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Corporate governance, managers' self-interest and corporate herd behavior of investment- empirical research of Chinese listed companies

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ABSTRACT

In this paper, the listed companies in China from 2009 to 2013 were considered as a sample, the fact whether managers self-interested motives lead to herd behavior was analyzed and the inhibitory effect exerting on herd behavior caused by companies' governance mechanism was examined. The studied results demonstrated that there is more obvious in herd investment behavior of listed companies in China. In the companies' governance mechanism, the shareholder control, managerial can effectively control non-flock investment behavior and the inhibition of independent directors is not obvious. The conclusion drawn in this paper not only supports the assumption of that herd behavior is sourced from managers' self-interest motivation, but also help us to recognize the corporate governance mechanism must be effective in the perfect market environment.

KEYWORDS

Companies' governance mechanism; Managers' self-interest; Herd behavior; Investment efficiency.



INTRODUCTION

Herd behavior is the act that economic agents made the same decisions and actions under the uncertain information, where their actions are not based on the information they have, but according to the observed behaviors or signals of other economic agents^[1-2]. In the securities market of China, either institutions or individual investors showed herd behavior in varying degrees.

In the stage of Chinese economic transition, in addition to capital markets, entity investment field also presents as herding behavior of investment^[3-4]. For example, the "Internet hot" and "bio-engineering heat" from year 2000 to 2003, many listing Corporations in China have made the investment in the Internet and bio-pharmaceutical industry; in the years 2004-2006, a lot of enterprises launched projects blindly according to the investment trends caused by the same types of enterprises, resulting in the investment overheating of iron and steel, cement, electrolytic aluminum and other industries; since the beginning of 2005, the Chinese enterprises raise the investment boom on the photovoltaic industry, leading to the fact that photovoltaic industry today has become the heavy disaster area of excess capacity. Herd behavior in the enterprise investment leads to the low efficiency of investment at the micro level; meanwhile, it also caused the industry's repeat construction at the macro level, and even hampered the sustainable and harmonious development of economy, environment and society.

As demonstrated in the above facts, the herd investment behavior is one of the reasons leading to the decline in investment efficiency, but the research concerning the generation and governance mechanism for herding investment behavior was limited. Knyazeva et al. (2008) believes that the herd behavior is the managers' selfish action under the condition of the principal-agent mechanism through the comparison of cost and income. According to the self-interest behavior of managers, shareholders will design a series of corporate governance of their supervision. Fang Junxiong, Lu Wei (2012) found the fact based on the empirical studies of listing Corporations in China that the companies governance mechanism in holding the establishment and herding investment behavior of shareholder and the Remuneration Committee of the significant correlation^[5]. Yang Jie (2012) has studied the herding investment behavior of state owned holding listing Corporation, and mentioned that Pyramid hierarchy and herding investment behavior are negatively correlated, that is, reduce the Pyramid hierarchy can effectively inhibit the herd behavior of investment. In addition, research on Herding investment behavior physical investment enterprises is still very rare. Therefore, whether there exists herd behavior China listing Corporation investment significantly, and whether effective corporate governance mechanism constraint managerial self-interest behavior, thereby inhibiting herding investment behavior of non efficiency, this is the purpose of this paper.

The contribution of this paper mainly has the following two points: firstly, it proved that there is a significantly herding behavior among Chinese listing Corporations through empirical research and provides a new explanation for the non-efficiency investment of Chinese enterprises; secondly, based on the agency-conflict context of the manager's self-interested behavior theory, the effect of corporation governance mechanism on the investment behavior of the herd was verified and the occurrence mechanism of herd behavior for enterprise investment was revealed preliminarily.

THEORETICAL BACKGROUND AND RESEARCH HYPOTHESIS

(a) Managers' self-interest investment and enterprises' herd behavior

Investment is the basis of main motive of enterprise growth and the growth of future cash flow, efficiency of investment behavior will be directly related to the operation effect and value of the enterprise implementation. The current study shows that, Chinese enterprises widespread excessive investment in non efficiency, herding investment behavior may be one of the reasons. Main explanations for herding investment behavior as the following three points: first, information speculation, Bikhchandani, Hirshleifer, and Welch (1992), in case the manager under incomplete information, imitating others and can save the searching and processing information cost, thus cause the herd behavior. Second, reputation concerns, Stein (1989), managers and peers make convergence of investment decision, after the failure of more easily attributed the reason to external uncontrollable factors, thus conducive to managers escape responsibility, maintain its occupation reputation^[6]. The third is the compensation structure, Maug and Neik (1995) found that, relative performance when the fund manager's remuneration depends on other managers in the same industry, distorts the incentive mechanism, create a herd behavior^[7]. Although the above theoretical analysis of herd behavior of investment are quite different, but they are of the view that the root causes of herd behavior is the investment agency problems in the investment decision and management, which is the management agency mechanism under the act of self weighing costs and benefits of the selection.

Hypothesis 1, there is herding behavior of investment of listing Corporation in China.

(b) The self interested behavior of corporate governance mechanism and management

Good corporate governance can produce to supervise and restrict the managers' self-interest behavior of managers, the formation of the effective containment, and then inhibit the inefficiency of investment behavior of the company^[8-9]. Corporate governance is a series of system arrangement, the China Company governance evaluation system is composed of six dimensions, namely the board of shareholder governance mechanism, the board of supervisors governance mechanism, governance mechanism of information governance mechanism, the manager level governance mechanism, disclosure mechanism, stakeholders. The objective of this thesis is to explore the micro enterprises, influence the corporate governance characteristics on Herding investment behavior. For the Chinese listing Corporation, corporate governance model has two

obvious tendencies, namely the control of large shareholder governance model and the "internal control" mode of governance. Therefore, this paper studies shareholders governance, board governance, managers three governance mechanism by self interested behavior constraint management, indirect mechanisms of inhibition of herding investment behavior.

Shleifer and Vishny (1997), La Porta et al (1999) study found that, the existence of large shareholders can effectively alleviate the agency problem between shareholder manager^[10-11]. Compared with Europe and the United States Chinese listing Corporation listing Corporation, significant difference is that Chinese listing Corporation generally exist the holdings of major shareholders, Fang Junxiong, Lu Wei (2012) study demonstrated that the major shareholder of the company governance mechanism in holding has significant influence on the herd behavior of investment. Chinese listing Corporation besides having large shareholder control features, another feature is the state-owned accounted for a larger proportion of. Tang Xuesong (2007) study found that non state owned property of large shareholders and large shareholders of state-owned properties compared to control excessive investment is more obvious^[12]. Because of the state-owned property of the control of large shareholders in the listing Corporation of "internal control" problem is more serious. Because of "lazy" and passing the buck by managers, it is easier to occur herd behavior in the investment decision-making process.

Hypothesis2, compared with state-owned controlling shareholders, the control exerted on herding investment behavior caused by non state-owned shareholders is more obvious.

On behalf of shareholders, directors have fiduciary duty to supervise the manager, especially the independent directors play an important role in monitoring managers. Williamson pointed out that the introduction of independent director, board of directors can ensure that the board of directors of the company are not basic control relation for management intervention affected. In general, the independent director is not easy to be managers bribe and control, are relatively independent views on inspection company investment decision, so the supervision on managers and inhibit the inefficiency of investment behavior more effective. Chung et al. (2003) and Gugler et al. (2003) believed that the independent directors can blind investment behavior by its expertise and high sense of responsibility to curb the enterprise top management. An important mechanism of the independent director system of board governance to self-interest behavior, which could effectively supervise and manage self interest behaviour, as well as inhibit of company herd investment behavior.

Hypothesis3, the independent directors can restrict the herd behavior of investment.

The manager shareholding has two effects on the protection of the interests of shareholders, one is Convergence of Interests, and the other is the Managerial Entrenchment. With the ratio increases of manager shareholding, the agency costs between shareholders and managers will be reduced due to the cost-sharing effect, which means the favorable effect for interest; however, when the proportion of shareholding exceeds a certain level, the status of shareholders can effectively reduce the market force, called as the management entrenchment effect. At present, the Chinese listing Corporations have generally adopted the management stock ownership plan, but the manager shareholding ratio is relatively low, and the manager shareholding of listing Corporation was expressed as the favorable effect. The manager shareholding can effectively alleviate the agency problem between shareholders and managers, the use of material incentive mechanism ensures the goals of shareholders and managers is consistent, thereby reducing the managers act of selfish, thus restraining the herd behavior of investment company.

Hypothesis 4 manager shareholding can restrict the herd behavior of investment.

DATA AND METHOD

Data collection

All the A-share listed companies of Shanghai and Shenzhen stock markets from 2010 to 2013 were selected as initial sample, and the following companies were excluded: the financial listed companies; data incomplete company such as financial data missing; in order to avoid the influence of outliers, ST and PT companies from 2010-2013 were excluded. 4652 samples were obtained after the screening. The data used in the paper including financial data, company management data and shareholder data were collected from GTA CSMAR database and SFC website.

Method

Based the results by Richardson (2006), Fang and Lu (2012). Firstly, different companies flock investment were estimated, then inspect the inhibition of company management (shareholders, independent directors, manager shareholders) to the herd investment behavior^[13].

Measure the enterprise herding investment behavior

Based the results by Richardson (2006), Fang and Lu (2011). The enterprise herding investment behavior was calculated by the following formula:

$$I_{i,t} = \alpha + \beta \times \Pi_{i,t} + \sum Control + \varepsilon \quad (1)$$

Where $I_{i,t}$ is the first year new investment of company i , $\Pi_{i,t}$ is the median value of the new investment of company i in year t , control is the control variables.

Corporate management and corporate herd investment behavior

According to the previous analysis, the following model is used to validate the hypothesis 1,2,3:

$$I_{i,t} = \alpha + \beta_1 \times \Pi_{i,t} + \beta_2 \times ST \times \Pi_{i,t} + \beta_3 \times ID \times \Pi_{i,t} + \beta_4 \times MS \times \Pi_{i,t} + \sum Control + \varepsilon (2)$$

Where ST is the dummies that controlling the shareholders character, if the state-owned holding, then ST = 0; if a non-state-owned holding, then ST = 1. ID is the proxy variable of the proportion of independent directors. MS is the proxy variable of manager Shareholding proportion. The industry and annual were controlled at the same time.

TABLE 1 Variable description

Name		description
dependent variables	$I_{i,t}$	new investment expending calculate by cash flow. $I_{i,t}$ = cash payments of fixed assets, intangible assets and other assets in period t / total assets
explanatory variables	$\Pi_{i,t}$	is the median value of the new investment of company i in year t
	ST	the dummies that controlling the shareholders character, if the state-owned holding, then ST = 0; if a non-state-owned holding, then ST = 1.
	ID	the proxy variable of the proportion of independent directors
	MS	the proxy variable of manager Shareholding proportion
control variables	Tobin-Q	Tobin-Q value
	CFO	Net cash flow from operating activities / early assets
	Cash	Cash ratio, monetary funds / early assets
	Tang	Fixed assets ratio, fixed assets /early assets
	Size	The natural logarithm of total assets
	Lev	Debt ratio
	Profit	profit 1, otherwise 0
	Year	Year dummies, involving four years data of listed companies, so a total of 3 year dummies
	Ind	Industrydummies, based on SFC Industry Classification Standard, excluding the financial sector, a total of 20 industry dummies

EMPIRICAL ANALYSIS AND RESULTS

Statistical analysis

There was a positive correlation between $I_{i,t}$ and cross-variable $ST^* \Pi_{i,t}$, $MS^* \Pi_{i,t}$, $ID^* \Pi_{i,t}$, where the correlation coefficient of $ST^* \Pi_{i,t}$ and $\Pi_{i,t}$ is 0.876, the correlation coefficient of $MS^* \Pi_{i,t}$ and $\Pi_{i,t}$ is 0.653, correlation coefficients between the other variables are not large as presented in Table 2.

Regression analysis of corporate herd investment behavior

As shown in Table 3, China listed companies of new investment expending significant positive correlation with industry investment position, showing obvious herd investment trends that company's investment expenditure changes with the industry investment. At the same time, the model (1) indicates that: the company's internal resources and adequate profitability will increase investment expending next year, and reduce future liabilities will increase investment spending.

TABLE 2 statistical analysis

	Average	Median	Standard deviation	Maximum	Minnum
$I_{i,t}$	0.076	0.0443	0.116	4.43	0
$\Pi_{i,t}$	0.054	0.052	0.023	0.152	0.002
Tobin-Q	1.415	1.157	1.314	47.64	0.18
CFO	1.443	1.172	0.167	4.19	-7.33
Cash	0.194	0.142	0.353	21.67	0
Tang	0.353	0.333	0.047	0.71	0
Size	21.61	21.49	1.154	26.47	14.14
Lev	0.512	0.511	0.285	6.54	0.012

Profit	0.878	0.97	0.326	1	0
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TABLE3 regression analysis results of herd investment behavior

variables		model (1)		
		expected sign	coefficient	t value
explanatory variables	$\Pi_{i,t}$	+	0.067	1.876**
	Tobin-Q		0.021	1.523
control variables	CFO		0.074	5.278***
	Cash		0.045	3.317***
	Tang		0.124	8054***
	Size		0.025	1.563
	Lev		-0.034	-2.067**
	Profit		0.053	4.212***
	Year	control		
	Ind	control		
	Adj. R ²	0.093		
	N	4652		

Note: ***,**and* denote significance level of 0.01, 0.05 and 0.1 (two-tailed)

Regression analysis of corporate management and corporate herd investment behavior

The regression analysis results of corporate management and corporate herd investment behavior calculate by model (2) are presented in Table 4.

TABLE 4 The regression analysis results of corporate management and corporate herd investment behavior

variables		model (2)		
		expected sign	coefficient	t value
explanatory variables	Π_{CF}	+	0.076**	2.073
	ST* $\Pi_{i,t}$	+	0.041*	1.713
	ID* $\Pi_{i,t}$	+	0.0023	0.547
	MS* $\Pi_{i,t}$	+	0.027*	1.673
control variables	Tobin-Q		0.037***	2.621
	CFO		0.083***	6.014
	Cash		0.041***	3.005
	Tang		0.144***	9.332
	Size		0.036**	2.303
	Lev		-0.042***	-3.052
	Profit		0.074***	5.494
	Year	control		
	Ind	control		
	Adj. R ²	0.138		
N	4652			

Note: ***,**and* denote significance level of 0.01, 0.05 and 0.1 (two-tailed)

Regression results is shown in Table 4, cross-binomial regression coefficients of controlling shareholders and managers holding variable are 0.041 (significance level is 1%) and 0.027 (significance level is 1%) respectively, which means non-state shareholders holding and managers holding control the corporate herd investment behavior. Hypothesis 2 and Hypothesis 4 are verified. Cross-binomial regression coefficients of independent directors variable are 0.0023, which means the effect of independent directors to the control of corporate herd investment behavior is not significant. Hypothesis 3 has not been verified.

Overall, corporate management has great impact on the control of corporate herd investment behavior. The intensity sort is controlling shareholders > manager shareholding > independent directors. Research results show that: (1) State-controlled listed companies easier to herd investment behavior. The reason is that the board of directors of state-owned holding listed companies supervision mechanism is not perfect, "Internal control" problem outstanding, and business managers is prone to herd behavior in order to evade responsibility in the investment decision-making process. (2) The effect of managers holding control the corporate herd investment behavior is significant. The reason is that managers holdings actually strengthen the material incentives for managers of enterprises and weaken the conflict between shareholders and

managers. Managers make investment decisions for their own interests and not blindly based on the behavior of others. (3) The effect of independent directors to the control of corporate herd investment behavior is not significant. The reason is that independent directors are subject to a major shareholder and lack of independence. Meanwhile, our current independent directors lack of fixed allowance and incentives, expectations of independent directors to assume greater costs in order to improve the level of supervision is not realistic. Therefore the supervisory role of the independent directors is failed.

CONCLUSION

In this paper, the listed companies in China from 2009 to 2013 were considered as a sample, the fact whether managers self-interested motives lead to herd behavior was analyzed and the inhibitory effect exerting on herd behavior caused by companies' governance mechanism was examined. The results demonstrated that there is more obvious in herd investment behavior of listed companies in China. In the companies' governance mechanism, the shareholder control, managerial can effectively control non-flock investment behavior and the inhibition of independent directors is not obvious.

The results have the following policy implications: Corporate management mechanisms depends on sound market mechanism and internal and external oversight mechanisms. "Mixed ownership" of the state-owned enterprises reformation by the Government must be fix the market dominant position and reduce government intervention of the enterprise besides improve the corporate governance structure. Otherwise only decentralization of government will not achieve the desired reform goal, and may even distort business behavior and reduce the efficiency of the investment.

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