

AN EMPIRICAL STUDY ON CAPITAL STRUCTURE AND CORPORATE PERFORMANCE OF CHINESE LISTED COMPANIES

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Abstract *The relationship between level of debt and the company's performance remains an important unsolved issue in the field of financing. It is very important to know how China's listed companies manage their capital towards business growth. This paper investigates the impact of the capital structure on corporate performance of a sample of 711 listed companies on the Shenzhen Stock Exchange in China in 2014. The results indicates that there is a positive relation between financial leverage and corporate performance as well as there is a positive impact that the mixture of long-term debt and short-term debt (using total debt). This would help decision maker in the companies to finance firms operation in the both periods. On the other hand, the short term debt has a negative relation and impact on corporate performance compared to the changing in firm size which cannot change in the profitability of firms.*

Keyword: *Capital Structure, Financial Leverage, Corporate Profitability, Chinese Companies*

INTRODUCTION

A firm's financing decision is one of the most important financial decisions. Since the concept of capital structure and its practical contents are very important for managers regardless of the field they are working with. The formula of the capital structure is the outcome of the interrelationship between tax benefits received by the entity as a result of high debt and the risk of bankruptcy which prefers to use the funding through the issuance of stock and their impact on the profitability of the firm which has become issue of the balance of capital structure between loans and equity the common things for all firms.

Moreover, the financial decision in the companies affects the future of the company's cash flows, profitability, and liquidity. This decision relates to determining the financial ratio of short-term, and long-term sources as well as determining the appropriate mix of the both debt and equity source (Cheng, Liu, & Chien, 2010). Yet, using an optimal combination of funding is important, because it decreases the cost of capital in the company, and then maximizes the value and increases the winning investment opportunities available to company (Margaritis & Psillaki, 2010).

Many companies do not welcome funding which depends entirely on shares as a sufficient source for capital structure whereas the loan may be one of the elements that is the lowest cost, but it is not permanent, as it cannot be relied upon so much as the lenders may refuse corporate financing when the debt ratio is high.

The size of the company's debt (leverage) in the capital structure is possible to affect significantly on the value of the company through effect on returns and risks of the company. That is to say, the financial director of the company should be able to assess determining the mixture of the capital structure when making a decision, because this decision has a fateful impact on the company performance and value in the future.

(Chen, 2004) emphasized that countries which have chosen market-oriented of the economic system may carry a lot of similarities with the developed countries. It is interesting to know how the theories of capital structure can work in transition economy, which has an environment within the institutional structures do not differ from developed countries. People's Republic of China is the largest growing economy and a transition in the world, so it was chosen to be the focus of this study. The aim of this study is the analysis of relationship between the level of debts and the firm's performance (profitability), in addition to checking impact of level of debts on the firm performance.

Capital structure is the most important element of the company founding, it refers to a combination of debt and equity capital, which the company is using to finance its operations in the long and short-term goals.

It is hoped to answer the question of whether there is a relationship between debt ratio and the company's returns which is return on equity (ROE), and is there an impact of debt ratio on the profitability of the company?

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BACKGROUND

Capital structure is among the very complicated matters for financial decision-makers due to its correlated relationship with other financial decisions' variables. Bad decisions of capital structure can lead to high cost of capital and this means a decrease of current value net of projects making it unacceptable. Basically, capital structure deals with financing decision on a mixture of debt and equity, which plays a vital role on the growth of the company.

Furthermore, the emergence of research and studies in the field of finance and capital structure of company has attracted considerable attention where conducted different studies on the impact of capital structure on the firms' performance revealed conflicting and contradictory results (Sabin & Miras, 2015). In addition, many researchers give great interest to study the relationship between the capital structure and equity that maximise profit and face shareholders' expectations in terms of return on capital employed for the same risk (Intrigano, 2012).

By this means yet in this field, many empirical studies have been conducted to discover whether there is any positive, negative relationship or zero relationship between corporate performance and capital structure, and most of these studies have reached mixed results (Salim & Yadav, 2012).

Salim and Yadav (2012) have tried to investigate the effect of capital structure on Malaysian listed companies performance using four accounting measures of companies performance where empirical tests indicated that the capital structure negatively affected was measured by using ROE, while the capital structure had significantly negative impact on the company's performance that was measured by ROA. According to the study by Margaritis and Psillaki (2010), there is a positive and significant relationship between financial leverage and corporate performance.

Aggarwal and Zhaob (2007) showed additional evidences that indicate how the company's growth may effect on the relationship between capital structure and performance, as the high growth of company affects negatively whereas the low growth affects positively.

Weill (2008) examined the effect of leverage on the firms' performance in seven European countries. The study summarised that there is a positive and significant relationship between leverage and performance of companies in Spain and Italy, while a negative and significant relationship in Germany, France, Belgium and Norway, and not significant in Portugal. Li, Meng, Wang, and Zhou (2008) concluded that the leverage correlated negatively with ROA while positively with ROE.

Holz (2002) has shown that there is a positive relationship between capital structure and financial performance of the company, and that managers are willing to finance

their projects by borrowing in order to achieve maximum performance.

METHODOLOGY

Sample and Data

This study uses a new database which has market and accounting data for 711 Chinese listed companies in 2014 (the researcher got all the data from Shenzhen Stock Exchanges A share), so it will make use of cross sectional data. The database is China Stock Market and Accounting Research Database (CSMAR).

Variable Selection

Return on equity (performance): The return on assets ratio, often called the return on total assets, is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets.

Firm size is a natural logarithm of total assets.

Short-term debt ratio is short-term debt to total assets, also known as short-term liabilities. Short-term debt refers to any financial obligations that are due within a 12-month period, or within the current business year or operating cycle.

Long-term debt ratio is long-term debt to total assets, also known as long-term liabilities. Long-term debt refers to any financial obligations that extend beyond a 12-month period, or beyond the current business year or operating cycle.

Financial leverage ratio is total liabilities to total assets.

The Model

The econometric formulation proposed in this study examines the relationship between capital structure and firm performance, as well as the affect. We propose in this work to test the effect and relation. The specific model as follows:

$$Y_i = \beta_1 + \beta_2 x_{2i} + \beta_3 x_{3i} + \beta_4 x_{4i} + \beta_5 x_{5i} + \mu_i$$

$$ROE_i (\text{performance}) = \beta_1 + \beta_2 FS_i + \beta_3 STD_i + \beta_4 LTD_i + \beta_5 LEV_i + \mu_i$$

where:

i = firm

ROE_i = Return on assets

FS_i = Firm size

STD_i = Short term debt to total assets

LTD_i = long term debt to total assets

LEV_i = Financial leverage

μ_i = the error term

RESULTS

8.45%, short-term debt is 13.34%, long-term debt is 10.37%, financial leverage is 52.07%, and firm size is 9.71.

Table 1 consists of descriptive statistics for research variables indicating that the means for return on equity is

Table 1: Descriptive Statistics

	ROE	STD	LTD	LEV	FS
Mean	0.084460	0.133419	0.103673	0.520654	9.707853
Median	0.054153	0.112179	0.069490	0.524391	9.627893
Maximum	34.18592	0.686926	0.696241	1.649887	11.70621
Minimum	-9.485958	6.5809	3.8505	0.074383	8.482571
Observations	711	711	711	711	711

Correlation analysis is defined as the degree of relationship between two variables. Table 2 presents correlation matrix

showing Karl Pearson's coefficient of correlation and significance level.

Table 2: Correlation Analysis

Correlation Probability	ROE	STD	LTD	LEV	FS
ROE	1.000000				

STD	0.041697	1.000000			
	0.2668	-----			
LTD	0.023409	-0.054621	1.000000		
	0.5332	0.1457	-----		
LEV	0.078166	0.395876	0.403684	1.000000	
	0.0372	0.0000	0.0000	-----	
FS	-0.019264	-0.007951	0.344824	0.427171	1.000000
	0.6081	0.8324	0.0000	0.0000	-----

Profitability ratio shows that long-term, short-term debt, and firm size have insignificant correlations with firm performance, so on STD and LTD level employing more on debt in separate will result in higher cost of debt and lead to decrease in profitability. Companies in ability to pay interest to the investor will decrease the value of equity. On the leverage level (total debts) the results also show a significant positive correlation with ROE which isn't consist

with findings of Intrisano (2012) who concluded that there is a non-significant correlation with debt ratio (DR). Based on these results it can be said that it is possible to borrow on the short run and long run but in the mixture way, that is, using total debts.

Regression analysis has been also conducted using cross sectional data in E-Views 9.0 to answer the research questions.

Table 3: Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.792376	1.064582	1.683642	0.0927
FS	-0.212523	0.114820	-1.850929	0.0646
STD	-1.114425	0.563795	-1.976650	0.0485
LTD	-0.825358	0.561527	-1.469845	0.1420
LEV	1.132195	0.362048	3.127198	0.0018

Dependent Variable: Return on equity

Regression equation shows that firm size (FS) has no significant impact on Return On equity (ROE) where P-value = $0.0646 > 0.05$ indicating that the changes in the firm size would not improve or deteriorate the profitability of a company. This is consistent with the findings of Khan (2012) that the change in FS will not impact firm profitability (ROE ratio). Additionally, short term debt has a negative significant impact on ROE which P-value = $0.0485 < 0.05$ that means an increase in one of STD ratios will reduce firm profitability in term of ROE by -1.114425, whereas Abor (2005) found that there is a positive and significant impact between STD and ROE.

But long term debt has no significant impact on ROE P-value = $0.1420 > 0.05$ indicating that the changes in the firm size would not impact the profitability of a company. On the other hand, the firms can use the both STD and LTD to finance their operation which is obvious from Table 2. Financial leverage (LEV, it is a total debt) has a positive significant impact on ROE which P-value = $0.0018 < 0.05$, that means the firms can improve their profitability when they use mixture of debts and these findings confirm with findings of other researchers like Margaritis and Psillaki (2010), Holz (2002), and Weill (2008).

CONCLUSION

One of the important financial decisions facing the financial management of the institution is a choice between financing, relying on short and long-term commercial and bank debt bonds, or relying on equity represented by ordinary shares, compulsory and optional reserves, and undistributed profits. The relationship between capital structure and the company value has raised the attention of researchers, academics, firm's management and employees (Glen & Pinto, 1994). The present study investigated the impact of capital structure on the financial performance of companies according to a sample of 711 of Chinese listed companies in 2014. Results indicated that there was a positive relationship between financial leverage and corporate performance, and financial leverage had a positive impact on corporate performance confirming that the companies can manage and finance various operations in the long-term and short-term periods using a mixture of both long-term and short-term debts. Furthermore, there might be different results if the firms use short-term or long term-debt. That was clear from the results which indicated that the short-term debt had a negative impact on corporate performance; whereas, the long-term debt had insignificant relation and cannot affect

ROE. Indeed, the firm size has insignificant relation and cannot affect corporate performance.

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