Empirical research on capital Institution and Enterprise Performance

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Abstract: This paper takes China's A-share listed companies on Shanghai and Shenzhen stock exchanges in 2019 as samples. Through understanding the capital structure, analyzing the actual cases of capital structure and enterprise performance, and studying the indicators of enterprise performance, we can obtain the relative comprehensive indicators of enterprise performance, so as to find out the correlation between enterprise performance and its asset-liability ratio.

Keywords: Empirical Research; Enterprise Performance; Scale of the Company; The proportion of the Largest Shareholder

1. Introduction

Capital institution represents the composition of various capital values of an enterprise and its corresponding proportional relationship, which is the content that must be set for the establishment of the company, shows the rights and obligations of the stakeholders of the enterprise, affects the corporate governance structure, and has a certain impact on the behavior, value and performance of the enterprise. According to the above analysis, it can be seen that the theory of enterprise structure is the index to ensure the maximization of corporate value and the best performance, and it is generally the key part of being adopted to study whether there is an optimal capital institution. Correspondingly, enterprise performance refers to the business benefits and managers' performance in a certain operating period, which can be effectively displayed through the operational benefits and performance in the business stage.

In this paper, based on the analysis of the size of the enterprise and the structure of enterprise ownership, the effect of the capital institution on enterprise performance is studied by exploring the relationship between the debt asset ratio (DAR) and the return on equity (ROE), with the former as the explanatory variable and the latter as the explanatory variable.

2. The ortical analysis and research hypothesis

In recent years, capital institutions have received widespread attention, and many scholars have analyzed the correlation between capital institutions and enterprise performance.

Jordan uses multiple imputation methods to conduct research and believes that there is a correlation between enterprise performance and financial leverage [1]. Margaritis and Psillaki conclude that the relationship between DAR and enterprise performance is U-shaped [2]. Tsuruta conducts research on certain small and medium-sized enterprises, and considers that the profits of companies with high leverage ratios exceed those with low leverage [3].

In China, there are also a large number of scholars who have studied the correlation between capital institution and performance. Among them, Xiao Zuoping [4], Long Ying [5], Lu Jingwen [6], Mi Yan [7], Zhang Lili[8] et. al. establish hypotheses through different models, and conclude that the company's debt-to-capital ratio and performance show a

significant negative correlation. But there are also different opinions. Zhang Wei finds, through computational research, that the impact of capital institutions on performance is not obvious[9]. Jian Zhenqiang finds that by analyzing the correlation between multiple capital institutions and performance, there is a positive correlation between the two parties. The profitability of the company is not only related to financial leverage, but also related to other variables [10].

In summary, the above relevant analysis shows that there are differences and divergences in the research on the relationship between the capital institution and enterprise performance, the DAR and the ownership structure will have some influence on the future development of the company, of which the greatest influential factor is the DAR and there is a negative correlation between DAR and enterprise performance.

3. Research design

3.1 Samples and data sources

Listed companies in Shanghai and Shenzhen in 2019 are selected as research objects. In terms of data, abnormal sample data are eliminated, including: sample data that does not show completeness; ST companies, GEM listed companies and financial companies (Compared with the financial status of other types of companies, such listed companies are quite different); Companies that cannot determine the nature of property rights and lack of executive information are also excluded because this paper considers the nature of the property rights of state-owned enterprises and non-state-owned enterprises, as well as the network of executives. It is worthy noting that relevant variables obtained in this paper come from the CSMAR database; some variables that cannot be obtained in the database are collected and sorted out by hand. In additon, Excel software is used for data analysis, and SPSS Statistic 23.0 software is used for sample data analysis.

After confirming the sample, statistics are performed, and a total of 465 listed companies were selected, all of which are valid samples.

3.2 Model setting and variable definition

In terms of analysis, the multiple regression analysis method was selected to study the correlation between the enterprise performance and the DAR. The specific content of the model is as follows:

Model: $Y = a + b \times DAR + c \times SIZE + d \times Top1 + \varepsilon Y = a + b \times DAR + c \times SIZE + d \times Top1 + \varepsilon$

The definition table of research variables is shown in Table 4-1.

Variable type	Variable name	Variable symbol	Calculation formula
Explained variable	Enterprise Performance (ROE)	ROE	Net profit/owner's equity
Explanatory variables	Asset Structure (DAR)	DAR	Total liabilities/total assets
Control variable	Enterprise Size	SIZE	Natural logarithm of total assets at the end of the period
	The Proportion of The Largest Shareholder	TOP1	The proportion of the largest shareholder

Table 4-1. Definition of research variables.

4.Empricial analysis

4.1 Descriptive statistics

The explained variable is the return on equity (ROE) with a standard deviation of 22.4525, and the explanatory variable is the debt asset ratio (DAR) with the maximum of 141.8229%, the minimum of 3.35689%, and the variance of 400.477, indicating that the degree of data concentration is low.

4.2 Correlation statistics

In order to verify whether the hypothesis is correct, this article carried out corresponding analysis activities to evaluate the correlation between various variables. For details, see Table 4-2.

Table 4-2. Correlation analysis.

	ROE	DAR	TOP1	SIZE
ROE	1			
DAR	-.300**	1		
TOP1	.101*	-.004	1	
SIZE	.120**	.462**	.053	1

Note: * indicates that the correlation is significant at the 0.05 level (two-tailed). ** indicates that the correlation is significant at the 0.01 level (two-tailed).

By observing the content of the table, it is found that the correlation coefficient between ROE and DAR has reached -0.300. At the significance level of 0.01, if the DAR continues to increase, the corresponding ROE will also climb, that is, the hypothesis proposed in this paper is correct.

4.3 Multiple regression analysis

In order to further verify the hypothesis proposed in the previous article, the multiple linear regression model was used to analyze the relationship between capital institution, enterprise size, the proportion of the largest shareholder and enterprise performance. The analysis results are shown in Figure 4-3 and Figure 4-4

	Non-standardized coefficient		Standardized coefficient	T	Significance	Collinearity statistics
	B	Standard error	β			Tolerance
(constant)	-104.683	17.604		-5.947	.000***	
DAR	-.507	.054	-.450	-9.440	.000***	.786
SIZE	5.647	.832	.324	6.784	.000***	.786
TOP1	.136	.070	.083	1.952	.051*	1.000
a. Dependent variable: ROE						

Figure 4-3. Regression analysis.

Model	Sum of square	Degree of freedom	R^2	Adjusted R^2	F	Significance
Return	42629.306	3	.100	.096		
Residual	191269.739	459	.182	.177	34.100	.000***
Total	233899.045	462				
Dependent variable: ROE						
Predictor variables: (constant), TOP1, DAR						
Predictor variables: (constant), TOP1, DAR, SIZE						

Figure 4-4. ANOVAa.

Note: *** indicates it is significant at the 0.001 level, ** indicates it is significant at the 0.01 level, * indicates it is significant at the 0.05 level, + indicates it is significant at the 0.1 level, and the values in parentheses are standard errors. All variables that should be controlled have been controlled.

The analytical quantity of ROE reaches 0.100, and the degree of fit is ideal. The T value of the proportion of the largest shareholder exceeds 0.05, which does not meet the test standard. The coefficient of DAR reaches -0.507, showing a significant negative correlation. The significance level of the logarithm of total assets is also at 0.001, which means that the index and performance in this aspect show a clear positive correlation. The F significance test value of the model is 34.100, its level is less than 0.001, the regression is very significant as a whole.

5.Conclusion

In recent years, enterprises continue to pursue a better enterprise performance, and constantly modify their own capital institution. The conclusions obtained from the analysis are as follows:

(1) Appropriate debt of the enterprise helps to control the cost, but when the DAR reaches a certain extent, the income of the enterprise will be reduced. After analysis, we can conclude that there is an obvious negative correlation between, enterprise performance and assets and liabilities. Both DAR and ownership structure will have an impact on the company's operation and development, but DAR has a significant impact on enterprise performance.

(2) Enterprise performance is proportional to the size of enterprises, large-scale enterprises have a perfect internal structure, and large-scale enterprises tend to diversify, achieve high efficiency and reduce risks. Enterprise performance is also proportional to the shareholding ratio of the largest shareholder, but the significance is not high. In the face of the new development environment, in the case of relatively concentrated equity, we must have a certain right to supervise the agent in order to ensure that the operation will not encounter greater risks.

However, it is worth noting that there are deficiencies in this paper because of a variety of reasons, such as the collection and collation of information such as ROE and the shareholding ratio of the largest shareholder, using manual methods to analyze the data, it is inevitable that there will be no deviation in the data analysis. In addition, there are also some problems to be explored in this paper, such as the different effects of long-term debt and short-term debt on enterprise performance, the continuous improvement of corporate profits will promote the development of enterprises, affect the operation and development of enterprises, and so on. For the purposes of this study, the above-mentioned deficiencies have not been mentioned, presumably this will be the future direction of research.

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