The Impact of Managerial Risk Preference on Corporate Social Responsibility

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Abstract—In view of the impact of managers' personal characteristics on enterprises' non-market strategic decisions, this paper explores the impact of managerial risk preference on the participation of corporate social responsibility by using the data of China A-share non-financial listed companies from 2010 to 2020. This paper finds that managerial risk preference has a significant positive impact on corporate social responsibility participation.

Keywords-Upper Echelons Theory; Managerial Risk Preference; Corporate Social Responsibility

1. Introduction

For a long time, scholars have been keen to explore the driving factors of corporate social responsibility (CSR). However, so far, most existing studies have focused on formal institutional constraints, and few studies have explored the relationship between them and corporate social responsibility from the individual level. The Upper Echelons Theory (Hambrick and Mason, 1984) states that because of the complexity of a firm's internal and external environment, it is difficult for management to comprehensively understand all aspects of it. Moreover, managerial traits influence their strategic choices and, in turn, influence the behavior of the firm [1]. Risk preference is a unique personality trait that can be found in many people, including the top management team. As top management teams choose organizational strategies that fit their management models and preferences, we argue that a company's involvement in CSR investment activities is also influenced by management's value system and personality traits. Based on this, exploring the impact of management risk preferences on CSR from the perspective of management traits can help to better understand the differences in CSR practices among Chinese listed companies.

2. Literature Review

2.1 Research on Managerial Risk Preference

Risk preference is defined by Sitkin and Pablo (1992) as an individual's current propensity preference to take or avoid risk [2]. Most of the existing drivers of managerial risk preference focus on personal characteristics. Nadkarni and his colleagues found that personality factors such as the Big Five personality, namely, openness, conscientiousness, extraversion, agreeableness, and neuroticism (Nadkarni and Herrmann, 2010) or temporal orientation (Nadkarni

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and Chen, 2014) promote risk-taking behavior [3, 4]. In a comprehensive meta-analysis, Lilleholt (2019) found that cognitive ability was negatively associated with risk aversion. In short, managers with different personal characteristics will make different risk decisions in different contexts [5].

2.2 Research on Corporate Social Responsibility

In recent years, there has been increasing academic interest in exploring the antecedents, drivers, and motivations of CSR. Rozuel and Kakabadse (2011) argue that management ethics is a prerequisite for corporate social responsibility because it can redefine the responsibilities a company needs to assume and our degree of harmony with society as a whole [6]. However, the research on the antecedents of CSR is much less than the research on its outcomes. And a large number of studies focus on the external drivers of CSR, such as stakeholder pressure (Zhu, Yeung and Zhou, 2021), institutional pressure (Xu and Li, 2018; Yang, Ling and Chen, 2021), with limited research on internal determinants of CSR [7, 8, 9]. Internal determinants investigated in existing studies include executive team configuration (Xu and Li, 2018), and management team commitment to ethics (Rozuel and Kakabadse, 2011) [6, 8]. What is largely missing from this stream of research is the role of the personality traits of the organization as a whole and its key members and supporters. Few have explored the impact of management's values and personality traits on CSR. According to the upper echelons theory, executives' choices are influenced by their personal values, personalities, and prior experiences, and they choose organizational strategies that fit their management style and preferences. Therefore, this study attempts to explore the impact of managerial risk preferences on CSR to fill the research gap in this area.

3. Research Hypothesis

The neoclassical principal-agent theory assumes that managerial behavior is rational and opportunistic (Ross, 1973; Jensen and Meckling, 1976) [10, 11]. The personal preferences of specific groups, such as top management team members, are not included in this concept. Instead, the theory focuses on homogeneous management behavior. The upper echelons theory (Hambrick and Mason, 1984) challenges this view [1]. According to the upper echelons theory, the choice of executives is influenced by their personal values, personalities, and previous experience, and they will choose the organizational strategy suitable for their management model and preferences. Risk preference is one of the characteristics of management. When choosing a strategic investment, management will make decisions according to their risk preference.

As one of the important strategies of sustainable management, corporate social responsibility has attracted more and more attention. The CSR investment consists of three elements: irreversibility, uncertainty over future expected returns, and flexibility in timing (Dixit and Pindyck, 2012) [12]. Whether firms benefit from CSR investing remains controversial for both firms and beneficiaries. On the one hand, CSR investments are like sunk costs that cannot be reused for other purposes, such as donations to the poor (Cruz and Wakolbinger, 2008) [13]. Similarly, some studies suggest that corporate social responsibility is a short-term profit at the expense of long-term investment, which contradicts the goal of maximizing shareholder wealth. Because CSR activities often involve a range of costly activities with no immediate

return, this can lead to lower profits and weaken stock performance (Fabrizi, Mallin and Michelon, 2014; Becchetti et al., 2015) [14, 15].

On the other hand, the CSR investment serves as an important signal to improve reputation by creating long-term value. For example, companies with more social responsibility policies will build a good image (Di Giuli and Kostovetsky, 2014), thereby obtaining product premiums and attracting potential job seekers [16]. Companies with superior performance on CSR will have better access to finance (Cheng, Ioannou and Serafeim, 2014), which helps firms gain a competitive and sustainable advantage (McWilliams and Siegel, 2000) [17, 18]. Investing a large number of resources in CSR activities may improve the relationship between various stakeholder groups so as to maximize shareholder wealth and improve corporate performance. However, at the same time, CSR engagement will require a large initial investment, while the benefits will depend on subsequent interactions among different stakeholder groups, and it will take time for responsive interactions among stakeholders to translate into higher performance. Therefore, the return on CSR investment is unlikely to be realized in the short term, and current financial resources are usually likely to be used up in the short term (Lin et al., 2019) [19]. While CSR reduces a company's risk by providing insurance-like protection against litigation and regulatory costs (Kacperczyk, 2009), it may also be considered an unfamiliar and risky strategic investment due to its less clear predictability and ambiguity about the outcomes exhibited [20]. Therefore, the CSR investment also involves obvious risks that not all decision-makers are willing to accept. Given the long-term nature of CSR, management's propensity to accept risk may influence their propensity to invest the necessary time and organizational resources in CSR activities. Caeteris paribus, risk-averse individuals may find the CSR investment less attractive than those with lower levels of risk aversion. In summary, hypothesis 1 of this paper is proposed as follows:

H1: Managerial risk preference is positively correlated with corporate social responsibility. Namely, the more risk preference the management has, the stronger the willingness of the enterprise to fulfill social responsibility and the higher the level of CSR commitment.

4. EmpiricalResearch Design

4.1 Data

This study selected A-share listed companies from 2010 to 2020 in China as the research samples. In these samples, financial and insurance companies were excluded. Then we eliminated ST and PT companies. We also eliminated samples with missing CSR data, management data, and control variables. All continuous variables in this study were condensed to eliminate the influence of extreme values. Finally, 10127 valid samples were obtained. The data processing software is STATA 16.0.

The comprehensive CSR score data come from the Hexun database, and other data related to the company's financial characteristics and management are obtained from the CSMAR database.

4.2 Variable Definition

1) Dependent varibale. In this paper, we use the CSR score from the Hexun database to measure the CSR performance, which has been deployed in recent Chinses CSR studies. Using the data obtained from CSR reports and annual reports, the Hexun database constructs an evaluation system, which is divided into five first-level dimensions (shareholder responsibility, employee responsibility, supplier, customer and consumer rights responsibility, environmental responsibility, and social responsibility) and 13 secondary indicators, and 37 tertiary indicators. These metrics are weighted to produce a final CSR score, and the higher the score, the better the listed company is doing in CSR fulfillment.

2) Independent varibale. This paper uses the following two indicators to measure managerial risk preference.

a) Incash (satisfaction rate of self-generated funds): Based on the research of Zhang Tiezhu (2010), this index measures managerial risk preference from the perspective of cash inflow from operating activities to meet all cash expenditures [21]. The higher the indicator, the more risk-averse management is. For the convenience of understanding and illustrating the research results, negative values are taken for this index. InCash is calculated as follows:

$$InCash_{i,t} = (CFOinflow_{i,t} + Cash_{i,t}) / CFOoutflow_{i,t} \quad (1)$$

where $CFOinflow_{i,t}$ are cash inflows from operating activities in year t for company i; $Cash_{i,t}$ are cash and cash equivalents in year t for company i; $CFOoutflow_{i,t}$ are cash outflows from operating activities in year t for company i.

b) DI (defensive distance): Based on previous studies, this paper uses the defensive distance (DI) to measure managerial risk preferences (Xu and Gan, 2021) [22]. This index measures the degree of managerial risk preference from the perspective of enterprise's liquidity and default.

Table 1 Definitions of variables

Variable name	Symbol	Definition
Corporate social responsibility	CSR	Social responsibility score from Hexun Database
Managerial risk prefrence	InCash	Equation (1)
Defensive distance	DI	Equation (2)
Asset-liability ratio	Lev	Total liabilities/total assets
Fixed assets ratio	PPE	Fixed assets/total assets
Cash flow ratio	Cashflow	Net operating cash flow/total assets
Cash dividends ratio	Dividends	Total cash dividends/total assets
Institutional ownership	INST	Total shares held by institutional investors /tradable shares
Management's average tenure	Tenure	Mean tenure of management members
Management's average ownership	Mshare	Ln(average number of shares held by members of management at the end of the year+1)
Management's average education	Education	Mean sum of education of management members: 1= Technical secondary school and below, 2= Junior college, 3= Bachelor's degree, 4= Master's degree, 5= Doctoral degree
Management's average age	Age	Mean age of management members

Management's financial background	FBG	The percentage of management members with a financial background

Table 2 The relationship between managerial risk preference on corporate social responsibility

	(1) OLS	(2) FE	(3) OLS	(4) FE
	CSR	CSR	CSR	CSR
InCash	1.175***	1.968***		
	(2.835)	(3.321)		
DI			3.079***	2.778***
			(4.651)	(2.663)
Lev	5.269***	-3.912**	4.434***	-3.660**
	(5.806)	(-2.101)	(4.605)	(-1.985)
PPE	-9.339***	-13.562***	-9.959***	-14.076***
	(-7.280)	(-5.264)	(-7.578)	(-5.383)
Cashflow	25.190***	10.788***	25.041***	11.051***
	(9.778)	(4.409)	(9.732)	(4.487)
Dividends	235.899***	178.893***	233.743***	177.421***
	(23.837)	(11.725)	(23.681)	(11.673)
INST	10.791***	2.394**	10.586***	2.334**
	(14.902)	(2.141)	(14.646)	(2.077)
Tenure	0.046***	0.013	0.045***	0.015
	(7.101)	(1.098)	(7.013)	(1.196)
Mshare	0.123***	0.059	0.125***	0.059
	(4.764)	(1.097)	(4.889)	(1.078)
Education	2.213***	1.208*	2.232***	1.216*
	(7.778)	(1.926)	(7.851)	(1.931)
Age	0.175***	-0.055	0.172***	-0.059
	(4.614)	(-0.700)	(4.562)	(-0.751)
FBG	0.263	2.546	0.555	2.724
	(0.221)	(1.392)	(0.466)	(1.484)
Constant	3.527*	29.118***	3.792*	28.080***
	(1.694)	(6.629)	(1.826)	(6.518)
Firm FE	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R2	0.215	0.191	0.216	0.190
F	115.391	34.373	115.467	34.129
N	10127	10127	10127	10127

Note: t-Statistics are shown in parentheses. *, **, *** represents statistical significance at the 10%, 5% and 1% level, respectively.

The larger its value is, the higher the elasticity of the coverage of quick assets to operating cash flow expenditures, namely, the relative risk aversion of management. For ease of understanding and illustration of the study results, the value is taken as one thousandth and negative. DI is calculated as follows:

$$DI_{i,t} = (Cash_{i,t} + MS_{i,t} + Rec_{i,t})/(CFOoutflow_{i,t} / 365) \quad (2)$$

Where $Cash_{i,t}$ are cash and cash equivalents in year t for company i; $MS_{i,t}$ are trading financial assets in year t for company i; $Rec_{i,t}$ are receivables in year t for company i; $CFOoutflow_{i,t}$ are cash outflows from operating activities in year t for company i.

Control Variables. According to existing literature (Liu and Lu, 2018), asset-liability ratio (Lev), fixed assets ratio (PPE), cashflow ratio (Cashflow), cash dividends ratio (Dividends) and institutional ownership (INST) are used as control variables [23]. We also control the influence of management's personal characteristics, individual and year fixed effects. The variable definitions are shown in Table 1.

4.3 Method

In this paper, we use the ordinary least squares (OLS) to estimate the relationship between the managerial risk preference and corporate social responsibility. Multiple regression models are established to test the above hypothesis 1:

$$\begin{aligned} CSR_{i,t=}\alpha_{0+} \alpha_1 Incash_{i,t} + \alpha_2 Lev_{i,t} + \alpha_3 PPE_{i,t} + \alpha_4 Cashflow_{i,t} \\ + \alpha_5 Dividends_{i,t} + \alpha_6 INST_{i,t} + \alpha_7 Tenure_{i,t} + \alpha_8 Mshare_{i,t} \\ + \alpha_9 Education_{i,t} + \alpha_{10} Age_{i,t} + \alpha_{11} FBG_{i,t} + Firm\ FE \\ + Year\ FE + \varepsilon_{i,t} \end{aligned} \quad (3)$$

$$\begin{aligned} CSR_{i,t=}\ \alpha_{0+}\alpha_1 DI_{i,t} + \alpha_2 Lev_{i,t} + \alpha_3 PPE_{i,t} + \alpha_4 Cashflow_{i,t} \\ + \alpha_5 Dividends_{i,t} + \alpha_6 INST_{i,t} + \alpha_7 Tenure_{i,t} + \alpha_8 Mshare_{i,t} \\ + \alpha_9 Education_{i,t} + \alpha_{10} Age_{i,t} + \alpha_{11} FBG_{i,t} + Firm\ FE \\ + Year\ FE + \varepsilon_{i,t} \end{aligned} \quad (4)$$

5. Empirical Results and analysis

Table 2 shows the regression results. Model (1) and model (3) are regression models without firm fixed effect; model (2) and model (4) are regression models in which firm fixed effect are added to model (1) and model (3), respectively. In the four regression models, the coefficients of correlation between managerial risk preference and CSR are 1.175, 1.968, 3.079 and 2.778, respectively. All of them are significant at the 1% level, indicating that managerial risk preference is positively related to CSR.

6. Conclusion

The empirical test results show that the managerial risk preference is positively correlated with the level of CSR commitment in China's listed companies, namely, the more risk-preferring management is, the more CSR involvement the company has. Because CSR is a long-term strategic investment and the uncertainty of its impact on corporate performance, CSR investment involves certain risks. Therefore, risk-loving management prefers CSR investment.

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