

Dual-Class Structure and Firm Value: A New Solution Based on Stewardship Theory

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Abstract: Based on the Chinese application of stewardship theory, this paper takes US-listed Chinese stock companies during 2005-2021 as an example, and conducts a qualitative and quantitative study on the nature of dual shareholding and the degree of shareholding separation, respectively, to answer the question of how to design the dual shareholding structure in order to enhance the value of enterprises. It is found that the nature of dual shareholding structure significantly contributes to the value enhancement of Chinese companies in general, but the impact of the degree of shareholding separation on the value of enterprises shows a threshold effect. Specifically, it is manifested as follows: below the threshold and when the control is low, it tends to trench effect and inhibit enterprise value; above the threshold and when the relative control is maintained, it tends to benefit convergence effect and enhance enterprise value. Therefore, it is necessary to guide enterprises to rationally choose a two-tier shareholding structure. At the same time, enterprises should design an appropriate degree of equity separation based on the qualities of the founding team.

1. Introduction

Dual equity structure originated in the United States and refers to an equity design structure that gives some shareholders voting rights or other related rights disproportionate to the number of shares they hold.^[1] This structure can help founders to realize equity financing without losing control, and has been accepted by dozens of developed countries such as the United States, Germany, Canada, etc., and has become a development trend in the international capital market. Therefore, in order to improve the international competitiveness of China's capital market, and at the same time satisfy the financing needs of different types of enterprises, China's policy-making bodies have also introduced the dual equity structure. This has once again triggered the discussion of "dual shareholding" in Chinese academia. Therefore, this paper attempts to investigate the following questions: Does the choice of dual shareholding structure effectively enhance firm value? What is the impact of different levels of equity separation on firm value?

This paper may have the following contributions. First, it expands the breadth and depth of research on dual equity structure. Existing studies, whether exploring insiders' private gains or management's avoidance of external interference,^{[2][3]} have mostly ignored the uniqueness of

founders and their teams to the firm. Based on the stewardship theory and the characteristics of the founding team, this paper explores the value-adding effects of dual equity structures on firms. Second, this paper complements the research on the degree of equity separation by focusing on the degree of equity separation of the founding team, which is viewed as the amount of heterogeneous capital invested by the founding team in the firm and the extent of their tendency to play the role of "stewardship" in the post-IPO period. Third, this paper provides empirical evidence that double-layer shareholding structure promotes the enhancement of enterprise value of Chinese listed companies, which can provide some reference for the choice of shareholding structure and the formulation of regulatory policies for Chinese listed companies as well as Chinese stocks after the return.

2. Research Hypothesis

2.1. Dual-Class Structure and Enterprise Value

The most obvious feature that distinguishes the dual equity structure from the single equity structure is the separation of control and cash flow rights, which makes the founder firmly grasp the control of the company. The founder is different from the general external investors, the founder is a typical "stewardship" role,^[4] which is reflected in the following three points: first, the founder tends to hold more shares, the founder manages the enterprise so that the interests of the shareholders and managers have the same,^[5] and both have the purpose of maximizing the value of the enterprise. Second, founders have a strong psychological ownership of the startup, the demand for corporate control exceeds the interests of money, honour and other claims, and the resulting self-restraint utility of the founders can effectively mitigate agency costs.^[6] Third, in the start-up stage of the enterprise, the financial, intellectual and relational resources invested by the founders together constitute the specialized human capital of the founders that is different from that of the general investors,^[7] and also creates their expert authority status in the enterprise. In addition, under the influence of traditional Chinese culture, there is a strong collectivist atmosphere in China, which emphasizes the importance of collectivism and focuses on moral and spiritual value enhancement.^[4]

Therefore, this paper argues that firm founders in the Chinese scenario tend to choose stewardship behaviour and commit to the long-term development of their firms. Based on the above analysis, the following hypotheses are proposed in this paper:

H1: Dual shareholding structure promotes better corporate value than single shareholding structure

2.2. Degree of Separation of Dual-Class and Firm Value

Founders of startups are usually actively involved in the creation of the organization and are the main decision makers and practitioners of the organizational structure and strategic choices of the firm.^[8] Therefore, although the same dual shareholding structure, the actual degree of separation varies among individual firms. The reason for this is that founders and their teams have varying degrees of influence over the firm, and the heterogeneous resources they possess are the resource base for their quest for power.^[9] From the perspective of the founders and their team, the degree of equity separation is their "pricing" of the various resources invested, the more they invest in the start-up period, the more they can ask for a higher degree of separation, the design of equity separation at this time is in line with the convergence of interests effect, but also through the stabilization of the control of the founders to strengthen the role of the team of founders of the "stewardship", in order to promote the development of the enterprise. However, the substantial separation of cash flow and voting rights of the founding team also contributes to the exacerbation

of the trench effect to some extent, especially when founders' heterogeneous inputs are small. The role of "stewardship" is weakened in this case, which is reflected in different behavioural choices and the accentuation of agency problems.

Based on the above analysis, this paper suggests that the effect of the degree of equity separation on firm value may not have a linear relationship, but rather a threshold effect. Therefore, this paper proposes the following hypothesis:

H2: There is a threshold effect between the degree of dual equity separation and firm value

3. Research Design

3.1. Sample Selection and Data Sources

In this paper, we select the Chinese public companies listed in the United States from 2005 to 2021 as the research object. Among them, the data on dual shareholding structure come from prospectuses and annual reports of Chinese-listed companies collected and collated manually, and the financial data mainly come from Wind Economics and Compustat databases. Samples with missing data, delisted, and those in the financial sector (SIC code 6000-6999) and utilities (SIC code 4900-4999) are excluded. Excluding industries with no firms with dual shareholding structure during the sample period, as well as the sample of firms that have been listed for less than three years and whose shareholding form has shifted, we end up with 978 annual observations for 128 firms. To control for the effect of outliers, the relevant continuous variables are deflated at the 1% and 99% levels.

3.2. Model Setting and Variable Definition

To test hypotheses 1 and 2, the following model was developed:

$$TobinsQ_{i,t} = \beta_0 + \beta_1 Class_{i,t} + \gamma Controls_{i,t} + \sum Year + \sum Industry + \varepsilon_{i,t} \quad (1)$$

$$TobinsQ_{i,t} = \beta_0 + \beta_1 Wedge_{i,t} \times I(Wedge_{i,t} \leq y) + \beta_2 Wedge_{i,t} \times I(Wedge_{i,t} > y) + \gamma Controls_{i,t} + \sum Year + \sum Industry + \varepsilon_{i,t} \quad (2)$$

Where the dependent variable TobinsQ denotes firms' value. The explanatory variable Class in equation (1) is a dummy variable for whether the listed company implements a dual shareholding structure. Eq. (2) is the basic setting of the threshold model (single threshold), y is the threshold value, and $I(\cdot)$ is the linear function. The dual and above threshold model is analogous. Where the explanatory variable Wedge denotes the degree of equity separation of the founding team. controls is the control variable. Drawing on previous studies, controls are provided for firm age at listing, board size, net assets per share, cash, total asset turnover, gearing, gross sales margin, equity checks and balances, number of shareholding organizations, and firm size. In addition, industry and year are also controlled.

4. Empirical Analysis

4.1. Descriptive Statistics

The maximum value of TobinsQ is 11.190, the minimum value is 0.200, and the standard deviation is 1.830, indicating that there is a large variation in enterprise value among firms. On average, about 27% of enterprises have implemented dual equity structure. The minimum value of

the degree of equity separation in enterprises with dual equity structure is 3.800, the maximum value is 64.200, and the standard deviation is 16.330, which shows that even though the same dual equity structure, the degree of equity separation is very different.

4.2. Regression Analysis

Column (1) of Table 1 reports the regression results of equation (1). The regression coefficients of Class are all significantly positive, indicating that the dual equity structure enhances firm value as a whole, and hypothesis H1 is verified.

Table 1: Regression results.

Variables	All	Below threshold	Above threshold	Voting<50%	Voting≥50%	Voting≥50%
	(1)	(2)	(3)	(4)	(5)	(6)
	TobinsQ	TobinsQ	TobinsQ	TobinsQ	TobinsQ	TobinsQ
Class	1.275*** [6.419]					
Wedge		-0.110* [-1.735]		-0.087* [-1.909]	-0.074 [-0.758]	
I(Wedge _{i,t} ≤y)			0.038 [1.444]			0.056** [2.145]
Controls	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
Industry	YES	YES	YES	YES	YES	YES
N	978	93	172	52	41	160
r ² _a	0.244	0.396	0.630	0.704	0.941	0.643

Note: ***, ** and * indicate significant at the 1%, 5% and 10% levels, respectively.

4.3. Threshold Effect

In this paper, for unbalanced panel data, xthreg2 command written by Qunyong Wang and Yujun Lian is used to get Fixed Effect Threshold Model for Unbalanced Panel Data in Stata 16.1.

First, the threshold estimation was performed using 300 Bootstrap sampling method, which showed the presence of a single threshold effect. Second, with the confirmation of the existence of a threshold effect, the Wedge threshold estimate in the sample interval is further determined to be 34.1300 with a 95% confidence interval of [34.0600, 35.3800]. Finally, the results of the threshold model estimation are analysed, as shown in column (2) and column (3) of Table 1. When the degree of equity separation is less than or equal to 34.13%, the coefficient of Tobin's Q is negative and significant, indicating that the degree of equity separation inhibits the increase of firm value. When the degree of equity separation is greater than the threshold 34.13%, the coefficient is positive but does not show significant correlation, indicating that the degree of equity separation at this level does not significantly affect firm value.

It can be seen that when the degree of equity separation is small, the trench effect plays a dominant role. After the degree of equity separation reaches a certain percentage, the convergence of interests brought by the role of "stewardship" and the trench effect reaches a balanced state, i.e., there is a non-linear relationship between the degree of equity separation and enterprise value caused by the threshold effect.

4.4. Moderating Effect of Voting Ratio on The Degree of Equity Separation

Shareholders holding more than 50 per cent of the company's equity can decide on all matters other than the exceptional matters involved in full control. Therefore, the 50% threshold is important. By combining high and low levels of separation with high and low levels of voting

power, the sample size of 12 samples with a level of separation greater than 34.13% and a voting power less than 50% is not statistically significant and is therefore excluded. The regression results for the remaining combinations are shown in columns (4), (5) and (6) of Table 1. It can be seen that when the degree of separation is less than 34.13% and the voting power is less than 50%, the degree of equity separation is significantly negatively correlated with firm value; when the degree of separation is less than 34.13% and the voting power is greater than 50%, there is no correlation between the degree of equity separation and firm value; and when the degree of separation is greater than 34.13% and the voting power is greater than 50%, the degree of equity separation is significantly positively correlated with firm value.

This paper also substitutes variables, increases the sample size, and matches post regressions using the PSM method, proving that the results are robust and are not presented in tabular form due to space constraints.

5. Conclusions

This paper provides an in-depth examination of the relationship between dual shareholding structure and firm value using Chinese companies listed in the U.S. from 2005 to 2021. This paper views the founding team in dual equity structure firms as the stewards of the firm, and the degree of equity separation as the pricing of the founding team's heterogeneous capital. The results of the study show that (1) the adoption of a dual equity structure as a whole effectively promotes the enhancement of the firm's value, but there is a threshold effect between the degree of equity separation and the firm's value, and when the degree of equity separation is lower than the threshold value, the degree of equity separation significantly inhibits the firm's value. However, there is a threshold effect between the degree of equity separation and enterprise value. When it is higher than the threshold, the relationship with enterprise value is not obvious. (2) Voting size moderates the degree of equity separation. When high voting rights coexist with high separation, the degree of equity separation significantly promotes firm value enhancement. When low voting rights coexist with low separation, the degree of equity separation significantly inhibits firm value enhancement. That is, the combination of the two affects which effect is more significant, the trench effect or the interest convergence effect.

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