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Individual Blockholders and Corporate Risk-Taking: Korean Evidence

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ABSTRACT

Purpose: This study examines the influence of individual blockholders on corporate risk-taking using Korean-listed firm data. Studies on corporate governance argue that non-controlling large shareholders, that is individual blockholders, increase corporate risk-taking by monitor and discipline the controlling shareholder's self-serving decisions. However, as individual blockholders have limited resources to monitor a controlling shareholder, whether individual blockholders increase corporate risk-taking is an empirical question.

Design/methodology/approach: To test research the question, this study examines the influence of individual blockholders on corporate risk-taking by using multivariate regression analysis. Korean individual blockholder data are refined manually to confirm individual blockholders' independence from the controlling shareholder of the firm. **Findings:** The regression analysis showed that individual blockholders reduced overall corporate risk and long-term risky investments, while short-term corporate risk-taking related to credit policy increased. Besides, the persistence of risky investment decreases in the presence of individual blockholders. The empirical analysis also finds that the negative relation between individual blockholders presence and corporate risk-taking is strengthened by financial slock. These results contradict previous studies which predict that individual blockholders will increase corporate risk-taking if they have insufficient resources to discipline a controlling shareholder. The results of this study highlight that institutional support is necessary for individual blockholders to perform the corporate governance role, which is applicable for all countries that the concentrated ownership prevails.

Originality/value: Using manually collected data, this study reports the empirical results that contradict the expectation of most prior studies on the influence of individual shareholders on corporate risk-taking.

Keywords: Individual blockholder, Controlling shareholder, Corporate governance, Corporate risk-taking, Risky investment

I. Introduction

A long-term investment is essential for the sustainable growth of a firm. Long-term investment inevitably entails performance uncertainty, which increases the risk of payoff for insiders, managers, or controlling shareholders in most Korean firms, through performance evaluation and compensation. As a result, insiders reduce risky investment, which not only reduces the firm's long-term growth but also increases the likelihood of expropriation of minority shareholders.

Researchers argue that corporate governance is a means to control insiders' avoidance of risk-taking (Shleifer & Vishny, 1997). Due to the incentives of monitoring and monitoring ability, researchers consider large shareholders as one of several corporate governance mechanisms. As

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one type of large shareholder, an individual large shareholder (hereafter, individual blockholder) is one candidate for corporate governance mechanisms. In this vein, researchers have investigated individual blockholders' role in corporate governance. However, their influence on corporate risk-taking is not complete, yet. Using Korean data, this study fills the void of literature on the influence of individual blockholders on corporate risk-taking.

Studies on shareholders' corporate governance role mainly focus on shareholders with large resources, such as controlling shareholders, or institutional investors. A few studies examine whether individual blockholders are an effective corporate governance mechanism. Researchers have not paid much attention to individual blockholders probably because individual blockholders' influence is relatively small compared to other types of blockholders. This study fills the void in the literature by investigating individual blockholders' influence on corporate risk-taking.

For long-term growth, firms should take risks from investment projects that have the uncertainty of payoffs. However, the uncertainty makes managers avoid risky investments to secure their bonuses. Therefore, if other things are equal, risk-averse managers choose projects with low uncertainty, which reduces corporate risk-tanking and damages the firm's long-term profitability. As such, the manager's risk aversion propensity causes the agent problem through corporate risk-taking (John, Litov, & Yeung, 2008).

In Korea, most firms have a controlling shareholder who occupies the executive manager position and directly exercises influence on most firm decisions. Hence, Korean firms' agency problems generally occur between a controlling shareholder and the other shareholders (Almeida, Park, Subrahmanyam, & Wolfenzon, 2011; S. Claessens, Djankov, & Lang, 2000; La Porta, Lopezde-Silanes, & Shleifer, 1999). Therefore, a controlling shareholder's economic incentive is important to understand the agency problem related to corporate risk-taking.

Korean controlling shareholders, like professional managers, avoid risky investments because of the following reasons (Boubaker, Nguyen, & Rouatbi, 2016; Mishra, 2011). First, Korean controlling shareholders and their family members generally take executive management positions. Thus, they can manipulate corporate decisions so that they could expropriate corporate resources through self-dealing transactions (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2008).1) Since diverting resources have less uncertainty in payoff than risky investment, controlling shareholders who can utilize diverting have an incentive to increase diverting resources by reducing risky investment and retaining cash flows. Second, Korean controlling shareholders are well-entrenched by having large voting rights through the ownership chain of related firms. Hence, their controlling power is hardly threatened by outsiders (Stijn Claessens, Djankov, Fan, & Lang, 2002; La Porta et al., 1999). Therefore, disciplining Korean controlling shareholders is nearly impossible.

Individual blockholders do not have enough resources to monitor and discipline a controlling shareholder. To help large shareholders' minoring and disciplinary actions, the Korean Commercial Law grants various rights to blockholders with ownership of 3% or more to protect the rights of non-controlling shareholders. For example, blockholders can examine accounting information and ask the court to dismiss the executives who committed inappropriate actions. However, several details of law or regulations constrain non-controlling shareholders' exercise of their rights.

Therefore, individual blockholders must risk a conflict of interest with the controlling shareholder while maintaining their equity investment. This makes individual blockholders pursue the benefits they can obtain from short-term profitability rather than the benefits from long-term growth. Consequently, considering individual blockholders' preferences, a countrolling shareholder would reduce risky investment for long-term growth, but accelerate short-term performance.

The conjecture above contradicts previous studies that expect individual blockholders to suppress a controlling

Since 2014, the Korean government, specifically the Korea Fair Trade Commission, regulates related-party transactions within Korean large business groups, so-called Chaebols, because the controlling shareholders of Chaebols exploit the related-party transactions to divert firm resources for their private benefit.

shareholder's agency problem regarding risky investments, and increase corporate risk-taking (Boubaker et al., 2016; John et al., 2008; Mishra, 2011; Shleifer & Vishny, 1997). Using the Korea Exchange data, this study tests the conjecture above.

The remainder of this paper proceeds as follows. Chapter II reviews literture and documents institutional backgrounds. Chapter III develops hypotheses, and introduces research models. Chapter IV presents sample and descriptive statistics. Chapter V reports the results of empirical analyses. Chapter VI concludes this study.

II. Literature Review and Institutional Backgrounds

A. Corporate risk-taking and corporate governance

A firm innovates products and cost structure by risky investment, which leads to a firm's sustainable long-term growth, which increases firm value and benefits shareholders. However, since insiders, managers, and a controlling shareholder, can organize self-serving transactions for their private benefits without taking risks from investments (Bae, Kang, & Kim, 2002; Cheung, Rau, & Stouraitis, 2006; Jiang, Lee, & Yue, 2010; Johnson, Porta, Lopez-de-Silanes, & Shleifer, 2000). Besides, since risky investments deplete corporate resources that they can divert, insiders have the incentive to reduce corporate risk-taking (Mishra, 2011). This conflict of interest can be adjusted by corporate governance that increases the costs of insiders' private benefits. Hence, corporate motivates insiders to take risks from the investment but discourages them to divert corporate resources. Prior studies support this argument by reporting the positive correlation between corporate governance and corporate risk-taking at the country level (John et al., 2008).

B. Individual blockholders

Large shareholders have a lot of ownership, so let's take an economic incentive to monitor firms and in many cases practically discipline insiders (Shleifer & Vishny, 1997). Non-institutional blockholders (hereafter, individual blockholders) are the same in that they have economic incentives to monitor investee firms. Although individual blockholders generally have a limited amount of ownership, they can discipline insiders through several ways, such as lawsuits, or massive disposal of shares that cause a sudden drop of firm value (Edmans, 2009). Using the US equity market data, Dou, Hope, Thomas, and Zou (2016) reported that individual blockholders affect the financial disclosure of companies that affects the capital market reactions.

On the other hand, individual blockholders have limitations as a corporate governance mechanism, as well. Individual blockholders cannot govern with voting power alone because the ownership stake is small. In particular, in Korea, most companies have a controlling shareholder with concentrated ownership (Stijn Claessens et al., 2002; S. Claessens et al., 2000), so to discipline a controlling shareholder's self-serving decision-making using voting power is rarely achievable. Therefore, there will be limitations on the function of individual blockholders. Empirical studies show mixed results regarding the impact of Korean individual blockholders on financial reporting quality, which means that Korean individual blockholders have both possibilities and limitations (Yim, 2020).

C. Blockholders and Korean institutional backgrounds

The Korean Commercial Law grants several authorities to blockholders with ownership of 3% or more to protect the rights of non-controlling shareholders, the most important of which are as follows. First, blockholders can ask the firm to review the firm's accounting book (Commercial Act Article 466). Second, blockholders can ask the court to dismiss the directors or internal auditors who have committed inappropriate actions (Commercial Act Article 385). Third, blockholders can request the holding of an extraordinary shareholders' meeting (Commercial Act Article 366). Fourth, blockholders can ask the court to designate an auditor to examine the firm (Commercial Act Article 467). These authorities appear to allow blockholders to discipline controlling shareholders.

However, these authorities can achieve their intended purpose only if they are properly implemented. In several details in Korean laws and precedents, the rights of non-controlling shareholders are constrained. For example, in the case of the authority to review accounting books (Commercial Act Article 466), accounting books of subsidiaries of the firm are excluded from the review.²) Subsidiaries or special purpose entities (SPE) are widely used in many transactions these days. Therefore, excluding subsidiaries from the scope of review of accounting books can be exploited as a way to hide information that can identify insiders' self-serving transactions.

Another example is the subject of a director's obligation of good faith. In Korean commercial law, the director's obligations in good faith are limited only to firms. The scope of the director's obligations of good faith does not include shareholders. In other words, even if directors serve the private benefit of a controlling shareholder at the expense of non-controlling shareholders, non-controlling shareholders cannot hold the directors legally responsible. Therefore, non-controlling shareholders have restrictions on exercising the authority granted by Article 385 of the Commercial Act.

In sum, in Korea, the authorities of non-controlling blockholders are formally guaranteed. However, the actual implementation of these rights has many restrictions. Therefore, among blockholders, the influence of individual blockholders, especially those with low bargaining power and lack of social and economic resources, can be greatly limited.

D. Ownership and corporte risk-taking

Each shareholder has his stances on corporate risk depending on the nature of his economic incentives (Boubakri, Cosset, & Saffar, 2013; Faccio, Marchica, & Mura, 2011; Mishra, 2011; Paligorova, 2010). As the government considers political incentives such as unemployment rate or macroeconomic stability important, state ownership restrains corporate risk-taking to decrease the uncertainty of financial outcome or layoff of employees whereas foreign shareholders' ownership enhances risk-taking (Boubakri et al., 2013).

The most important ownership structure related to this study is the ownership structure in which a controlling shareholder with concentrated ownership has a dominant influence on several companies affiliated to the business group. Concentrated ownership structure is widely found in Asian countries, including Korea (S. Claessens et al., 2000).³⁾ This ownership structure makes the control power larger than the cash flow right of the controlling shareholder (Stijn Claessens et al., 2002), and the disagreement between the two provides a controlling shareholder with various means of diverting firm resources (Cheung et al., 2006; Cho & Lim, 2018). Therefore, they have an incentive to increase the resources at their disposal by avoiding risk-taking (Boubaker et al., 2016; Mishra, 2011). Supporting this conjecture, empirical results report that a controlling shareholder reduces corporate risk-taking (Boubaker et al., 2016; Mishra, 2011).

Non-controlling shareholders are known to prefer to increase risk-taking and improve corporate value because diverting cash flows for their private benefit are not possible (Boubaker et al., 2016; Mishra, 2011). However, the personal character of a non-controlling shareholder, such as his equity investment portfolio diversification, affects the risk-tolerance (Faccio et al., 2011). Therefore, a non-controlling shareholder's influence on corporate risk-taking may not be unconditional. In summary, the impact of blockholders on corporate

In 2001, the Supreme Court of Korea allowed the review of the subsidiary's accounting book for the parent company.

³⁾ Most Korean firms have concentrated ownership structure with a controlling shareholder, except financial firms that are regulated by the Korean government, and privatized past-state-owned firms, such as POSCO, KEPCO, and KT&G.

risk-taking is expected to be influenced by the details of their economic incentives.

III. Hypotheses and Research Models

A. Hypothesis development

Compared to a controlling shareholder, Korean non-controlling shareholders have a weaker influence on a firm's decision-making. Therefore, non-controlling shareholders cannot easily interrupt decisions that serve only for a controlling shareholder's interest by sacrifice minority shareholder's wealth. In this circumstance, non-controlling shareholders' optimal strategy is to collude with a controlling shareholder.

Since a controlling shareholder can easily take private benefits from a firm under his control, the controlling shareholder has a weak incentive to take corporate risks from investments. Therefore, to avoid the conflict with a controlling shareholder, non-controlling shareholders are likely to pursue benefits by accepting corporate risk-avoidance.⁴)

Although non-controlling shareholders cannot directly influence corporate decisions, decisions against noncontrolling shareholders' demands could trigger shareholder activism. Since non-controlling shareholders' strategy is to avoid corporate risks, a controlling shareholder will reduce corporate risk-taking in line with the expectation of risk-averse non-controlling shareholders.

Among non-controlling shareholders, individual blockholders have relatively strong influence and regal rights that can trigger shareholder activism. Therefore, a controlling shareholder's risk-avoidance increases in the existence and influence of individual blockholders. Based on the conjecture above, this study hypothesizes H1 as follows.

HI: Individual blockholders' presence are negatively related to corporate risk-taking. Individual blockholders' risk-taking tendencies will vary according to the length of the investment period. Individual blockholders cannot manage the risks arising from long-term investments. Therefore, individual blockholders are reluctant to bear risks from long-term investments. Alternatively, individual blockholders pursue payoffs by boosting short-term performance, which has higher certainty than long-term investments.

Considering individual blockholders' risk preference, a controlling shareholder will decrease long-term risk-taking the existence and influence of individual blockholders. Instead, a controlling shareholder will boost short-term performance. Based on the above conjecture, this study hypothesizes H2 and H3 as follows.

- H2: Individual blockholders are negatively related to risks from long-term investments.
- H3: Individual blockholders are positively related to risks from short-term investments.

If individual blockholders avoid risks from long-term investment, a controlling shareholder will decrease long-term investment as the influence of individual blockholders increases. As the firm invests more in long-term investments, individual blockholders' want to reduce future risky investments more to avoid risks. Therefore, as current long-term investments increase, future long-term investments decrease more in the influence of individual blockholders, which reduces the persistence of long-term investments.

Especially, the effect of individual blockholders is most noticeable in research and development (R&D) investments because the uncertainty of R&D is high among several forms of long-term investments. Besides, the payoffs of R&D investments are usually obtained in a long time. Therefore, continuous investments over the long term are necessary. These reasons make R&D investment unfavorable to individual blockholders who demand a short-term return on their investment. Consequently, a controlling shareholder decreases R&D investments as the influence of individual blockholders increases. The conjecture above leads to H4:

In such an environment, investors invest in the firm for short-term capital gains rather than long-term growth (Bushee, 2004).

H4: Individual blockholders' presence is negatively related to the persistence of long-term investment.

Financial constraint affects corporate investment decisions. Generally, a firm invests more when the firm has a large cash flow surplus. Thus, cash flow surplus weakens the negative relation between individual blockholders and investments.

However, if an investment decision is affected by shareholders' preference of short-term payoffs, firms are unlikely to increase investment even when the firm has a large cash flow surplus. If this is the case, cash flow surplus does not affect the relationship between individual blockholders and investment. In the extreme case, a firm will reduce its investments as its cash flow surplus grows and expand its financial slack for short-term payouts, such as dividends or share buybacks. In this case, cash flow surplus strengthens the negative relation between individual blockholders and investments. Either way, cash flow surplus does not waken the negative relation between individual blockholders and investment.

Based on these conjectures, H5 is suggested as follows in null form:

H5: Cash flow surplus does not affect the negative relation between individual blockholders and future investments.

B. Research model

In this study, only non-institutional, non-controlling large investors are selected as individual blockholders from the list of non-controlling blockholders with ownership of 5% or more disclosed in the annual report. Blockholders having a special relationship with the controlling shareholder cannot perform the monitoring role. Therefore, although they are classified as non-controlling blockholders, they are classified as a related party of the controlling shareholder and are excluded from the list of individual blockholders. For example, even if a former CEO owns more than 5% of the firm's ownership, this study does not classify him as an individual blockholder of the firm because he cannot be independent of the controlling shareholder. As such, whether or not a special relationship exists was checked using all public information sources including internet search and previous annual reports, and blockholders suspected of independence were removed from the list of individual blockholders. Therefore, the number of individual blockholders used in this study is not larger than that disclosed.⁵⁾

The test for H1 use following model.

RISK =
$$\alpha + \beta_1 IB_t + \beta_2 CONTROLS_t + YEAR_dummy + IND dummy + \epsilon$$
 (1)

Appendix documents variable definitions. The proxies of corporate risk-taking (RISK) are the volatility of daily stock price and annual return on assets from year t+1 to year t+5 (Bargeron, Lehn, & Zutter, 2010). The indicator variable for the existence of individual blockholders (IB D), the sum of ownership of individual blockholders (IB O), and the number of individual blockholders (IB N) are used as the proxies for individual blockholders (IB). CONTROLS denotes the set of variables affecting risk-taking (CS, FS, SIZE, ROA, REV GROWTH, MTB, CFS, LEV, YRET). The controlling shareholder of a firm has the most dominant influence, so his/her ownership of her was included as a control variable (CS). The relationship between ownership of a controlling shareholder and risk-taking is the cornerstone of H1. Hence, the sign of the coefficients of CS should be checked in advance of the test for H1. Foreign investors' ownership (FS) is also controlled because of their strong influence in Korean stock markets. Year dummy variables (YEAR dummy) and industry dummy variables (IND dummy) are also included.

The tests for H2 and H3 use following models, respectively (Curtis, McVay, & Toynbee, 2020).

$$LTI_{t+1} = \alpha + \beta_1 IB_t + \beta_2 CONTROLS_t + YEAR_dummy + IND_dummy + \epsilon$$
(2)

⁵⁾ A blockholder may have a hidden relationship with the controlling shareholder family that cannot be discovered by public information sources. This is a limitation of the data collection of this study.

$$SI_{t+1} = \alpha + \beta_1 IB_t + \beta_2 CONTROLS_t + YEAR_dummy + IND_dummy + \epsilon$$
(3)

R&D investment and capital expenditure (CAPEX) is used as the proxies for long-term investments (LI). The operating cycle and account receivable cycle are used as short-term investments (SI). CONTROLS denotes the set of control variables of each model. CONTROLS of Equation (2) includes CS, FS, CFS, R&D, CAPEX, SG&A, ADV, M&A, ADJNI, \triangle ADJNI, MTB, and TA. CONTROLS of Equation (3) include CS, FS, MTB, SIZE, \triangle REV, ICOV, and CFS. Both equations (2) and (3) include year dummy variables and industry dummy variables.

The significance of all regression analysis results is calculated using a firm-cluster adjusted standard error. In addition, to prevent the problem that the estimate is distorted due to outliers not solved by wisorization, values that have an absolute value of Studentized error greater than 3 for all regression models are excluded from the regression analysis, and the estimated value is reported.⁶⁾ In this process, the observations of each regression analysis are slightly different.

IV. Sample and Descriptive Statistics

Firms listed on the Korea Composite Stock Price Index (KOSPI) Market of the Korea Exchange are used as an initial sample. The sample period ranges from 2000 to 2017. Financial data and stock return data are acquired from the FnGuide database. Each firm's blockholder data are obtained initially from the FnGuide database and crosschecked those with annual reports. To confirm the independence of individual blockholders, all the publicly available sources, including annual reports and news articles on the internet, are utilized. Observations that do not have financial data are excluded to create variables for the analysis for H1. The extreme 1% of all the continuous variables are winsorized to avoid measurement error from extreme values. The final sample has 5,200 firm-year observations, excluding firm-year observations for which no data are available for analysis. Table 1 reports descriptive statistics of the final sample.

Table 1. Descriptive Statistics

Variable	Ν	Mean	25%	Median	75%
RETVOL	5,200	0.031	0.022	0.029	0.038
ROAVOL	5,200	0.052	0.016	0.031	0.060
$R\&D_{t+1}$	4,877	0.010	0.001	0.004	0.013
CAPEX _{t+1}	4,877	0.045	0.012	0.032	0.066
$AVG(R\&D)_{t+1 \sim t+5}$	2,809	0.011	0.002	0.005	0.014
AVG(CAPEX) _{t+1-t+5}	2,809	0.047	0.016	0.038	0.066
OCYCLE _{t+1}	4,644	128.165	72.620	108.735	158.808
ACYCLE _{t+1}	4,766	63.717	33.374	55.822	80.194
IB_D	5,200	0.043	0.000	0.000	0.000
IB_N	5,200	0.048	0.000	0.000	0.000
IB_O	5,200	0.004	0.000	0.000	0.000
CS	5,200	0.412	0.300	0.411	0.519
FS	5,200	0.105	0.005	0.039	0.151
SIZE	5,200	19.921	18.731	19.659	20.857
ROA	5,200	0.024	0.003	0.032	0.067
∆REV	5,200	0.105	-0.031	0.063	0.170
MTB	5,200	1.095	0.448	0.743	1.297
CFS	5,200	0.053	0.007	0.053	0.100
LEV	5,200	0.484	0.343	0.491	0.624
YRET	5,200	0.195	-0.196	0.056	0.416
R&D _t	5,200	0.010	0.001	0.004	0.012
CAPEX	5,200	0.047	0.012	0.033	0.068
SGA	5,200	0.189	0.079	0.130	0.235
ADV	5,200	0.011	0.000	0.002	0.010
MA	5,200	0.001	0.000	0.000	0.000
ADJNI	5,200	0.055	0.017	0.054	0.105
∆ADJNI	5,195	0.007	-0.020	0.004	0.032
ТА	5,200	2,792	136	345	1,143
CASH	5,152	0.059	0.016	0.043	0.085
ICOV	5,200	52.106	0.920	3.144	9.895

⁶⁾ Using observation having the absolute of the Studentized error larger than three does not qualitatively change the results of regression analyses. However, to report the result conservatively, those observations are excluded from regression analyses.

V. Empirical Results

A. Corporate risk-taking and individual blockholders

Table 2 reports the empirical analysis results of equation (1). RETVOL is positively related to the three proxies of individual blockholders (IB_D, IB_N, and IB_O), meaning that the overall firm risks decrease in individual blockholders' presence, the number, and the sum of ownership. Non-operating risks, as well as operating risks, can cause the fluctuation of firm value, a decrease of the controlling shareholder's reputation as an investor-friendly controlling shareholder. Further, some of those risks incur political costs.⁷) Therefore, individual blockholders' presence gives controlling shareholders the motivation to suppress shareholder activism by minimizing overall firm risks including risks from non-operating activities.⁸)

In columns (4) to (6), ROAVOL does not have

Table 2.	Corporate	Risks	and	Individual	Blockholders
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VADIADIES	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	RETVOL	RETVOL	RETVOL	ROAVOL	ROAVOL	ROAVOL
IB_D	-0.001*			-0.001		
	(-1.76)			(-0.28)		
IB_N		-0.001**			-0.001	
		(-2.05)			(-0.53)	
IB_O			-0.014**			-0.014
			(-2.08)			(-0.62)
CS	-0.006***	-0.006***	-0.006***	-0.010**	-0.010**	-0.010**
	(-5.24)	(-5.31)	(-5.33)	(-2.03)	(-2.04)	(-2.04)
FS	-0.007***	-0.007***	-0.007***	0.009	0.009	0.009
	(-4.15)	(-4.15)	(-4.13)	(1.16)	(1.16)	(1.16)
SIZE	-0.001***	-0.001***	-0.001***	-0.003***	-0.003***	-0.003***
	(-8.72)	(-8.72)	(-8.66)	(-4.47)	(-4.49)	(-4.49)
ROA	-0.019***	-0.019***	-0.019***	-0.151***	-0.151***	-0.151***
	(-7.88)	(-7.87)	(-7.86)	(-10.29)	(-10.29)	(-10.29)
$\triangle \text{REV}$	0.001***	0.001***	0.001***	-0.001	-0.001	-0.001
	(3.04)	(2.99)	(3.02)	(-0.62)	(-0.62)	(-0.62)
MTB	0.002***	0.002***	0.002***	0.006***	0.006***	0.006***
	(9.47)	(9.50)	(9.52)	(5.70)	(5.70)	(5.70)
CFS	-0.008***	-0.008***	-0.008***	-0.028***	-0.029***	-0.029***
	(-3.67)	(-3.65)	(-3.66)	(-2.83)	(-2.83)	(-2.83)
LEV	0.011***	0.011***	0.011***	0.002	0.002	0.002
	(9.30)	(9.26)	(9.25)	(0.29)	(0.29)	(0.29)
YRET	0.002***	0.002***	0.002***	-0.002*	-0.002*	-0.002*
	(9.17)	(9.14)	(9.16)	(-1.91)	(-1.91)	(-1.92)
Industry Dummy	Included	Included	Included	Included	Included	Included
Year Dummy	Included	Included	Included	Included	Included	Included
Observations	5,147	5,145	5,144	5,063	5,063	5,063
Adj R-squared	0.576	0.577	0.578	0.345	0.345	0.345

significant relation with IB_D, IB_N, and IB_O. The potential explanations for these results are as follows. Operating performance is directly related to a firm's cash flows that are useful for maximizing the controlling shareholder's wealth. Therefore, a controlling shareholder has the motivation to block individual blockholders' influence in decision-making for operating activities. If this is the case, individual blockholders do not have significant relation with risks measured using operating performance. Alternatively, as hypothesized, individual blockholders' influence on risky investment could differ between long-term and short-term investments, which influence the consequence of investment decisions, which is the return on assets.

A controlling shareholder's ownership has a consistently negative relation with both risk measures, meaning that a controlling shareholder avoids risk-taking, both operating risks, and non-operating risks. Foreign shareholders' ownership is negatively related to the volatility of future stock returns, but the volatility of future operating performance. This result can be explained using the same reasoning as the results for individual blockholders.

B. Long-term investment and ownership

Tables 3 to 5 reports individual blockholders' influence on long-term investments. Table 3 documents the influence of individual blockholders on the change of capital expenditure (△CAPEX). In Table 3, IB_D and IB_N have negative coefficients, meaning that individual blockholders avoid risk by reducing CAPEX investment. Quantitatively, in column (2), the coefficient of IB N indicates that adding one individual blockholders

elevates the level of CAPEX by 0.4% of total assets. Considering that the mean value of CAPEX is 4.5% of total assets (Table 1), the change has economic

Table 3. CAPEX and Individual Blockholders

	(1)	(2)	(3)
VARIABLES	$\triangle CAPEX_{t+1}$	$\triangle CAPEX_{t+1}$	$\triangle CAPEX_{t+1}$
IB_D	-0.006**		
	(-2.24)		
IB_N		-0.005*	
		(-1.96)	
IB_O			-0.029
			(-0.84)
CS	0.006	0.006	0.006
	(1.15)	(1.15)	(1.20)
FS	0.013**	0.013**	0.013**
	(2.10)	(2.11)	(2.12)
CFS	0.010	0.010	0.011
	(0.79)	(0.79)	(0.80)
R&D	0.025	0.025	0.023
_	(0.44)	(0.44)	(0.42)
CAPEX	-0.592***	-0.592***	-0.592***
_	(-25.46)	(-25.47)	(-25.45)
SG&A	0.014**	0.014**	0.014**
-	(2.09)	(2.08)	(2.08)
ADV	-0.088*	-0.086	-0.087
	(-1.66)	(-1.61)	(-1.63)
M&A	-0.011	-0.011	-0.010
	(-0.18)	(-0.18)	(-0.18)
ADJNI	0.095***	0.095***	0.095***
	(7.11)	(7.11)	(7.12)
∆ADJNI	0.016	0.016	0.016
	(1.36)	(1.36)	(1.35)
MTB	0.003***	0.003***	0.003***
	(3.18)	(3.17)	(3.20)
TA	0.000***	0.000***	0.000***
	(4.57)	(4.57)	(4.58)
Industry Dummy	Included	Included	Included
Year Dummy	Included	Included	Included
Observations	4,101	4,101	4,101
Adj R-squared	0.408	0.407	0.407

⁷⁾ In 2014, a member of the family of the controlling shareholder of Korean Air Co., who was a member of executive manager of the firm, was on board an aircraft that was about to leave for Korea at John F. Kennedy International Airport, turned the airplane to the gate just before departure because of issues related to in-flight service. This incident caused a social, legal, and political backlash, and caused a significant decline in Korean Air's image. ("Flight Attendant Kicked Off Korean Air Flight Alleges Cover-Up," The New York Times. December 18)

Immorality in the private life of the controlling shareholder is also not directly related to the firm operation but can trigger shareholder activism.

significance. However, the sum of individual blockholders' ownership (IB_O) did not have a significant relationship with the change of CAPEX.

Interestingly, a controlling share's ownership is irrelevant to the change of CAPEX, and the level of CAPEX as well (untabulated). However, foreign shareholders' ownership (FS) has a significantly positive coefficient. An intuitive explanation for this result is that foreign investors encourage risk-taking related to investment intangible long-term assets. However, alternative explanations are also possible. Investment in CAPEX is made to expand the production capacity of previously acquired technologies and products. Therefore, the above results imply that foreign investors evaluate CAPEX investment favorably because they expect that investments for this purpose will improve profitability by taking a manageable amount of uncertainty without the risk from the failure of the development of new technology. Therefore, this result can be interpreted as pursuing clear cash flows rather than promoting risk-taking by foreign investors through CAPEX.

Table 4 documents the relation between R&D investment and individual blockholder. The changes in R&D investment are negatively related to IB_D, IB_N, and IB_O. These results mean that individual blockholders decrease corporate risk-taking regarding R&D investment. CS has a significant negative correlation with both R&D investments, which shows that the controlling shareholder is trying to reduce risk-taking by reducing the size of the R&D investment.

Tables 3 and 4 show that individual blockholders reinforce a controlling shareholder's risk aversion associated with R&D investments. This result contradicts the arguments of previous studies that expect the increase of R&D investment in non-controlling large shareholders' presence (Boubaker et al., 2016; Mishra, 2011).

Potential explanations for the difference of results between this study and prior studies are as follows. Korean controlling shareholders are well-entrenched using complex ownership structures through the ownership chain. Besides, while Korean commercial law has a legal protection device for shareholders, the protection tools cannot be easily exercised because of restrictions that exist in the details. In such a situation, individual blockholders' rational choice regarding holding of the firm's equity stake is to focus on short-term payoff rather than the long-term payoff. In this case, reducing

Table 4. R&D and Individual Blockholders

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VARIABLES	(1)	(2)	(3)
VARIABLES	$\Delta R \& D_{t^{+1}}$	$\Delta R\&D_{t+1}$	$\Delta R\&D_{t+1}$
IB_D	-0.000*		
	(-1.70)		
IB_N		-0.000*	
		(-1.83)	
IB_O			-0.005**
			(-2.45)
CS	-0.001**	-0.001**	-0.001**
	(-1.99)	(-2.00)	(-2.02)
FS	-0.000	-0.000	-0.000
	(-0.08)	(-0.09)	(-0.11)
CFS	0.001	0.001	0.001
	(1.07)	(1.06)	(1.06)
R&D	-0.044***	-0.044***	-0.044***
	(-5.59)	(-5.58)	(-5.58)
CAPEX	0.001	0.001	0.001
	(0.40)	(0.40)	(0.41)
SG&A	-0.001**	-0.001**	-0.001**
	(-2.15)	(-2.16)	(-2.16)
ADV	0.008	0.009	0.009
	(1.57)	(1.59)	(1.60)
M&A	-0.011	-0.011	-0.011
	(-1.31)	(-1.31)	(-1.31)
ADJNI	0.001	0.001	0.001
	(0.73)	(0.73)	(0.74)
∆ADJNI	0.001	0.001	0.001
	(0.74)	(0.74)	(0.73)
MTB	0.000	0.000	0.000
	(1.54)	(1.53)	(1.52)
ТА	-0.000*	-0.000*	-0.000**
	(-1.96)	(-1.95)	(-1.98)
Industry Dummy	Included	Included	Included
Year Dummy	Included	Included	Included
Observations	4,128	4,128	4,128
Adjusted R-squared	0.034	0.034	0.035

long-term investment and pursuing short-term financial stability would be a rational choice for individual blockholders. This is consistent with the controlling shareholders' risk aversion.

C. Short-term investment and ownership

If this conjecture of the previous chapter is correct, individual blockholders should encourage short-term risk-taking to boost short-term performance. Table 5 documents the empirical test results for this conjecture. The operating cycle has a positive correlation with the presence, number, and ownership of individual blockholders. Since the operating cycle refers to shortterm investment by companies locked in business, these results mean that individual blockholders increase the risk of short-term business activities.

To analyze specific aspects of short-term risk-taking increase, the operating cycle was divided into two parts: credit policy and inventory management. Among them, the results of the credit policy are reported in columns (4) to (6) of Table 5. The receivable cycle was found to have a strong positive correlation with

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	OCYCLE _{t+1}	OCYCLE _{t+1}	OCYCLE _{t+1}	ACYCLE _{t+1}	ACYCLE _{t+1}	ACYCLE _{t+1}
IB D	15.303*			18.577***		
_	(1.78)			(3.17)		
IB N		17.528**		. ,	17.027***	
_		(2.29)			(3.55)	
IB_O			119.146			149.323***
			(1.63)			(2.72)
CS	0.240	0.269	0.185	-15.282**	-15.108**	-15.734**
	(0.02)	(0.02)	(0.01)	(-2.45)	(-2.42)	(-2.52)
FS	-23.904*	-24.305*	-23.744*	-22.487***	-23.033***	-22.763***
	(-1.78)	(-1.81)	(-1.77)	(-3.09)	(-3.16)	(-3.09)
MTB	-2.704*	-2.719*	-2.715*	-1.257	-1.302	-1.364
	(-1.79)	(-1.79)	(-1.79)	(-1.44)	(-1.47)	(-1.53)
SIZE	-9.261***	-9.171***	-9.346***	-4.120***	-4.093***	-4.226***
	(-5.95)	(-5.90)	(-6.02)	(-5.17)	(-5.14)	(-5.28)
ΔREV	-17.556***	-17.470***	-17.581***	-9.629***	-9.689***	-9.719***
	(-5.92)	(-5.91)	(-5.91)	(-5.95)	(-5.94)	(-5.97)
CASH	-24.335	-24.009	-23.950	-39.882***	-39.069***	-39.018***
	(-0.76)	(-0.75)	(-0.75)	(-2.87)	(-2.82)	(-2.78)
ICOV	-276.969***	-277.909***	-276.565***	-195.604***	-193.429***	-194.455***
	(-2.93)	(-2.94)	(-2.92)	(-4.28)	(-4.24)	(-4.24)
CFS	-74.968***	-74.083***	-74.912***	-33.286***	-33.313***	-33.507***
	(-4.10)	(-4.05)	(-4.10)	(-3.25)	(-3.24)	(-3.24)
Industry Dummy	Included	Included	Included	Included	Included	Included
Year Dummy	Included	Included	Included	Included	Included	Included
Observations	4,518	4,519	4,518	4,637	4,640	4,641
Adjusted R-squared	0.525	0.525	0.525	0.465	0.467	0.466

 Table 5. Short-Term Investments and Individual Blockholder

IB_D, IB_N, and IB_O, indicating that the existence of individual blockholders encourages aggressive credit sales by easing the credit policy of the company. However, in the tabulated results, the inventory cycle had an insignificant relationship with IB_D, IB_N, and IB_O. In summarizing the above results, short-term risk-taking in the operating cycle is mainly related to credit policy and has no significant relationship with inventory management.

The results in Table 5 are consistent with my conjecture. If individual blockholders focus on short-term performance, they will focus on short-term performance enhancement activities rather than the firm's long-term investment, and the intuitive activity is to expand sales through a generous credit policy. This will inevitably increase the payback period of account receipts, increasing the receivable cycle. Combining Tables 4 and 5 supports the conjecture that individual blockholders' presence will reduce the long-term risk-taking of companies while increasing short-term risk-taking.

D. The persistence of investment

Table 6 reports the analysis results to test H4. To test the effect, the average of R&D investments from t+1 to t+5 is regressed on the interaction term of the dummy variable for the presence of individual blockholder(s) and current R&D expenses. R&D*IB_D has a significant negative coefficient, which means that the higher the level of R&D investment, the stronger the investment reduction by individual investors. To put it differently, individual blockholders decrease the persistence of R&D investment. Significant results that are qualitatively consistent with IB_D are also observed in IB_N and IB_O. These results show that individual investors avoid high levels of R&D expenditure. Unlike R&D investment, individual blockholders do not affect the persistence of CAPEX.

In column (1), the coefficient of R&D*IB_D is -0.244, meaning that if all other conditions are the same, the average future R&D investment is up to 24.4% lower in firms with individual blockholders compared to firms without individual blockholders. Hence, individual

VADIADIES	(1)	(2)	(3)
VARIABLES	Avg(R&D)_t+1-t+5	Avg(R&D) _{t+1-t+5}	Avg(R&D) _{t+1-t+5}
R&D*IB_D	-0.244***		
	(-3.20)		
R&D*IB_N		-0.143***	
		(-3.10)	
R&D*IB_O			-1.415***
			(-3.32)
IB_D	0.002**		
	(2.58)		
IB_N		0.002**	
		(2.04)	
IB_O			0.013*
			(1.69)
CS	-0.001	-0.001	-0.001
	(-0.83)	(-0.82)	(-0.89)
FS	-0.001	-0.001	-0.001
	(-0.60)	(-0.56)	(-0.56)
CFS	0.009***	0.009***	0.009***
	(3.81)	(3.81)	(3.80)
R&D	0.809***	0.809***	0.808***
	(37.98)	(38.05)	(38.12)
CAPEX	-0.001	-0.002	-0.002
	(-0.56)	(-0.60)	(-0.60)
SG&A	-0.008***	-0.007***	-0.007***
	(-3.14)	(-3.09)	(-3.09)
ADV	0.057***	0.057***	0.058***
	(3.45)	(3.37)	(3.38)
M&A	-0.018	-0.018	-0.018
	(-0.94)	(-0.91)	(-0.92)
ADJNI	-0.001	-0.001	-0.001
	(-0.27)	(-0.30)	(-0.29)
∆ADJNI	-0.002	-0.002	-0.002
	(-0.98)	(-0.89)	(-0.89)
MTB	0.000	0.000	0.000
	(0.76)	(0.74)	(0.71)
ТА	0.000	0.000	0.000
	(1.31)	(1.30)	(1.25)
Industry Dummy	Included	Included	Included
Year Dummy	Included	Included	Included
Observations	2,747	2,745	2,747
Adjusted R-squared	0.833	0.834	0.834

Table 6. Persistence of R&D investment

blockholders' influence on the decrease of R&D investment over the next five years is economically significant.

However, in the tabulated result, the persistence of CAPEX is not affected by the presence of individual blockholders. The difference can be explained by the difference between R&D and CAPEX. R&D expenditure is more persistent than CAPEX because R&D includes expenditures that are repeatedly spent each year, such as the labor costs of research personnel. On the other hand, in CAPEX, large-scale investments are often intermittently executed, such as the replacement of production facilities in factories. Therefore, in the five-year window, it is common for CAPEX to adjust a considerable amount of individual blockholders' annual investments, whereas, in the case of R&D, a significant amount of expenditure remains unchanged unless there is a special intervention. Therefore, corporate risk-avoidance by individual blockholders appears to be stronger in R&D.

E. Cash flow surplus and investment

This section tests H5. In column (1) of Table 7, the coefficient of CFS*IB_D appeared to be significantly negative. As the cash flow surplus increased, the tendency of individual blockholders to decrease CAPEX was more pronounced. As the cash flows of a firm strengthen, individual blockholders want to reduce CAPEX investment, thereby restraining the firm from using excess cash flow as investment resources. The result rejects H5. A cash flow surplus strengthens the negative relation between individual blockholders and future CAPEX.

This result shows that the relationship between individual blockholders and the changes of CAPEX reported earlier is not due to financial constraints. Further, the result implies that strong excess cash flows strengthen the tendency to cut investment.

In untabulated results, R&D investment was not related to cash flow surplus. This is because R&D investment is an investment with high persistence, so investment is carried out regardless of cash flow volatility (Brown & Petersen, 2011).

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VARIARIES	(1)	(2)	(3)
VARIABLES	$\Delta CAPEX_{t+1}$	$\Delta CAPEX_{t+1}$	$\Delta CAPEX_{t^{+}1}$
CFS*IB_D	-0.062*		
	(-1.67)		
CFS*IN_B		-0.058*	
		(-1.73)	
CFS*IB_O			-0.537*
			(-1.76)
IB_D	-0.003		
	(-0.91)		
IB_N		-0.002	
		(-0.60)	
IB_O			-0.005
			(-0.13)
CS	0.005	0.005	0.005
	(1.09)	(1.08)	(1.12)
FS	0.013**	0.013**	0.013**
	(2.09)	(2.09)	(2.11)
CFS	0.013	0.013	0.012
	(0.95)	(0.95)	(0.91)
R&D	0.020	0.021	0.020
	(0.36)	(0.37)	(0.36)
CAPEX	-0.593***	-0.593***	-0.593***
	(-25.42)	(-25.43)	(-25.42)
SG&A	0.015**	0.015**	0.015**
	(2.12)	(2.11)	(2.12)
ADV	-0.087	-0.083	-0.085
	(-1.62)	(-1.54)	(-1.56)
M&A	-0.011	-0.011	-0.010
	(-0.19)	(-0.19)	(-0.18)
ADJNI	0.095***	0.094***	0.094***
	(7.07)	(7.06)	(7.04)
∆ADJNI	0.014	0.014	0.015
	(1.22)	(1.23)	(1.24)
MTB	0.003***	0.003***	0.003***
	(3.24)	(3.23)	(3.25)
ТА	0.000***	0.000***	0.000***
	(4.55)	(4.54)	(4.56)
Industry Fixed Effect	Included	Included	Included
Year Fixed Effet	Included	Included	Included
Observations	4,102	4,102	4,102
Adjusted R-squared	0.407	0.407	0 406

Table 7. Cash Flow Surplus and CAPEX

VI. Conclusions

In Asian countries where business groups with centralized ownership structures are common, the agency problem between shareholders remains a problem due to the political and economic influence of the controlling shareholder. Previous studies argue that a controlling shareholder avoids risky investments because a controlling shareholder can enjoy risk-free cash flows by expropriating corporate resources of firms under the controlling shareholder's control.

Previous studies suggest that non-controlling large shareholders could play the role of corporate governance by monitoring or penalizing a controlling shareholder's expropriation of firm resources, which leads to corporate investments in risky projects. However, those studies do not consider whether non-controlling large shareholders have sufficient influence over a controlling shareholder.

Since a controlling shareholder is well-entrenched by a large voting power created through the complex ownership structure, institutional supports are necessary for non-controlling large shareholders to monitor or discipline the controlling shareholder. However, In Korea, public or private enforcement of the protection of minority shareholders' rights is not strong enough for this purpose. In this case, an optimal choice of non-controlling individual blockholders is to collude with the controlling shareholder by focusing on short-term performance to reduce the uncertainty of corporate value and promote financial stability.

The analysis results of this study empirically support this conjecture. The empirical analysis of this study shows that individual blockholders accelerate short-term performance by easing credit policy and pursuing aggressive sales growth while reducing long-term investment. These results suggest that non-controlling large shareholders do not play the corporate governance role if the difference in relative influence is large between a controlling shareholder and non-controlling large shareholders.

This study has the following contributions to the literature. First, to my knowledge, this is the first firm-level study to look at the relationship between Korean individual blockholders and corporate risktaking regarding corporate investments. Some prior studies have examined this topic at the country level (Mishra, 2011). However, no study examined this topic at the firm level using Korean data. By using firm-level data, this study finds a negative relation between individual blockholders and corporate risk-taking. This result is opposite to what prior studies have argued.

Second, this study suggests that individual blockholders' corporate governance role is conditional on several aspects. This study finds empirical results opposite to what prior studies argue (Mishra, 2011; Shleifer & Vishny, 1997). This study points out the detailed weaknesses of Korean law for minority shareholder protection. Combining empirical results and institutional loopholes, this study suggests that non-controlling shareholders' role as corporate governance could be limited without institutional supports. Further, this study suggests that non-controlling shareholder to reduce corporate risk-taking.

Third, this study implies that individual blockholders need institutional empowerment to function as a corporate governance mechanism. Korean controlling shareholders are well-entrenched through an entangled ownership structure (S. Claessens et al., 2000; La Porta et al., 1999), and have a strong influence in Korean society and politics (Murillo & Sung, 2013). Therefore, individual blockholders cannot fully influence corporate decisionmaking. To utilize individual blockholders' economic incentives and investor expertise in facilitating corporate risk-taking, institutional supports should be in place to fill the significant difference in influence between individual blockholders and controlling shareholders.

This study has the following limitations. First, this study relied on public sources to confirm the independence of individual blockholders. However, public sources can miss relationships between a controlling shareholder and large shareholders that are not publicly known. Therefore, the proxies for individual blockholders in this study could have some measurement errors.

Second, this study focuses on a risky investment. Investment is intertwined with payout policy and financing policy through firm resources. Therefore, payout policy and financing policy should be analyzed to fully understand the impact of individual blockholders on corporate risk-taking as well as investment policies. This can be addressed in future research.

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Variable	Definition
RETVOL	the standard deviation of daily return from year t+1 to t+5
ROAVOL	the standard deviation of earnings from continuing operation divided by lagged total assets from year t+1 to t+5 $$
R&D	research and development expenses divided by lagged total assets
CAPEX	investment cash outflows for purchasing tangible assets divided by lagged total assets
$AVG(R\&D)_{t+1\sim t+5}$	the standard deviation of research and development expenses divided by lagged total assets from year t+1 to t+5 $$
AVG(CAPEX) _{t+1~t+5}	the standard deviation of investment cash outflows for purchasing tangible assets divided by lagged total assets from year t+1 to t+5 $$
ACYCLE	accounts receivable cycle, defined as 360 divided by the ratio of revenue to average accounts receivable
ICYCLE	inventory cycle, defined as 360 divided by the ratio of cost of goods sold to average inventory
OCYCLE _{t+1}	operating cycle, defined as the sum of accounts receivable cycle and inventory cycle
IB_D	1 if the firm has any individual blockholders in the year, 0 otherwise
IB_N	the number of individual blockholders
IB_O	the sum of ownership of individual blockholders
CS	the ownership of the controlling shareholder and his/her family members
FS	the sum of ownership of foreign shareholders
SIZE	the natural logarithm of total assets in thousand of Korean won
ROA	continuing operation divided by lagged total assets
ΔREV	the change of revenue
MTB	the market value of equity divided by book value of equity
CFS	cash flows from operation plus research and development expenses less depreciation expenses
LEV	total liability divided by total assets
YRET	buy-hold return of the year
SGA	selling, general, and administrative expenses divided by lagged total assets
ADV	advertizing expenses divided by lagged total assets
MA	cash flow for merger and acquisitions divided by lagged total assets
ADJNI	net income added depreciation, amortization, research and development, and advertisement expenses
∆ADJNI	the change of revenue ADJNI
ТА	total assets in billion Korean won
CASH	cash and cash equivalent divided by lagged total assets
ICOV	operating income divided by interest expenses

Appendix. Variable Definitions