A Study on the Correlation Between Characteristics of BOD and Corporate Value

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Abstract This paper takes the listed companies in China as the samples, describes the correlation between the characteristics of BOD (board of directors) companies' value employing correlation analysis and regression analysis method. Empirical results demonstrates that there is a high negative correlation between board size and company value, and also there is a high negative correlation between board meeting frequency and company performance. Besides, the dual role of board chair and CEO could increase firm performance of target business.
Key words Board of directors; Corporate value; Corporate performance; Correlation analysis

1 Introduction

Corporate governance has become a popular issue for listed companies, which plays an important role for their growth. Characteristics of BOD, as one of its important component, have also become the focus of the relative study. The U.S. Securities and Exchange Commission and the Financial Accounting Standards Board have emphasized its important role in financial accounting as the board shoulders the serious responsibility of monitoring, evaluation and rewarding the senior managers. The early literatures mainly focus on four areas on the study of the board characteristics, namely: (1) board size; (2) board independence; (3) frequency of board meeting; (4) if the CEO is also the board chair. This article also mainly studies the relationship between the four characteristics and cooperates' value. With corporate governance continuously developing in China, the study on Chinese listed companies' boards is in the ascendant, and the paper aims to find the potential contact between Chinese listed companies' board characteristics and their value by empirical research, which offer the reference for corporate governance optimization and government policy formulation in China.

Several scholars focused on board size. Kogan and Wallach(1966) argued that the larger the board, the more difficult to reach the agreement. Small-scale board is better than the larger one. Yermack (1996) argues that there exists negative correlation between board size and the companies' Tobin Q, and the smaller board is more efficient than the larger one on monitoring the top managers. Eisenberg et al (1998) argued this result applies in Finland as well. Lehn et al. (2004) argued that board size and firm size are positively correlated, but board size and company's growth opportunity are negative correlated. In addition, board size will affect the directors' monitoring and controlling on the top managers. The lager the board, the oversight to the top managers is better(Adams and Mehran, 2002).

Board independence also has important effect on company's value and performance. Directors have a primary responsibility of overseeing the firm's financial reporting process. Previous literatures generally posited that independent directors or outside directors could effective monitor and control firm activities, which would value the company. Boone et al. (2007) suggested that board structure would affect the company's competitive environment and the management team the number of members of the board that have ties with the CEO. Raheja (2005) argued that insiders are key information channels for board, but sometimes the information would be distorted for personal interest. Different from the insiders, outsiders are more independent, which will monitor top managers efficiently, but they are lack of company information. But it is hard to find empirical research to prove that. Coles et al (2008) found there was no significant correlation between board composition and firm value. Bhagat and Black (1999) also obtained the similar conclusion ten years ago. In China, Hu Qinqin and Shen Yifeng (2002) found the proportion of independent directors not affect company performance.

Board meeting frequency also exhibits a negative relation to firm value. Jensen(1993) argued that, the board meetings tend to be formal, and the contents are more concentrated in the daily affairs rather managers' assessment, which will increase costs. The vast majority of the board is passive, they would interfere with management decisions only in exceptional circumstances. Vafeas (1999) argued that board meeting frequency and firm value are negative correlation, which is consistent to Jensen's point.

The dual role of board chair and CEO is another hot issue. Pi and Timme (1993) argued that when CEO is not board chair, it could increase company performance, because it could weaken the internal control. But some literatures find no statistically significant relationship between them (Baliga, 1996).

2 Methodology

2.1 Data

In this paper, our sample companies are listed companies in China in 2009. We exclude growth enterprises, financial listed companies, and the companies lacking of available data. It results in a final sample of 1641 companies. Our data source is CSMAR database.

2.2 Empirical model and variable measurement

Multiple linear regression analysis method is taken to test the relationship between board characteristics and company value. The dependent variables are company value (measured by Tobin Q) and company performance (measured by EPS). The independent variables are board size, board independence, board meeting frequency and whether CEO is board chair simultaneously, which are measured by natural logarithm of the number of board members, the ratio of independent director in the board, the times of meeting during the fiscal year, and the dual role of board chair and CEO (when CEO also is the board chair, we define that 1, or else 0) separately. Control variables include: 1) the natural logarithm of total assets; 2) leverage. To find out the correlation between board characteristics and firm value and performance, we run regressions, using the following model:

$$Tobin\ Q=\beta 0+\beta 1Lnsize+\beta 2Leverge+\beta 3Bsize+\beta 4Bratio+\beta 5Bmeeting+\beta 6Du \quad (1)$$

$$EPS=\alpha 0+\alpha 1Lnsize+\alpha 2Leverge+\alpha 3Bsize+\alpha 4Bratio+\alpha 5Bmeeting+\alpha 6\ Du \quad (2)$$

Table 1 Variables Explanation

variables type	Variables name	variables code	variables explanation
independent variables	Board size	*Bsize*	natural logarithm of the number of board members
	Board independence	*Bratio*	the ratio of independent director in the board
	Board meeting frequency	*Bmeeting*	the times of meeting during the fiscal year
	the dual role	*Du*	when CEO also is the board chair, it is defined 1, or else 0
dependent variables	Firm value	*Tobin Q*	Tobin Q
	Firm performance	*EPS*	Earning per share in 2009
Control variables	Companies' size	*Lnsize*	the natural logarithm of total assets
	Financial leverage	*Leverge*	Liability/asset ratio

3 Empirical Results

3.1 Descriptive statistics

Table 2 shows the descriptive statistics of all variables.

Table 2 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Board size	1604	1.1	2.89	2.186	0.2077
Board independence	1604	.09	.71	.3648	.05313
Board meeting frequency	1604	1	34	8.4701	3.66838
the dual role	1604	0	1	.1727	.37810
Firm value	1604	.25	1.47E4	11.9508	3.66253E2
Firm performance	1604	-4.21	4.57	.2790	.53145
Companies' size	1604	11.35	28.00	21.5861	1.39461
Financial leverage	1604	0	138.38	.7197	3.95037

3.2 Regression analysis

Correlations between board characteristics and dependent variables are presented in Table 3. There is a high negative correlation between board size and Tobin Q, which means the larger scale board with lower company value, and this result is consistent with existing literatures. Board size is negative correlate with company EPS, and the dual role of board chair and CEO could increase EPS.

Table 3 Correlations

		Tobin Q	EPS
Board size	Pearson Correlation	-.070***	.103***
	Sig. (2-tailed)	.005	.000
	N	1604	1604
Board independence	Pearson Correlation	.016	-.024
	Sig. (2-tailed)	.515	.337
	N	1604	1604
Board meeting frequency	Pearson Correlation	-.003	-.037
	Sig. (2-tailed)	.890	.142
	N	1604	1604
the dual role of board chair and CEO	Pearson Correlation	-.011	.042*
	Sig. (2-tailed)	.648	.093
	N	1604	1604

Note： ***,**，* denote significance at 0.01, 0.05 and 0.1 level (2-tailed), respectively.

Table 4 shows the result of regression models. After controlling companies' size and leverage, there is a high negative correlation between board size and Tobin Q (p=0.064), but not find significant correlation between the rest board characteristics and Tobin Q. The result is consistent with the existing literatures. The large scale boards possibly decrease company value. According to regression model 2, there is a high negative correlation between board meeting frequency and EPS（p<0.01）, which means the board meeting in China would decrease company performance. The dual role of board chair and CEO would increase company performance, which is different from many existing literatures.

Table 4 Regressions Results

	Model 1				Model 2			
Variables	Coefficient	Std.Dev.	t-Statistic	p-value	Coefficient	Std.Dev	t-Statistic	p-value
(Constant)	-114.171	85.214	-1.340	0.180	-1.966	0.250	-7.861	0.000
Lnsize	9.221***	3.526	2.615	0.009	0.112***	0.010	10.793	0.000
Leverge	82.285***	1.134	72.555	0.000	0.000	0.003	0.119	0.905
Bsize	-44.068*	23.814	-1.851	0.064	0.021	0.070	0.297	0.766
Bratio	-49.018	88.044	-0.557	0.578	-0.350	0.258	-1.353	0.176
Bmeeting	-1.790	1.211	-1.478	0.140	-0.012***	0.004	-3.495	0.000
Du	-16.024	11.686	-1.371	0.170	0.123***	0.034	3.584	0.000
R2	0.776				0.085			
Adj- R2	0.776				0.082			
F	924.666				24.834			
Pr>F	<0.01				<0.01			

Note： ***,**，* denote significance at 0.01, 0.05 and 0.1 level (2-tailed), respectively.

4 Conclusions and Limitations

4.1Conclusions

This paper contributes to our knowledge on the relationship between board characteristics and company value using a sample of 1641 listed firms in China. The sample includes firms of all sizes, ages, and businesses, which allows us to generalize our results more than is possible in papers with more restrictive sample selection criteria.

In today's investment market, investors choose the companies with better corporate governance mechanism to ensure getting higher return. As one of the key factors, board characteristics are significant for investors. Consistent with the anecdotal evidence, we find the larger board with lower company value. In China, larger board would substantially impact the cost of reaching the agreement, and take longer time for decision-making, which will decrease company value. Further, there is evidence that the company with poor performance has more meetings. According to (Gu Qi and Yu Dongzhi 2001), in China, the company trends to increase board meeting quantity when company performance worsen. Obviously, the board meeting in China is not an active act but a passive act, which could not increase company performance. And board meeting may become a response to the falling performance. In China, most companies belong to state-owned companies. With the development of Board of Supervisors and maturing of relative policies, the shortcoming of the dual role of board chair and CEO is weakening. On the contrary, it could not only help to improve the efficiency of communication and organizational decision-making speed, but also is conducive to innovation, and thus to help improve firm performance. Overall, our results show that there are significant relationships between board characteristics and firm value, suggesting that any approach that improves board characteristics could be taken, and also suggesting policy makers and researchers pay special attention to the relative reforms on firm board characteristics.

4.2 Limitations

In the listed companies, not all of the listed companies have issued the data, which will certainly not reflect the true situation of board characteristics. Besides, in the selection of variables, different financing indicators would lead to different result. We take the Tobin Q to measure company value, and EPS to measure company performance. But different measure methods would get different conclusion. And the indicator-selection measuring company value scientifically also is the further work.

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