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Comparative Study on the Impacts of Institutional and Individual Investor on Security Investment Risk

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ABSTRACT

Institutional investor is supposed to be more powerful than individual investor from the perspectives of regularity authority and scholar, but the results are mixed. Using the data of listed company in China, the paper presents a comparative study on the impacts of institutional investor and individual investor on investment risk. It shows that the scale and ownership of institutional investor have negative impacts on investment risk significantly, but the scale and ownership of individual investor have positive impacts on investment risk, which implies institutional investor has the effects to reduce investment risk comparing with individual investor. Therefore, developing institutional investor and reducing the scale of individual inventor is important for the stability of security market.

Keywords: *Corporate Governance, Institutional Investor, Individual Investor, Information Disclosure, Investment Risk*

1. Introduction

The separation of ownership and operation of corporation results in the conflict of its principal and agent, and there is lots of literature focusing on it [1]. However, with the development of institutional investor, the ownership of company both in USA and UK has the tendency of concentration [2]. And therefore, the conflict between managers and shareholders is replaced by controlled shareholder and minority shareholders [3].

As the deputy and trustee of individual investor, institutional investor has advantage of information. Scholars regard that institutional investor is full of experience, has the capacity of collecting information, analysis data, and has critical influence on investment company [4]. Based on the point, institutional investor has more information than individual investor [5]. However, in literature, the impacts of investor on investment risk are mixed. On one hand, scholar regards the information included in the price of stock could reduce the fluctuation of security return ratio, so the more share held by institutional investor, the more information included in stock price [6], and which is called institutional sophistication hypothesis [7]. On this point, it implies the ownership of institutional investor is positive related with the fluctuation and investment risk. On the other hand, literature argues that institutional investor is prudent [8], and the ownership of institutional investors is negative related with the fluctuation of stock price and investment risk, which is called institutional preference hypothesis [7]. With the rapid development of institutional investor in China, it is important to study the impacts of institutional investor on investment risk, not only for the decision of investors and security regularity commission, but also for the development of security market.

The paper makes a comparative study on the impacts of institutional and individual investor on investment risk based on the data of listed company in China during 2001-2008, and examines the institutional sophistication hypothesis and institutional preference hypothesis. There are three contributions of the paper in theory and practice. Firstly, it checks two hypothesis set up by west scholar using Chinese database. Secondly, it compares the impacts of institutional investor with that of individual investor in China, which can help scholars to understand the influence of institutional investor further. The last but not the least, the paper also analysis the combined influences of institutional investor on disclosure and invest-

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ment risk.

2. Literature Review and Hypothesis

Information about the invested company is asymmetric between mangers and shareholders. Information asymmetry may influence the information included in stock price, and therefore has impacts on the pricing function and investment risk.

Comparing with individual investor, institutional investor has two advantages in the respect of information. On one hand, institutional investor has large scale and professional knowledge, and has more power than individual investor to collect information, analysis information and make money [9,10]. Moreover, institutional investor may transfer the related information to other shareholders and stakeholders, which influence investment further. On the other hand, on the base of high ratio of share held, institutional investor has motives to take part in corporate governance and improve the quality of information disclosure. References [11,12] show that Chinese institutional investor has played an important role to improve the corporate governance and foreign large institutional investor could improve the information disclosure and enhance the mobility of security market. References [4,13] also regard that institutional investor could monitor the information disclosure behavior effectively based on their large capital and powerful capacity to deal with information.

Limited literature concluded that institutional investor could improve information disclosure in China. Reference [14] shows that the share held by institutional investor is positive related with the quality of information disclosure, and scholar also indicts that the ratio of share held and the scale of invested company of institutional investor are positive related with the quality of information disclosure [15]. According to literature, it is reasonable to regard that institutional investor has more power than individual investor to improve information disclosure. As a consequence, we have the hypotheses as follows:

Hypothesis H1: Comparing with individual investor, institutional investor has more power to enhance information disclosure, embodied as the ratio of share held and the scale of institutional investor are positive related with the quality of information disclosure, but that of the individual investor are not related with the quality of information disclosure significantly.

Monitoring cost will exist if investors monitor managers of listed company. In this point, individual investors have not strong incentive to care the behavior of managers. Contrary to this view, institutional investors have large share of listed company, face serious press of their principles and investment risk. Therefore, institutional investors have strong incentive to monitor managers in order to enhance information disclosure, improve the performance and reduce the investment risk. However, there are different points about the relation between the ownership of institutional investor and the fluctuation of stock price.

First, scholars regard that institutional investor enhance the fluctuation of stock price. Reference [16] has the opinion for the west section. In China, literature show that the fluctuation of share held by institutional investor has significantly effects on the fluctuation of Shanghai stock index, but that of the individual investor has not these impacts [17]. Reference [18] also has the view. Second, other literature regard that institutional investor can not induce the fluctuation of stock price. Empirical study shows that the existence of institutional investor at least can not result in the instability of security market [19], and scholar also finds evidence to support this point that institutional investor has not play the function to stabilize the security market [20]. Third, the existence of institutional investor can reduce the fluctuation of stock price. For instance, reference [21] finds that the higher the share held ratio of institutional investors, the more information included in stock price, which implies the share held ratio of institutional investor is negative related with the fluctuation of stock price. Reference [10] indicates that institutional investor can transfer the information related with the value of company to stakeholders, which has the function to reduce the value of information and investment risk. In China, some scholars find that the ownership of institutional investor is negatively related with the fluctuation of stock price [22]. Different from the three points above, the fourth view regards that the relationship between the ownership of institutional investor and the fluctuation of stock price is decided by the dividend policy, and there are evidence to support this consequence [7].

In general, the different points can be classified as two main views. The first view emphasizes the institutional preference hypothesis [7], which means the ownership of institutional investor is negative related with the fluctuation of stock price. The second view is the institutional transaction hypothesis [7], which means the ownership of institutional investor is positive related with the fluctuation of stock price or investment risk. Different from the west, the capital market in China is not maturity, and whether the two hypothesizes are correct needed to be test further. In addition, the more institutional investors invest a company, the stronger incentives of them to monitor the company's managers, and therefore, the higher quality of the information disclosure, the lower fluctuation of stock price. According to these views, we

have the hypotheses as follows:

Hypothesis H2: Comparing with individual investor, the ownership and the scale of institutional investor are negative with the fluctuation of stock price or investment risk, but that of the individual investor has not negative impacts on the fluctuation of stock price or investment risk significantly.

3. Methodology

3.1. Variables

In order to test the hypotheses, three types of variables including explanatory variable, explained variable and controlling variable are introduced. In the hypothesis H1, the explained variable is *DIS*, the quality of information disclosure, and the data of it is coming from the database of Shenzhen Stock Exchange, graded as high quality, medium quality, low quality and failed quality. Reference [15] measures them as 1, 2, 3 and 4 respectively. However, this measure method is not in line with their meanings in general. In order to deal with the problem, we measure them as 95, 85, 70 and 30 respectively. In other words, we use their medium value to measure the different level of information disclosure quality. In the hypothesis H2, the explained variable is the fluctuation of stock *BETA*. According to Efficient Market Hypothesis, stock price not only includes public information, but also includes private information of investors, listed companies and government monitoring section. In this view, the fluctuation of stock price reflects the extent of information asymmetry between listed company and investors. The greater the fluctuation of stock price, the higher the information asymmetry. Based on this point, we use the system risk - *BETA* to measure the fluctuation of stock price.

In the hypothesizes H1 and H2, the explanatory variables are the ownership of institutional investor IIS and the scale of institutional investor NII, which is the total share ratio held by institutional investors in the top 10 shareholders holding transactional share and the number of institutional investor repetitively. In order to compare its effects with individual investor, the explanatory variables also include individual investor's ownership PIS and its number NPI, which is the total share ratio held by individual investors in the top 10 shareholders holding transactional share and the number of individual investors repetitively. In this paper, the institutional investor includes investment fund, investment bank, commercial bank and trust company.

According to Principal and Agent Theory, corporate governance not only influences the quality of information disclosure and performance, but also has impacts on the investment return of investors. In order to research the impacts of institutional investor on investment risk on a certain corporate governance level, the controlling variable in the paper includes the scales of director in board, independent director, board of monitoring, the ratio of debt-asset and the concentration of ownership. All the variables are listed in **Table 1**.

3.2. Samples

Although the history of capital market in China is not more than 30 years, it develops fast. According to the monthly statistics data on January 2011 of Chinese Security Regulatory Commission, there are 2063 listed companies and 704 security investment funds at the end of 2010, which are available data source for scholars. The sample in this paper is listed company in Shenzhen Stock Exchange during 2001-2008, but not including financial and special treated company. Finally, the sample includes 337, 293, 294, 309, 272, 278, 299 and 276 companies at the year of 2001 to 2008 respectively. All the data comes from CCER DATABASE. **Table 1** shows the data of the samples.

Table 2 shows the characteristics of listed company in China. For instance, the average quality of information disclosure is 80.85, indicting that the information disclosure is high, and the security regulation is efficient. The average value of the system risk is 1.098, which implies the average system risk is nearly equal to the stock exchange market as a whole. From the point of ownership, in the top 10 large shareholders who held the transactional share, there are 3.33 institutional investors on average, but the total share ratio of institutional investor is only 3.9% for each company. Meanwhile, the average ratio of share held by the top 5 large shareholder is 54.8% and that of the top 10 is 57.6%, which implies that the ratio of share held by the sixth to tenth large shareholders is 2.8%, lower than that of the institutional investor. According to this view, institutional investor should play an important role in corporate governance.

4. Research Model and Discussion

4.1. Research Model

The hypotheses are tested by three steps. Firstly, we study the impacts of the number and share ratio of both the institutional and individual investor on the quality of information disclosure to check the hypothesis H1. Secondly, we analysis the impacts of the quality of information disclosure on the investment risk. Finally, we research the impacts of the numbered share ratio of both the institutional and individual investor on investment risk to test the hypothesis H2.

In literature, the level of corporate governance not only influences the extent of the interest of investors, but also influences the information disclosure and investment

Table 1. Variables and definition.

Items		
Name of variables	**Sign**	**Definition of Variable**
Quality of information disclosure	*DIS*	High, medium, low and failed is measured by 95, 85, 70 and 30 repetitively
Fluctuation of stock price	*BETA*	System risk of stock
The scale of institutional investor	*NII*	The number of institutional investors in the top ten shareholders with transactional share
The ownership of institutional investor	*IIS*	The ownership of institutional investors in the top ten shareholders with transactional share
The scale of individual investor	*NPI*	The number of individual investors in the top ten shareholders with transactional share
The ownership of individual investor	*PIS*	The ownership of individual investors in the top ten shareholders with transactional share
The scale of listed company	*SCA*	The LOG10 of total asset
Debt-asset ratio	*RDA*	Total debt / equity of shareholder
The scale of board of director	*SBD*	The number of director in board
The scale of independent board	*SBID*	The number of independent director
The scale of monitoring board	*SBM*	The number of monitoring director
Ownership concentration	*CR*5	The total share held by the top 5 largest shareholders

Table 2. Descriptive analysis of the sample.

Variable	Minimum	Maximum	Mean	Std. Deviation
DIS	30.000	95.000	80.850	10.609
BETA	0.010	4.095	1.098	0.295
NII	0.000	10.000	3.330	3.615
IIS	0.000	0.648	0.039	0.062
NPI	0.000	10.000	4.880	3.676
PIS	0.000	0.000	0.010	0.014
SCA	8.085	11.000	9.28	0.428
RDA	–16.515	273.718	1.376	5.963
SBD	0.000	17.000	6.850	2.169
SBID	0.000	8.000	2.820	1.305
SBM	0.000	6.000	1.150	0.790
*CR*5	0.129	1.277	0.548	0.143
*CR*10	0.145	1.339	0.576	0.138

risk. Therefore, in our model, we use the scales such as the number of director in board, independent director, monitoring board and the ownership concentration index to reflect the level of corporate governance. Meanwhile, in order to make out the impacts of investor of a certain scale listed company, we also take the scale of company as a variable in the models. In addition, in literature, scholars take the ownership of investor, leverage, stock return annual and information disclosure into account [7]. Therefore, we also use them as variables in the models. Furthermore, in order to make out the impacts of investors on information disclosure and investment risk under the same condition, the models we used are similar with each other. Under this consideration, in the paper, we use Model (1) and (3) to study the impacts of institutional investor, use the model (2) to check the impacts of information disclosure on the investment risk, and use the (4) and (5) to study the impacts of individual investor.

$$DIS = a_0 + a_1 NII + a_2 IIS + a_3 SCA + a_4 RDA + a_5 SBD + a_6 SBID + a_7 SBM + a_8 CR5 + a_9 CR10 + \varepsilon \quad (1)$$

$$BETA = c_0 + c_1 DIS + c_2 SCA + c_3 RDA + c_4 SBD + c_5 SBID + c_6 SBM + c_7 CR5 + c_8 CR10 + \mu \quad (2)$$

$$BETA = b_0 + b_1 NII + b_2 IIS + b_3 SCA + b_4 RDA + b_5 SBD + b_6 SBID + b_7 SBM + b_8 CR5 + b_9 CR10 + \eta \quad (3)$$

$$DIS = d_0 + d_1 NPI + d_2 PIS + d_3 SCA + d_4 RDA + d_5 SBD + d_6 SBID + d_7 SBM + d_8 CR5 + d_9 CR10 + \lambda \quad (4)$$

$$BETA = e_0 + e_1 NPI + e_2 PIS + e_3 SCA + e_4 RDA + e_5 SBD + e_6 SBID + e_7 SBM + e_8 CR5 + e_9 CR10 + \theta \quad (5)$$

4.2. Outputs and Discussion

Using the SPSS 16.0 to deal with the data, we present the results in **Table 3** to **Table5**. We use the Enter Method, so there is not collinearity in the model.

In **Table 3**, the model (1) shows that the scale of institutional investor has positive impacts on the quality of information disclosure at the level of 1%, which supports the hypothesis H1. Contrary to the result, the share ratio held by institutional investor has negative impacts on the quality of information disclosure at the level of 5%, which does not support the hypothesis H1. As for the reasons, in our opinion, both of the ratios of share held by institutional investor and that of the sixth to the tenth large shareholder are low, they have the inventive to collaborate with each other to protect their interest. The higher the ratio of share held by institutional investor, the more probability they collaborate with each other, and as a result, the more likelihood they harm the interest of other small shareholders to benefit themselves. Consequently, the share ratio of institutional investor has the impacts to reduce the quality of information disclosure. In fact, although institutional investor has the advantages of information, it is only used for their own interest. For example, in China, institutional investors disclosure their portfolio at the end of each season, which implies the information belongs to themselves and listed company. From the data of Standard Coefficient at the table, the effects of the scale of institutional investor is triangular that of the ownership of institutional investor, which means the number of institutional investor is more important than that of their ownership on information dis-

Table3 . The impacts of different investors on information disclosure.

	Institutional investor (Model (1))			Individual investor (Model (4))		
	Unstandard Coefficient		**Standard Coefficient**	**Unstandard Coefficient**		**Standard Coefficient**
	B	**Std. Error**	**Beta**	**B**	**Std. Error**	**Beta**
(Constant)	70.24*** (14.8)	4.739		74.86*** (15.53)	4.813	
NII	0.616*** (7.23)	0.085	0.210			
IIS	–10.65* (–2.16)	4.935	–0.062			
NPI				–0.18** (–2.57)	0.071	–0.062
PIS				–92.54*** (–4.99)	18.558	–0.122
SCA	0.263 (0.527)	0.500	0.011	0.176 (0.35)	0.504	0.007
RDA	0.009 (0.254)	0.036	0.005	0.006 (0.16)	0.036	0.003
SBD	0.042 (0.42)	0.102	0.009	0.045 (0.45)	0.102	0.009
SBID	1.18*** (6.95)	0.170	0.145	1.133*** (6.5)	0.173	0.139
SBM	0.100 (0.37)	0.274	0.007	0.093 (0.34)	0.276	0.007
*CR*5	–1.768 (–0.23)	7.863	–0.024	–5.217 (–0.67)	7.834	–0.070
*CR*10	6.576 (0.81)	8.166	0.085	9.824 (1.2)	8.109	0.128
	R = 0.25 Adjusted R^2 = 0.059 F = 17.316***			R = 0.24 Adjusted R^2 = 0.056 F = 16.484***		

Table 4. The impacts of information disclosure on investment risk (Model(2)).

	Unstandard Coefficient		Standard Coefficient	t	Sig.
	B	**Std. Error**	**B**		
(Constant)	1.456	0.141		10.333	0.000
DIS	–0.001	0.001	–0.045	–2.142	0.032
SCA	–0.009	0.014	–0.014	–0.663	0.507
RDA	0.001	0.001	0.014	0.681	0.496
SBD	–0.006	0.003	–0.046	–2.191	0.029
SBID	0.004	0.005	0.018	0.830	0.406
SBM	–0.002	0.008	–0.006	–0.309	0.758
*CR*5	0.246	0.220	0.119	1.120	0.263
*CR*10	–0.469	0.228	–0.219	–2.055	0.040
	R = 0.136 Adjusted R Square = 0.015 F = 5.554 (Significantly at the level of 1%)				

Table 5. The impacts of different investors on investment risk.

	Institutional investor (Model (3))			Individual investor (Model (5))		
	Unstandard Coefficient		**StandardCoefficient**	**Unstandard Coefficient**		**Standard Coefficient**
	B	**Std. Error**	**Beta**	**B**	**Std. Error**	**Beta**
(Constant)	1.377*** (10.24)	0.134		1.374*** (10.01)	0.137	
NII	–0.008*** (–3.25)	0.002	–0.096			
IIS	–0.019** (–0.135)	0.140	–0.004			
NPI				0.006*** (2.82)	0.002	0.070
PIS				0.214 (0.41)	0.526	0.010
SCA	–0.012** (–0.83)	0.014	–0.017	–0.016 (–1.1)	0.014	–0.023
RDA	0.001*** (0.69)	0.001	0.014	0.001 (0.73)	0.001	0.015
SBD	–0.006*** (–1.94)	0.003	–0.041	–0.006** (–2.1)	0.003	–0.045
SBID	0.005*** (0.95)	0.005	0.020	0.003 (0.61)	0.005	0.013
SBM	0.000*** (0.34)	0.008	0.000	0.000 (–0.12)	0.008	–0.003
*CR*5	0.077 (0.34)	0.225	0.037	0.159 (0.71)	0.224	0.077
*CR*10	–0.278 (–1.19)	0.233	–0.130	–0.372 (–1.61)	0.232	–0.174
	R = 0.16 Adjusted R^2 = 0.022 F = 6.89***			R = 0.15 Adjusted R^2 = 0.019 F = 5.97***		

closure.

In **Table 3**, the model (4) also shows that both the number and the share ratio held by individual investor have negative impacts on the quality of information disclosure at the level of 3% and 1% significantly respectively, which support the hypothesis H1.

Comparing with the outputs of model (1) and (4), the ownership of institutional and individual investor has negative impacts on the quality of information disclosure. Different with the impacts of the ownership, the scale of institutional investor and individual investor have different effects, which implies the number of institutional investor has more important role to improve the quality of information disclosure than that of the individual investor.

Table 4 shows that the quality of information disclosure has negative impacts on investment risk at the level of 5% significantly, in line with the literature [23-25]. In other words, high quality information disclosure could reduce the conflict of company and external investors, agency cost and investment risk.

From the output of Model (3), it shows that the num-

ber of institutional investor has negative impacts on investment risk at the level of 1% significantly, and the ownership of them has negative impacts on investment risk at the level of 3% significantly, and both of them support the hypothesis H2. From the model (5) in **Table 5**, it shows the ownership of individual investor has positive impacts on investment risk, which also supports the hypothesis H2.

Combining the outputs of **Table 3**, **Table 4** and **Table 5**, it shows that the number of institutional investor has positive impacts on the quality of information disclosure, which has negative impacts on the investment risk further significantly. As a result, in the **Table 5**, the number of institutional investor has negative impacts on investment risk, supporting the institutional preference hypothesis [7]. Different from the effects of institutional investor, both the number and ownership of individual investor has negative impacts on the quality of information disclosure, and the quality of information disclosure has negative impacts on investment risk. As a consequence, the number of individual investor has positive impacts on investment risk, which is in line with the output on model (5).

The fact that the outputs in **Table 3** and **Table 4** are in harmony with the outputs in **Table 5** shows that the large number of institutional investor has the impacts to reduce the investment risk, but the large number of individual investors has the effects to reduce the extent of monitoring and information disclosure, and finally increase the extent of investment risk. Hence, increasing the scale of institutional investor and reducing the scale of individual inventor is important to minimize the investment risk and stabilize the security market in China.

5. Conclusions

In order to steady the stock market and reduce the investment risk, institutional investor is becoming more and more important around the world, especially in China. Although there is lots of literature concerning on the impacts of institutional investor, the results are mixed. It is important to make an empirical study on the influence of institutional investor on the quality of information disclosure and investment risk.

With the data of listed company in China, the paper shows that both of the number and ownership of institutional investor has negative impacts on investment risk, which support the institutional preference hypothesis [7]. From the point of the number of institutional investor, it has positive impacts on the quality of information disclosure and negative impacts on investment risk, which implies institutional investor has the function to stabilize the stock market. Contrary to this view, both of the number and ownership of individual investor has negative impacts on the quality of information disclosure significantly, which implies that the individual investor has the effect to enhance the investment risk. Therefore, enhancing the institutional investor and reducing the scale and ownership of individual investor may improve the information disclosure and reduce the investment risk in China.

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