

The Impact of Capital Structure on Company Performance: A Study on Listed Internet Companies in China

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Abstract. Capital structure is one of the most important branches in corporate finance. It has a direct impact on company performances. The internet industry in China has grown rapidly, which plays a more and more crucial role in China's modern economy. This paper examines the performance and capital structure of 80 China's listed internet companies in the year of 2017. An empirical research has been conducted to find the relationship between the two factors above. According to the result, there is significant evidence to show that there is a negative correlation between the performance and capital structure of internet companies in China, and too much debt will do harm to business. Based on the discovery, this paper comes up with the suggestion on optimizing capital structure.

Introduction

With the development of China's market economy, companies' pursuit of value is becoming more and more urgent. The relationship between corporate capital structure and business performance has become a hot topic in the mainstream academic field of corporate finance. The two influence each other in an inseparable way.

Starting from ARPAnet, the Internet has been in existence for more than 50 years. In the 21st century, the Internet has accelerated its penetration into different areas of social economy, releasing a huge digital dividend, which makes a far-reaching impact on human well-beings. Based on the fast development of Internet technology in China, Internet industry booms. The first internet company in China appeared in 1995. From the 1990s to now, Chinese Internet companies have experienced three times of the tide of listings. In 2018, the number of Chinese Internet companies with a market capitalization in the top 20 of the world had reached 9, according to Mary Meeker's Internet Trends 2018.

In the meanwhile, the fierce market competition is making the Internet industry face deep adjustments, as the Matthew effect is becoming increasingly prominent. Small and medium-sized Internet companies are now under huge pressure[1]. The success of an Internet company is attributed to many factors, but capital structure as one of them has no doubt to have an important impact. A proper capital structure enables enterprises to improve the efficiency of capital utilization and to reduce capital costs and investment risks.

Analysis of the Capital Structure and Company Performance of the Internet Industry

The Definition and Characteristics of the Internet Industry. The Internet industry refers to Internet operating services, application services, information services, network products, and other Internet-related activities. Internet companies can be roughly divided into four forms: information sharing, e-commerce, network services and intelligent decision-making.

The China's Internet economy is showing three major characteristics. First, the penetration rate of Internet users continues to expand. To the end of June 2018, the number of Internet users in mainland China was 802 million, and the network penetration rate reached 56.7%. Second, the Internet has entered the post-mobile era. In the past ten years, mobile Internet has made great progress, which has greatly overturned the traditional Internet business model by continuously promoting new models. Mobile Internet is becoming the main infrastructure for the development of

the Internet industry. For instance, according to iResearch data, China Mobile Shopping accounted for 81.3% of the total online shopping transactions in 2017. Third, the status of Internet companies in the economy continues to rise. With the accelerated development of the Internet economy, Internet companies have grown stronger and their status in the national economy has continued to increase. As of the end of August 2018, 7 of the top 10 global market capitalization companies were Internet companies.

Internet Industry Development Status in China. According to CNNIC, to the end of 2018, the number of Chinese both domestic and overseas listed Internet companies had reached 91, with an overall market value of 5.4 trillion yuan. Internet companies listed in the United States have the highest market capitalization, accounting for 55.7% of the total, followed by the total market capitalization of Internet companies listed in Hong Kong, accounting for 29.7% of the total, while the total market value of Internet companies listed in Shanghai and Shenzhen account for 14.6% of the total Internet industry market value[3].

The Capital Structure and Company Performance of Listed Internet Companies.

The Capital Structure of Internet Companies. Total debt to total assets is a leverage ratio that defines the total amount of debt relative to assets. As shown in the above table, the average debt ratio of the Internet industry between 2013 and 2017 has remained at around 34%, which is lower than that of other traditional industries. The main reason may be that Internet companies focus more on R&D and are more involved in high-risk, high-yield projects. Commonly, equity financing is easier to get than debt financing. In addition, we can see from the table that the long-term debt accounts for a very small part of companies' debt capital, with an average of about 2%, while short-term liabilities account for the majority. It shows that Internet listed companies prefer mobile liabilities when they conduct debt financing[4].

Table 1 Debt financing structure of listed Internet companies(%)

	2013	2014	2015	2016	2017
Total debt to total assets	34.60	34.51	35.93	32.40	34.31
Long-term debt ratio	1.48	2.41	2.24	2.30	1.55
Short-term debt ratio	89.99	88.34	83.77	83.68	85.20

The Company Performance of Internet Companies. According to CAICT, to the end of 2018, the total market value of listed Chinese Internet companies was 8 trillion yuan. Compared to the previous three quarters, there has been a decline. In the third quarter of 2018, the total revenue of listed Internet companies was 493 billion yuan, and the growth rate of revenue has slowed down slightly. The proportion of e-commerce revenue was about 55.4%, and the market structure continued to concentrate on head enterprises. The convenience of the mobile Internet meets the individual needs of the Internet users. The mobile terminal has completely surpassed the PC Internet and has become the main direction of the transformation and development of the Internet business.

Empirical Analysis of the Impact of Internet Companies' Capital Structure on Company Performance

Data and Methodology. The dataset comes from the annual report of Internet companies that listed in Shanghai and Shenzhen Stock Exchange, HKEx, NYSE and NASDAQ in 2017. In total, there are 80 companies to be chosen as samples. Data is processed by Excel and R.

The first task is to transform the capital structure and company performance of 80 listed companies into measurable financial indicators. Debt Asset Ratio(DAR) is going to represent a company's capital structure, while company performance will be represented respectively by Return on Assets (ROA) and Earnings Per Share(EPS)[5,6]. Furthermore, there are three dummy variables in the model, which are company size(SIZE) and the listing place(CH stands for China, US stands for the US).

Table 2 Definition of variables

Variable classification	Indicators	Variable names and symbols	Variable definitions
Dependent variables	Company Performance	ROA EPS	Net profit / total assets *100% Net profit / total number of shares
Independent variable	Capital Structure	DAR	Total debt / total assets *100%
Dummy variable	Company size Listing Place	SIZE CH US	Natural logarithm of total assets at the end of the year; Take 1 when listing in the market that the variable represents, take 0 otherwise. It indicates that it's listed in Hong Kong when both are 0.

Estimation Methodology. The estimation methodology is going to be briefly explained next. The model uses the ordinary least squares(OLS) as its resolution to the regression problem. The Multivariate one-time model is developed for studying the correlation of listed Chinese Internet companies' capital structure and their operating performances. Now the equation to be estimated can be written respectively as:

$$ROA = \beta_0 + \beta_1 DAR + \beta_2 SIZE + \beta_3 CH + \beta_4 US + \varepsilon_1 \quad (1)$$

$$EPS = \beta_0 + \beta_1 DAR + \beta_2 SIZE + \beta_3 CH + \beta_4 US + \varepsilon_2 \quad (2)$$

where β_0 represents a constant. β_1 , β_2 , β_3 , β_4 are the coefficients of variables. ε is a random error term. In equation (1) ROA is considered as one of the two dependent variables. DAR represents the independent variable. SIZE is a controlled variable, and CH and US are the two dummy variables that imply where did a particular company go public.

Regression Results.

Table 3 Ordinary least square regression result (Dpt-ROA)

Indpt variable	Estimate	t-value	Prob
(Intercept)	-18.9728	-2.662	0.0095**
DAR	-0.1462	-2.158	0.0341*
SIZE	3.6382	3.773	0.0003***
CH	2.6503	0.707	0.4817
US	-4.3455	-1.030	0.3064
$R^2 = 0.2111$			
Adjusted $R^2 = 0.169$			

Table 4 Ordinary least square regression result (Dpt-EPS)

Indpt variable	Estimate	t-value	Prob
(Intercept)	-120.2071	-1.998	0.0493*
DAR	-0.1961	-0.343	0.7326
SIZE	18.8721	2.319	0.0231*
CH	-18.7431	-0.593	0.5553
US	-5.6508	-0.159	0.8743
$R^2 = 0.0911$			
Adjusted $R^2 = 0.0426$			

Based on the above analysis, the following conclusions can be drawn. The capital structure of

Chinese listed Internet companies is negatively correlated with their business performance. There is no significant linear relationship between earnings per share(EPS) and debt asset ratio(DAR), while there is a significant negative correlation between return on assets (ROA) and debt asset ratio(DAR).

Research Conclusions and Recommendations

Conclusions. Capital structure theory has experienced several evolutions from classical capital structure theory to modern capital structure theory to new modern capital structure theory. Different theories have different views on the relationship between capital structure and company performance, but the core is all about exploring the optimal capital structure. Due to differences in time, space and conditions, the relationship between capital structure and company performance among different regions, different industries and even different enterprises is also varied largely[7]. Thanks to the information technology revolution, China's Internet economic environment is remarkably active. The debt-to-asset ratio of the Internet industry is lower than that of other industries. The debt levels of Internet companies listed in different locations in China, Hong Kong and the United States are significantly different, and the proportion of current liabilities is higher. The company performance of Internet companies has the characteristics of high growth and high profitability[8]. The total market value continues to grow, while total revenue and operating profit are also fluctuating upward. However, due to the serious polarization in Internet industry, the Matthew effect is now getting more and more significant, and the company performances of large companies and medium-sized companies and small companies are quite different.

Suggestions. The primary task of optimizing the capital structure of Chinese listed Internet companies is to control the asset-liability ratio. Although the overall asset-liability ratio of Chinese Internet industry is relatively low, the debt ratio of some companies is still high, and the current liabilities account for a high proportion. Favorable conditions should be created for enterprises to improve business performances by increasing equity financing to reduce corporate financing costs, improving corporate capital structure and reducing operational risks as well as financial risks[9].

Corporate financing channels should be as diversified as possible to secure a healthier growing environment for companies. Broadening financing channels can reduce corporate risks and optimize capital structure, which contributes profoundly to improving business performances. For instance, debt financing should not be limited only to bank loans, but issuing bonds can also be considered as a good alternative.

Last but not least, it is also a critical task to strengthen the disclosure and supervision of information, to improve the signal transmission mechanism, so as to alleviate the investment and financing difficulties caused by information asymmetry[10]. That is a practical way to improve the overall operational efficiency of the whole financial market. As long as the environment has been well built up, it is time for enterprises to do their best to pay great attention to scientific research and core innovation in order to improve the overall strength of enterprises.

References

- [1] Olga Gaydarzhyyska,Victoriia Riaboshapka,Nataliia Hajdamaka. STUDY THE PROBLEMS OF OPTIMIZING THE CAPITAL STRUCTURE OF THE COMPANY[J]. Baltic Journal of Economic Studies,2016,2(4).
- [2] Information on <http://www.iresearchchina.com/>
- [3] Guo J , Zdeněk Zmeškal. Valuation of the China Internet company under a real option approach[J]. Perspectives in Science, 2015, 7(C).
- [4] Campbell G , Rogers M . Capital Structure Volatility in Europe[J]. International Review of Financial Analysis, 2018, 55:128-139.
- [5] Zeitun R M A , Tian G G . Capital structure, corporate performance and default risk : evidence from emerging market : a case study of Jordan[C]// 2018.

- [6] Elmagrhi M , Ntim C G , Malagila J , et al. Trustee Board Diversity, Governance Mechanisms, Capital Structure and Performance in UK Charities[J]. Social Science Electronic Publishing, 2018(2).
- [7] Jouda S , Hellara S . Diversification, capital structure, and performance: A simultaneous equation approach[J]. Managerial and Decision Economics, 2017.
- [8] Campbell G , Rogers M . Capital Structure Volatility in Europe[J]. International Review of Financial Analysis, 2018, 55:128-139.
- [9] Li M A, Qi P H. Based on Data Envelopment Analysis to Evaluate the Performance of Internet of Things Listed Company in China[J]. Future & Development, 2011.
- [10] Weng W , Li F , Zhang G . The Data Analysis about Management Holdings and Company Performance[C]// International Conference on Intelligent Transportation. IEEE Computer Society, 2018.