14.0	22.2	-99.8	115.7
	Book-to-Market Ratio	1,921	0.5	0.6	0.0	16.7
	Share of Financial Institutions (%)	2,025	0.3	0.2	0.0	0.8
	Share of the Ten Largest Shareholders (%)	2,027	0.5	0.2	0.0	1.0
1995	ROE (%)	3,024	6.0	93.2	-1400.0	4600.0
	Monthly Stock Return (%)	1,556	3.0	27.6	-99.6	322.0
	Book-to-Market Ratio	2,453	0.8	1.3	0.0	48.4
	Share of Financial Institutions (%)	2,499	0.3	0.1	0.0	0.9
	Share of the Ten Largest Shareholders (%)	2,497	0.5	0.2	0.1	1.0
2000	ROE (%)	3,566	-9.8	389.9	-18600.0	6881.3
	Monthly Stock Return (%)	2,156	-6.2	34.7	-100.0	559.5
	Book-to-Market Ratio	3,090	1.7	1.7	0.0	53.9
	Share of Financial Institutions (%)	2,887	0.2	0.1	0.0	0.7
	Share of the Ten Largest Shareholders (%)	2,890	0.5	0.2	0.0	1.0
2003	ROE (%)	3,639	-18.9	1299.2	-78029.2	2341.2
	Monthly Stock Return (%)	2,559	34.0	116.6	-99.9	5100.0
	Book-to-Market Ratio	3,537	1.0	0.9	0.0	18.2
	Share of Financial Institutions (%)	3,085	0.2	0.1	0.0	0.7
	Share of the Ten Largest Shareholders (%)	3,102	0.5	0.2	0.0	1.0

Table 2. Estimation Results for ROE: Coeffcieints on the Share of Financial Institutions

	Share of Financial Institutions	"Financial" Dummy	"Non-Financial" Dummy
1981	-11.424 ***	-2.218 *	1.980
	(3.776)	(1.213)	(1.272)
1982	0.210	0.316	0.217
	(1.013)	(0.406)	(0.427)
1983	0.070	0.196	-0.019
	(1.026)	(0.354)	(0.382)
1984	-0.809	-0.157	0.175
	(0.954)	(0.342)	(0.375)
1985	-1.791 **	-0.191	0.346
	(0.748)	(0.287)	(0.301)
1986	-1.117	0.346	0.863 ***
	(0.906)	(0.267)	(0.282)
1987	-2.094 ***	-0.121	0.888 ***
	(0.702)	(0.269)	(0.282)
1988	-3.376 ***	-0.482 **	0.917 ***
	(0.537)	(0.199)	(0.208)
1989	-1.172 *	0.035	0.602 ***
	(0.606)	(0.213)	(0.230)
1990	-1.382 **	0.102	0.571 ***
	(0.600)	(0.189)	(0.201)
1991	-2.477 ***	-0.238	0.729 ***
	(0.528)	(0.208)	(0.228)
1992	-2.275 ***	-0.286	0.712 ***
	(0.532)	(0.204)	(0.226)
1993	-2.360 ***	-0.005	1.408 ***
	(0.581)	(0.225)	(0.244)
1994	-3.216 ***	-0.253	1.342 ***
	(0.561)	(0.181)	(0.188)
1995	-3.998 ***	-0.571 ***	0.961 ***
	(0.490)	(0.183)	(0.189)
1996	-3.776 ***	-0.735 ***	0.763 ***
	(0.479)	(0.163)	(0.165)
1997	-3.989 ***	-0.725 ***	1.110 ***
	(0.532)	(0.176)	(0.176)
1998	-3.250 ***	-0.617 ***	0.680 ***
	(0.475)	(0.182)	(0.184)
1999	-6.177 ***	-1.265 ***	0.864 ***
	(0.608)	(0.194)	(0.193)
2000	-4.811 ***	-1.271 ***	0.387 *
	(0.645)	(0.231)	(0.229)
2001	-6.077 ***	-1.479 ***	0.805 ***
	(0.590)	(0.256)	(0.253)
2002	-5.071 ***	-1.295 ***	0.471 **
	(0.632)	(0.190)	(0.186)
2003	-4.615 ***	-1.497 ***	-0.060
	(0.541)	(0.215)	(0.218)

Notes

1. Book-to-Market Ratio is included in the explanatory variables.
2. The numbers in the parenttheses are standard errors.
3. ***, ** and * show the significan levels at 1%, 5% and 10%, respectively.

Table 3. Estimation Results for ROE: Coeffcieints on the Share of the Ten Large Shareholders

	Share of 10 Largest Shareholders	"Concentrated" Dummy	"Diversified" Dummy
1981	3.117	0.582	-0.966
	(4.845)	(1.617)	(1.411)
1982	-1.332	0.123	0.293
	(1.149)	(0.389)	(0.378)
1983	-0.300	0.964 **	1.211 ***
	(1.073)	(0.388)	(0.367)
1984	1.023	0.197	0.048
	(1.056)	(0.354)	(0.330)
1985	1.890 **	0.741 **	0.048
	(0.789)	(0.319)	(0.300)
1986	2.106 **	0.641 *	-0.053
	(0.890)	(0.353)	(0.330)
1987	3.712 ***	0.470 *	-0.473 *
	(0.706)	(0.279)	(0.263)
1988	4.632 ***	1.066 ***	-0.268
	(0.626)	(0.216)	(0.204)
1989	2.970 ***	0.795 ***	0.093
	(0.760)	(0.241)	(0.226)
1990	2.534 ***	0.668 ***	-0.023
	(0.619)	(0.212)	(0.202)
1991	2.040 ***	0.556 **	-0.145
	(0.685)	(0.229)	(0.210)
1992	3.111 ***	0.843 ***	-0.287
	(0.495)	(0.195)	(0.178)
1993	4.775 ***	1.206 ***	-0.507 **
	(0.601)	(0.214)	(0.200)
1994	5.844 ***	1.145 ***	-0.799 ***
	(0.523)	(0.182)	(0.175)
1995	4.715 ***	0.862 ***	-0.670 ***
	(0.550)	(0.167)	(0.162)
1996	4.693 ***	0.937 ***	-0.645 ***
	(0.509)	(0.196)	(0.193)
1997	5.717 ***	1.186 ***	-0.794 ***
	(0.558)	(0.202)	(0.200)
1998	5.195 ***	0.891 ***	-0.807 ***
	(0.460)	(0.200)	(0.198)
1999	5.543 ***	0.961 ***	-1.092 ***
	(0.621)	(0.208)	(0.208)
2000	4.580 ***	0.599 ***	-1.166 ***
	(0.581)	(0.205)	(0.204)
2001	7.598 ***	1.280 ***	-1.599 ***
	(0.536)	(0.210)	(0.209)
2002	6.687 ***	1.173 ***	-1.457 ***
	(0.569)	(0.217)	(0.217)
2003	5.431 ***	0.602 ***	-1.418 ***
	(0.457)	(0.190)	(0.191)

Notes

1. Book-to-Market Ratio is included in the explanatory variables.
2. The numbers in the parenttheses are standard errors.
3. ***, ** and * show the significan levels at 1%, 5% and 10%, respectively.

Table 4. Regressinon Results for Stock Returns by the Share of Financial Institutions

	α1 (Const)	α2 (D95)	RMRF	SMB	HML	α1 + α2
Financial - Non_Financial	-0.225		-0.014	-0.747 ***	0.123 **	
	(0.238)		(0.035)	(0.058)	(0.055)	
	0.088	-0.655	0.006	-0.745 ***	0.128 **	-0.567 *
	(0.321)	(0.449)	(0.038)	(0.058)	(0.055)	(2.890)
Financial	-0.029		0.988 ***	-0.119 ***	0.040 **	
	(0.075)		(0.011)	(0.018)	(0.017)	
	-0.095	0.139	0.983 ***	-0.119 ***	0.039 **	0.044
	(0.101)	(0.141)	(0.012)	(0.018)	(0.017)	(0.170)
Non_Financial (NF)	0.197		1.002 ***	0.628 ***	-0.083 *	
	(0.205)		(0.030)	(0.050)	(0.048)	
	-0.184	0.794 **	0.977 ***	0.626 ***	-0.089 *	0.610 *
	(0.275)	(0.385)	(0.033)	(0.050)	(0.047)	(4.550)

Notes

1. The rightest column shows the F-tests for the null hypothesis: $\alpha 1+\alpha 2=0$.
2. The numbers in the parentheses are standard errors.
3. ***, **, and * stand for the significance levels of 1%, 5%, and 10%, respectively.

Table 5. Regressinon Results for Stock Returns by the Share of the Ten Largest Shareholders

	α1 (Const)	α2 (D95)	RMRF	SMB	HML	α1 + α2
Concentrated-Diverse	-0.095		0.000	0.612 ***	-0.115 **	
	(0.233)		(0.035)	(0.058)	(0.054)	
	-0.464	0.768 *	-0.023	0.610 ***	-0.121 **	0.304
	(0.313)	(0.439)	(0.037)	(0.058)	(0.054)	(0.870)
Concentrated	0.023		0.979 ***	0.444 ***	-0.031	
	(0.173)		(0.026)	(0.043)	(0.041)	
	-0.249	0.568 *	0.961 ***	0.443 ***	-0.035	0.318
	(0.234)	(0.327)	(0.028)	(0.043)	(0.041)	(1.720)
Diverse	0.118		0.978 ***	-0.168 ***	0.084 ***	
	(0.106)		(0.016)	(0.026)	(0.025)	
	0.215	-0.201	0.984 ***	-0.167 ***	0.086 ***	0.014
	(0.144)	(0.202)	(0.017)	(0.026)	(0.025)	(0.010)

Notes

1. The rightest column shows the F-tests for the null hypothesis: $\alpha 1+\alpha 2=0$.
2. The numbers in the parentheses are standard errors.
3. ***, **, and * stand for the significance levels of 1%, 5%, and 10%, respectively.