# Board Characteristics and Capital Structure: An Empirical Study on China's Private Listed Companies\*

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**Abstract:** Board of directors is one of the important parts of the corporate internal governance mechanism. Using panel data from 144 China's private listed companies during 2001---2003, this paper empirically studies the relationship between board characteristics and capital structure with the methods of pooled OLS, first-order difference model and fixed effect model.

**Key words:** private listed companies; board of directors; capital structure

## 1. Introduction

According to modern corporate finance theories, agency cost is one of the determinants of capital structure. Jensen and Meckling (1976) firstly introduced agency cost into the research on capital structure. They referred agency cost caused by the interest conflicts between shareholders and managers to "equity agency cost" and agency cost caused by the interest conflicts between shareholders and creditors to "debt agency cost". They also indicated that as the debt ratio rose, debt agency cost would increase and equity agency cost would decrease. That is to say, there was a tradeoff relationship between such two costs of a corporate, and capital structure was optimal when the sum of them became minimal. The following academicians further developed the theory presented by Jensen and Meckling. On the interest conflicts between shareholders and managers, Stulz (1990) indicated that managers had strong behavior tendency of "empire building" and shareholders had to find the optimal capital structure with balancing the debt benefit of over-investment and debt cost of under-investment. On the interest conflicts between shareholders and creditors, Diamond (1989) showed that companies with different reputation tended to choose different financing means. New companies lacking good reputation had the motivation to perform asset substitution or choose risky projects, and this sort of moral hazard made equity financing or costly debt financing as the only financing means for them. Companies with adequate status could attain debt financing at lower cost. Hirshleifer and Thakor (1989) assumed that managers had the motivation to pursue relatively safe projects for considering their own reputation. They would rather select safe projects with higher success probability than projects which were more favorable for the shareholders. The behaviors of managers reduced the debt agency cost, whereas the company would use more leverage probably.

As the board of directors being one of the important parts of corporate internal governance mechanism, there is a close relationship between its efficiency and agency cost. After reviewing the literature of board institution,

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Hermalin and Weisbach (2001) regarded the board as a part of the equilibrium solution to the contract problem between minority interest shareholders and managers. They also indicated that the board of directors was the optimal solution (at least second best) to some agency problems which modern companies faced. Fama and Jensen (1983) held that as a supervisor to managerial behaviors, the board of directors needed to minimize agency cost and maximize shareholder interests. John and Senbet (1998) indicated that the efficiency of board of directors was determined by board characteristics such as size, composition and independence of board.

As a bridge between capital structure and board of directors, agency cost lays theoretical foundation how to understand the impact of the board of directors on capital structure decisions of companies. And how do the characteristics and internal structure of board influence capital structure of companies? So far as the authors know, there is little literature which answers this question directly and empirically. When exploring the determinants of capital structure, Agrawal and Knoeber (1996) discovered that there was a significant positive relationship between asset-liability ratio and outside directors ratio. Liang et al. (2001) investigated the correlation relationship between governance structure and financing structure of China's township listed companies and found out that leadership structure of board negatively correlated with debt financing and there was not a significant correlation between board size and financing structure.

Currently, private firms become main brace and new accelerating engine of China's economy. As the pioneers of China's private firms, private listed companies play an important role in advancing and improving the capital market of China. Comparing with China's state-owned listed companies, China's private listed companies are less intervened by government and so they can operate following the market rules. In the research field concerning capital structure and board characteristics, there are few papers focusing on China's private listed companies. This paper tries to make up this deficiency.

The rest of this paper are organized as follows: Section 2 is the research hypothesis based on theoretical analysis; Section 3 focuses on research design in which sample selection, variable definition and model construction are explained; Section 4 is an analysis of empirical results; The conclusion of the whole paper is drawn in Section 5.

#### 2. Research Hypothesis

Delegated to execute business decision, the board of directors is on the top of the internal decision-making system of a company and the core of corporate governance. After the ownership and control are separated, the principal (shareholder or creditor) needs to select and supervise the agent (manager) through the board of directors and then settle the problem about how to share the remaining risk and implement controlling (Fama and Jensen, 1983). Tasks of board mainly are that supervising the behaviors of the agent and making important decisions to prevent that the agent hurts the interest of the principal. Variables describing board characteristics include board size, ratio of board members appointed by principle shareholder, ratio of inside director, ratio of independent director, integrity of board committee and board leadership structure. We relate these variables with capital structure to explore the effect of board characteristics on capital structure decision-making. Then we can draw some conclusions.

## 2.1 Board Size Hypothesis

In terms of agency theory and organization behavioral theory, it is disadvantageous to improve the efficiency of corporate governance of which the board members are too many. Evans and Dion (1991) showed that the larger

the board size was, the lower the enthusiasm of the members on the board to participate in the meetings of board and the probability to reach agreement was. Lipton and Lorsch (1992) further indicated that although increasing the board members could strengthen supervision ability of the board, it also caused relevant costs, for instance, postponing decision-making and less fair discussion on managers' performance. And these costs would be greater than the benefits mentioned above. If the board size was too large, managers could attain advantage in making contact with the board members through some strategies, for example, alliance, provision of selected information, alienation and conquer (Alexander, 1993). Jensen (1993) pointed out that the board of directors became &ss efficient and more easily controlled by CEO when the number of the board members was over 7 or 8.

How does board size affect capital structure? We try to give two different explanations.

As for the first explanation, the larger the board size is, the more difficult it is to reach unanimity. If using equity financing means, corporation need very high transaction cost to settle problem of communication and coordination because of the dilution effect of equity and control right. Moreover, because it does not dilute the equity of current shareholders and change their current position, debt financing means can be easily accepted by board members. So we put forward the following hypotheses.

Hypothesis 1a: As for China's private listed companies, the larger the board size is, the more probable it is that debt financing means is used.

For the second explanation, the larger the board size is, the easier it is that the board is controlled by managers. Then the board of directors is only a symbol. And the personal utility function of the managers determines the selection of financing means. In China, there is soft restriction in capital market. Whereas, debt financing has the function of controlling corporate free cash flow and restraining managers' behavior to a certain extent. So managers prefer equity financing. Then we can get the following alternative hypothesis of 1a.

Hypothesis 1b: As for China's private listed companies, the larger the board size is, the more probable it is that equity financing means is used.

#### 2.2 Hypothesis of Principal Shareholder's Impact and Control

Leech and Leahy (1991) indicated that principal shareholder with over 20% ownership could fairly easily win support of other shareholders and then occupy advantageous proxy position in proxy fighting. In terms of international practices, 20% to 25% ownership is the hurdle of being controlling shareholder. Examining the ownership percentage of principal shareholders of 144 China's private listed companies in 2003, we discover that there are 119 companies with over 20% ownership, 100 companies with over 25% and 20 companies with over 50%. The average ownership percentage of principal shareholders in the sample companies is 32.32%. Therefore, the majority of principal shareholders of China's private listed companies occupy advantageous proxy position.

The mind of principal shareholder is carried out through shareholder meeting and the board of directors. Shareholder meeting is held only several times annually. And the board of directors is the standing body of shareholder meeting when it stands adjourned. The effect and control of principal shareholder to the board of directors is especially important. And we can use ratio of board members appointed by principal shareholder to describe the degree of the effect and control of principal shareholder. The higher the ratio is, the more significant the role of principal shareholder in the board decision-making is. As for capital structure decisions of China's private listed companies, the agency problem of equity financing is mainly caused by the interest conflict between principal shareholders and minority shareholders. Currently, minority shareholders' interest is not legally perfectly protected in China, equity financing becomes the financing preference to principal shareholders. So, we put forward the following hypothesis.

Hypothesis 2: As for China's private listed companies, the larger the effect and control of principal shareholder to the board of directors is, the more probable it is that equity financing means is used.

# 2.3 Hypothesis of Independence and Specialty of the Board of Directors

#### 2.3.1 Ratio of Inside Directors

Generally, inside directors refer to those persons who are both board members and insiders such as majority shareholders or managers. The higher the ratio of inside directors is, the lower the independence of board is. And the capital structure decision of the companies reflects more significantly the financing preference to insiders. There exists soft constraint of dividend in the equity financing market of China. Equity financing not only has low capital cost, does not affect the control right of principal shareholders and managers, but also can increase free cash flow of the companies. Whereas, debt financing will reduce free cash flow and has stronger restriction on insiders. So insiders prefer lower leverage. Then, we can put forward the following hypothesis.

Hypothesis 3: As for China's private listed companies, the higher the ratio of inside directors is, the more probable it is that equity financing means is used and the lower the asset-liability ratio is.

## 2.3.2 Ratio of Independent Directors

In a modern company, the board of directors is the agent of the shareholders. Its independence is the prerequisite of efficient supervision with the managers. Because independent directors are more independent than inside directors in terms of property, personality, operation and interest, and not controlled by majority shareholders or managers, they can fairly participate in board activity and make independent judgment which is advantageous for board and corporation. Whereas, independent director institution is implemented in China's listed companies only for a short time and it is mainly promoted by the government. A lot of listed companies retain independent director only for reaching the regulatory requirement. Until the end of 2003, there were nearly 60% of 144 samples of China's private listed companies with ratio of independent director being one-third which is the minimum requirement obliged by China Securities Regulatory Commission (CSRC). And there were also 30 companies within the sample which could not meet the minimum requirement. Therefore, the independence of board in China's private listed companies is still very weak and the function of independent director needs to be strengthened. Currently, ratio of independent directors has no significant effect on capital structure decision. So, we put forward the following hypothesis.

Hypothesis 4: As for China's private listed companies, ratio of independent directors is not correlated with asset-liability ratio, that is to say, it does not affect the selection of capital structure.

#### 2.3.3 Establishment of Board Committees

The efficiency of board is determined by not only board size and composition, but also the division of responsibility among the board members. The principle of corporate governance presented by OECD (1999) advocates establishing board committees and requires independent directors to play the main role in these committees. CSRC requires the board of directors of every listed company in China establish four board committees, namely strategy committee, nomination committee, remuneration and appraisal committee, and audit committee. Klein (1995) analyzed the effect of board committee structure and the role of board member in committee on the efficiency of board. She categorized board committees as monitoring-oriented committee and productivity-oriented committee. The former included auditing committee, appraisal committee and nomination committee. The latter included financing committee, investing committee and strategy and decision-making committee. The establishment and effective operation of board committees are in favor of improving board independence and specialty and can make sure that corporation follows optimal financing strategy for the

maximization of shareholders' interest. At current stage, the establishment of board committee of China's private listed companies is very immature. In end of 2003, there were respectively 35.4% of 144 sample companies with monitoring-oriented board committee and 34.7% with productivity-oriented board committee. So, board committee has little effect on board decision process and capital structure. Then, we can propose the following hypothesis.

Hypothesis 5: As for China's private listed companies, whether board committees are complete is irrelevant to capital structure.

### 2.4 Leadership Structure Hypothesis

Leadership structure refers to whether chairman of board of directors also holds the position of general manager. It is one of board characteristics. When a person held the dual important position, the supervision efficiency of board of directors to general manager decreased sharply because decision control right and decision management right were commanded by only one person (Fama and Jensen, 1983). And the less efficient performance of board official duties, for example, supervising, assessing, and dismissing the general manager, made the internal governance system fail (Jensen, 1993). Then in similar situation, chairman of board or general manager has absolute decision right of corporate capital structure. On the other hand, with the underdevelopment and less sanction of control right market and manager market in China, the capital with equity financing is generally regarded as free and perpetual fund without supervision and dividend pressure. And the higher proportion of this sort of fund in corporation capital is, the higher the utility of chairman of board of directors or general manager is. Therefore, comparing with debt financing, equity financing can produce more benefits for the dual chairman of board of directors and general manager. When the two positions are taken by different persons, the majority benefits of equity financing would be offset by transaction cost caused by the dissension between chairman of board and general manager (Liang et al, 2001) and then benefits of debt financing overweight that of equity financing. So companies prefer debt financing. For testing the above idea, we offer the following hypothesis.

Hypothesis 6: As for China's private listed companies, leadership structure is irrelevant with capital structure.

#### 3. Research Design

#### 3.1 Sample Selection

The significant characteristic of China's private listed companies is clearly-established ownership which better meets the standard of free competitive entity in market economy. It is because of this characteristic not held by China's state-owned listed companies that we define China's private listed companies as "listed companies which go public in the capital market of China and whose first principal shareholder is non-state-owned entity".

Many regulations about board in China are only implemented for a short time. For example, the overall implementation of independent director institution for China's listed companies was after August 16, 2001, when CSRC released instruction about establishment of independent director institution in listed companies. Therefore, we select 2001 to 2003 as the research period.

According to the definition mentioned above, there were 163 China's private listed companies until the end of 2000. For eliminating the effect of abnormal samples and satisfying the necessary condition of using panel data model, we filter original samples in accordance with the following standard: (1) Exclude 2 companies in finance industry; (2) Exclude 10 companies which have asset-liability ratio over 1 in at least one of the three years; (3)

Exclude 7 companies with data missing. Finally, we remain 144 sample companies and 432 balanced panel data totally.

The financial data used in this paper are from GTI financial data system and the data about board characteristics are abstracted from the formal annual report, IPO prospectus, second offering prospectus, shares allotment prospectus of sample companies.

## 3.2 Variable Definition

Variables in this paper include three kinds of variables: capital structure variable, board variables and controlling variables. The board variables are designed according to the characteristics of China's private listed companies. The definitions of all variables are listed in Table 1.

Table 1 Definitions of Dependent and Independent Variables

Table 1 Definitions of Dependent and Independent Variables					
Variables	Symbol	Definition			
Panel A: Capital Structure Variable ( Dependent Variable )					
Asset-liability ratio	RDA	Asset-liability ratio at the end of those years			
Panel B: Board Characteristic Variables (Independent Variables)					
Natural logarithm of board size	LNBDSZ	The natural logarithm of the number of board members			
Ratio of board members appointed by principal shareholder	RBMBH	The proportion of the number of board members appointed by principal shareholder to the number of all board members			
Ratio of inside directors	RID	The proportion of the number of corporate Insiders who are also board members to the number of all board members			
Ratio of independent directors	RIND	The proportion of the number of corporate independent directors to the number of all board members			
Monitoring-oriented committee	MC	Equals 1 if board of that year has auditing, nomination, compensation and appraisal committee, and 0 otherwise			
Productivity-oriented committee	PC	Equals 1 if board of that year has financing, investment, strategy and decision committee, and 0 otherwise			
Leadership structure	ВССЕО	Equals 1 if the chairman of board of that year also holds the position of general manager, and 0 otherwise			
	Panel	C: Controlling Variables			
Year 2002	Y2002	Equals 1 if the year is 2002, and 0 otherwise			
Year 2003	Y2003	Equals 1 if the year is 2003, and 0 otherwise			
Region	Region	Equals 1 if the registration place of the companies belongs to underdeveloped region, and 0 otherwise			
Industry	Industry	Equals 1 if the company belongs to non-manufactory industry, and 0 otherwise			
Natural logarithm of total asset	LNAsset	The natural logarithm of total asset of corporate in the end of the year			
Earnings	Earnings	The corporate return of equity in that year			

## 3.3 Model Construction

In order to test the hypotheses of the relationship between board characteristics and capital structure put forward in this paper, we construct three regression models based on balanced panel data.

$$RDA_{it} = \mathbf{b}_{0} + \mathbf{b}_{1}LNBDSZ_{it} + \mathbf{b}_{2}RBMBH_{it} + \mathbf{b}_{3}RID_{it} + \mathbf{b}_{4}RIND_{it} + \mathbf{b}_{5}MC_{it} + \mathbf{b}_{6}PC_{it} + \mathbf{b}_{7}BCCEO_{it} + \mathbf{b}_{8}Y2002_{t} + \mathbf{b}_{9}Y2003_{t} + \mathbf{b}_{10}Region_{it} + \mathbf{b}_{11}Industry_{it} + \mathbf{b}_{12}LNAsset_{it} + \mathbf{b}_{13}Earnings_{t} + \mathbf{e}_{it} \qquad (t = 2001,2002,2003)$$
 (1)

$$\Delta RDA_{it} = \mathbf{d}_0 + \mathbf{d}_1 \Delta LNBDSZ_{it} + \mathbf{d}_2 \Delta RBMBH_{it} + \mathbf{d}_3 \Delta RID_{it} + \mathbf{d}_4 \Delta RIND_{it} + \mathbf{d}_5 \Delta MC_{it} + \mathbf{d}_6 \Delta PC_{it} + \mathbf{d}_7 \Delta BCCEO_{it} + \mathbf{d}_8 Y2003 + \mathbf{d}_9 \Delta LNAsset_{it} + \mathbf{d}_{10} \Delta Earnings_{it} + \Delta \mathbf{e}_{it} \qquad (t = 2002, 2003)$$
(2)

$$RDA_{it} = \mathbf{a}_{i} + \mathbf{h}_{1}LNBDSZ_{it} + \mathbf{h}_{2}RBMBH_{it} + \mathbf{h}_{3}RID_{it} + \mathbf{h}_{4}RIND_{it} + \mathbf{h}_{5}MC_{it} + \mathbf{h}_{6}PC_{it} + \mathbf{h}_{7}BCCEO_{it} + \mathbf{h}_{8}Y2002_{i} + \mathbf{h}_{9}Y2003_{i} + \mathbf{h}_{10}LNAsset_{it} + \mathbf{h}_{11}Earnings_{it} + u_{it} \qquad (t = 2001,2002,2003)$$
(3)

Model (1) is a pooling OLS model. It is directly estimated with ordinary least squares method and cross-section data in different years. And for the effect of time factor, two year dummy variables are used to deal with it. The variables with subscript it in the model stand for the observation of sample i in year t (the same as the following models), and it is residual error. Model (2) is a first-order difference model. It is estimated by standard OLS approach after first-order difference calculations to the data of any two neighbor periods are made. It is the first difference treatment that makes the non-observable effect eliminated which can not be observed but has effects on the dependent variable and is invariable in time. Some controlling variables, for example, region and industry variables, will not change as time passes. So after first-order difference being made, they will not be included in the model. "\Delta" in model (2) is a difference operator, which stands for the change of variables from t=2001 to t=2002 or from t=2002 to t=2003. Model (3) is a fixed effect model. First, the fixed effect transformation of time-demeaned is made to eliminate non-observable effects. Second, the fixed effect transformed model is estimated by OLS approach. With the advantage of improving the preciseness of parameter estimation, fixed effect method makes full use of the combination information of cross-section and time series data. In model (3), region and industry variables, which do not change as time passes, are not included. for non-observable effect of sample companies and  $u_{it}$  is residual error. The estimation results of the three models are got by SPSS12.0 and Eviews4.0.

# 4. Empirical Results

# 4.1 Estimation Results of the Models

In general, the three models given above have certain abilities of explanation. The *F* statistics in these models testing the unite significance of the (non-controlling) independent variables are significant at 0.01 significant level. Almost all of the controlling variables are significant and show good controlling effects. The adjusted R-squared values of model (1) and (2) are slightly low (0.186 and 0.201 respectively). And the adjusted R-squared value of model (3) is 0.859 (non-weighted). This high value indicates that the majority of the dependent variable's deviations can be explained by the independents variables (under the estimation method chosen) in model (3). The Durbin-Watson (DW) estimates of the three models given above are all close to 2 which show that there is no first-order serial correlation in the residuals. For the first-order difference equation, we also make White testing. The LM estimate is 60.531 and *p*-value is 0.420. So we are not able to refuse the null hypothesis of homoscedasticity. It means that we can consider the model without heteroscedasticity. Generally, the parameter estimates of model (2) and (3) are similar in sign and significant level, but the results of model (1) have some difference from that of the two models.

#### 4.2 Hypothesis Testing

According to the estimation results in Table 2, board size is significantly negatively correlated with asset-liability ratio at 0.1, 0.05 and 0.01 level respectively in three models. Therefore, hypothesis 1b is supported by the testing and hypothesis 1a not.

According to the estimation results of model (2) and (3), the ratio of board member appointed by principal shareholder is significantly negatively correlated with asset-liability ratio at 0.1 and 0.05 significance level. Although the two variables are negatively related in model (1), they are not significant statistically. The difference is possibly as a result of that non-observable effect is missed out related to independent variables in pooling OLS model. And non-observable effect that is constant in time can be eliminated with first order difference transformation or fixed effect transformation. Even if there is correlation between non-observable effect and independent variables in all periods, the unbiasedness and consistence of first-order difference estimators and fixed effect estimators will be not changed and the preciseness of statistical inference can be improved. Therefore, we are cautious to the empirical results of model (1) and adopt estimation results of model (2) and (3). In other words, hypothesis 2 is supported by the testing.

The estimation results in all three models indicate that ratio of inside director is negatively correlated with asset-liability ratio at 0.01 and 0.1 level respectively. Therefore, as for China's private listed companies, the higher the ratio of inside director is, the lower the ratio of debt to asset is. And hypothesis 3 is supported.

Table 2 shows that ratio of independent director is not significantly correlated with asset-liability ratio and the estimates of parameters in model (2) and (3) are very close to 0. And the number of independent directors is irrelevant with capital structure. Therefore, hypothesis 4 is supported.

From Table 2, the two dummy variables describing the professional committee of board are not significant at 0.01, 0.05 and 0.1 level respectively. Therefore, hypothesis 5 is supported.

Lastly, the leadership structure variables of the three models are significant at 0.01, 0.05 and 0.1 level respectively and their signs are all negative. Therefore, hypothesis 6 is supported.

	C 2 Estimation Result	s of the Models			
Dependent variables	Ratio of Debt to Asset				
Observations	Model (1)	Model (2)	Model (3)		
variables	432	288	432		
Interval	28.965**(2.120)	0.799(1.011)	b		
Natural logarithm of board size	-6.883*(-1.933)	-1.181**(-2.271)	-2.966***(-2.734)		
Ratio of board member appointed by principal shareholder	-3.359(-0.621)	-3.059*(-1.685)	-2.411**(-1.987)		
Ratio of inside directors	-25.185***(-4.210)	-0.685*(-1.822)	-6.227***(-3.703)		
Ratio of independent directors	-3.854(-0.451)	-1.325E-06(-0.246)	-2.527E-05(-0.558)		
Monitoring-oriented committee	-2.828(-0.452)	1.861(0.550)	1.589 (1.617)		
Productivity-oriented committee	3.683(0.580)	-2.538(-0.750)	-3.533(-0.587)		
Leadership structure	-3.651*(-1.712)	-1.044**(-2.349)	-1.960***(-4.378)		
Year 2002	3.074(1.290)	-	-2.076***(-5.314)		
Year 2003	6.260**(2.226)	1.091**(2.288)	-1.797***(-6.333)		
Region	4.636***(2.606)	_	_		
Industry	9.869***(6.161)	_	_		
Natural logarithm of total asset	2.718***(2.824)	18.665***(7.894)	14.694***(17.160)		
Earnings	-0.041***(-3.737)	-0.028***(-5.044)	0.020***(8.070)		
	0.211	0.229	0.999 ( Weighting)		
$R^2$	0.211	0.229	0.909 (Without weighting)		

Table 2 Estimation Results of the Models a

Adjusted $R^2$	0.186	0.201	0.997 (Weighting) 0.859 (Without weighting)
F <sup>c</sup>	3.027***	3.106***	161.900***
D-W	1.948	1.977	2.142

Notes: a. In the rows of independent variables, numbers out parentheses are estimates of parameters and numbers in parentheses are t testing values, and \*\*\* stands for significance at 0.01 level, \*\* stands for significance at 0.1 level.

- b. The 144 intervals of the fixed effect model are omitted because they are not important for the research.
- c. The F statistic is used testing the unite significance of all non-controlling independent variables in the models, that is to say, the null hypothesis of F test is that the parameters of all non-controlling independent variables are zero.

#### 5. Conclusion

Based on the empirical analysis of 144 samples of China's private listed companies, we can get the following conclusions:

Firstly, after controlling some general accepted factors affecting capital structure (region, industry, corporate size, earnings, etc.), board characteristics have significant influence on the capital structure formation of China's private listed companies.

Secondly, as for China's private listed companies, board size, ratio of board members appointed by principal shareholders, ratio of inside director and leadership structure all have significant influence to the selection of financing means and all are negatively correlated with asset-liability ratio. These indicate that the equity financing preference of China's private listed companies mainly reflects the wills of principal shareholders and insiders. And the interest of vast minority shareholders has no way to be considered. So in optimizing the capital structure of China's private listed companies, it is necessary and important to strengthen protection of minority interest.

Thirdly, as for China's private listed companies, the ratio of independent director and the setting of monitoring-oriented committee and productivity-oriented committee are irrelevant with capital structure. The result indicates that the independent directors and professional committees of China's private listed companies are not able to act properly. China's private listed companies need further improving independent director institution and professional committee institution and really strengthening the independence and specialization of board. Some feasible suggestions include: (1) to establish independent directors association, develop the market of independent director, and reinforce the governance function of independent directors by reputation mechanism; (2) to remain a reasonable size of board, improve the composition of board, increase the ratio of independent director and make it over 50% of all board members; (3) to establish the professional committees composed mainly of independent directors and select an independent director as the chairman in every professional committee.

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#### Board Characteristics and Capital Structure: An Empirical Study on China's Private Listed Companies

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