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Analysis of the Motivation of Financing Leasing of Listed Companies an Empirical Study Based on Guangdong Province, China

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Abstract: Financial leasing has been favoured by many listed companies relying on its flexibility, low risk and tax advantages. This paper analyses the motivation of finance leasing of listed companies by collecting the financial report data disclosed by listed companies in Guangdong Province, China, from 2007 to 2019, information from CSMAR database and government planning documents, and selecting indicators in combination with existing research theories, and finally analysing the motivation of finance leasing of listed companies by using Logistic regression and Probit regression. It is found that the debt substitution effect of finance leasing is significant, i.e. there is mutual substitution between finance leasing and borrowing financing. At the same time, we also note that listed companies take finance leasing more for the purpose of short-term capital financing and improving the asset growth rate.

1. Introduction

As the most common and basic form of non-bank finance in the international arena, since the establishment of China's first financial leasing company in 1981, financial leasing business has been penetrating into all corners of China's economy like bamboo shoots sprouting up. Since 2007, China's financial leasing industry has entered a period of rapid growth, with the number of pilot enterprises growing rapidly from 26 to 560 in 2013, and the business volume increasing from 8 billion yuan to 930 billion yuan in 2011. At present, China's financial leasing market has become one of the largest in the world[1]. With the advantages of flexibility, convenience and risk diversification, financial leasing has been favored by many listed companies. Therefore, studying the influencing factors of listed companies' financial leasing is of great significance to understand the financing channels of listed companies and the development of the financial leasing industry.

2. Status of Research

2.1. Theory of Tax Differentials

According to the theory of tax rate differentials, the difference in tax rates between companies

determines the value of a finance lease to some extent. The pass-through of tax advantages can result in a joint tax benefit for both the lessee and the lessor, and the greater the tax rate differential, the greater the tax benefit. In addition, the tax avoidance effect and the increase in tax shields under the pass-through of tax advantages can significantly increase the likelihood of financial leasing. Weston (1960) analyzes the impact of tax burden in the decision of financial leasing from the perspectives of lessees and lessors, and points out that both parties to the transaction can share the profit tax benefits and thus realize the co-benefits[2]. Myers (1976) suggests that low-tax-rate firms are more inclined to financial leasing compared to high-tax-rate firms, and are more likely to finance leasing and are more prone to tax arbitrage as lessees[3]. Smith (1985) constructed a model based on the difference between the tax burden of the lessee and the lessor, and deduced that financial leasing can reduce the total tax burden of both parties[4]. Lessees with low tax rates are more likely to use finance leasing.

However, studies related to the relationship between tax rates and finance leasing have also triggered some counter-arguments. Finucance (1988) points out that a firm's high or low tax rate does not affect whether or not it enters into a finance leasing transaction, and that there is no significant correlation between the two[5]. Krishnan (1994) suggests that tax rates may not be the main driver of finance leasing and finds that there is no significant difference in the tax rates between a finance leasing sample and a non-finance leasing sample[6]. Mehran (1999), through an empirical test of U.S. firms, finds no clear association between taxes and finance leasing[7].

2.2. Debt Substitution Theory

The debt substitution theory views financial leasing and borrowing finance as two types of exogenous financing with the nature of debt, and they can be substituted for each other. In the business operation, both finance leasing and borrowing financing are regarded as financing tools with fixed contractual obligations, and there is a relationship between them. Many scholars have studied the enterprise's financial leasing decision based on this theory. Myers (1976) proposed the complementary relationship between financial leasing and borrowing financing channels. If financial leasing is feasible for the enterprise, the corresponding borrowing financing may be canceled, showing a negative relationship[3]. Marston (1988) analyzed the relationship between debt ratio and financial leasing by constructing a model[8]. The empirical results support the substitutability of finance leasing and borrowing financing, especially among low debt ratio firms. Yan (2006) further analyzes the substitution relationship among firms, emphasizing the effects of agency problems and tax avoidance ability on the substitution relationship of financing channels[9].

However, some scholars have questioned and empirically tested the debt substitution theory. Ang (1984), using a sample of U.S. firms, found that the amount of finance leasing was higher for firms with larger borrowing finance[10]. Finucane (1988), using a sample of U.K. firms, also concluded that there was a close relationship between finance leasing and borrowing finance[5]. Lasfer (1998) found that there is a strong relationship between smaller firms there is mutual substitution, while in larger firms the efficiency advantage of finance leasing disappears and borrowing finance is preferred[11].

2.3. Agency Cost Theory

In the financing process, a special principal-agent relationship is formed between firms and investors. Enterprises plan to utilize borrowed funds to enhance their operational capabilities, while investors seek high returns. Such different motives lead to risks in the use of funds. Compared with borrowed financing, financial leasing has the unique advantage of allowing the creditor to participate in the decision-making of the use of funds and to recover the leased assets according to the provisions when the risk of default arises, controlling the risk within an acceptable range.

Agency cost theory also emphasizes the role of ownership structure in reducing agency costs.

studies by Smith (1985) and Mehran (1999) confirm the positive association between corporate ownership structure and financial leasing decisions[4][7]. Firms with higher executive ownership are more likely to opt for finance leasing. Robicheaux (2010) goes further by stating that finance leasing reduces the agency cost of debt and leads to a greater return on capital[12].

From the perspective of bankruptcy costs, financial leasing provides some protection for the leasing enterprise in the event of the debtor's bankruptcy. The ownership of assets by the lessor enterprise in financial leasing can be used as collateral, which helps to avoid ex ante bankruptcy costs. Krisman (1994) emphasizes the advantages of financial leasing in preventing bankruptcy risk, and the empirical analysis of Eisfeldt (2009) further confirms the positive correlation between the magnitude of bankruptcy risk and financial leasing[6][13].

3. Empirical Studies

3.1. Data Sources

Financial data is from 2007-2019 financial statements of listed companies in Guangdong Province and the CSMAR database, and policy support industry information is from China's Guangdong Provincial Government Planning.

3.2. Variable Selection and Description

If an enterprise is in a supported industry, its financing situation will be greatly improved. Especially in China, a country that is currently dominated by indirect financing and has a strong policy orientation, the target industry supported by the government can obtain wider financing channels and lower financing costs. To summarize, this paper believes that the government's attitude will affect the financing situation of enterprises in this industry, and financial leasing will become the second financing choice.

According to Lasfer (1998), overall financial leasing companies show significant profitability characteristics compared to non-financial leasing companies, and financial leasing has a positive impact in corporate profitability and is welcomed by companies with profitability characteristics. When a company with good profitability has a sizable asset growth rate as well as a return on capital (ROA), then the financing needs of the company will be enhanced.

The growth rate of sales revenue reflects the growth rate of the company's sales revenue. If the listed company intends to expand its business, its demand for equipment and facilities as well as cash flow will increase, and then financial leasing will become a good financing channel for the listed company. At the same time, when the company develops new business, finance leasing allows the company to use the assets without fully assuming the risk of ownership of the assets, which makes finance leasing a more attractive financing method.

We use Tobin's Q to be able to better represent the value and growth capacity of the company. Firms with higher growth have higher debt ratios because they can increase ROI and avoid taxes by having high debt. Although growth is characterized by high debt and high risk of bankruptcy, the "agency cost theory" suggests that the separation of the right to use and the right to own in finance leasing has a clear advantage in preventing risk.

According to the "debt substitution theory", a higher gearing ratio represents the difficulty of enterprises to raise funds from banks and capital markets, and if they want to raise further funds, they will tend to finance leasing, although some scholars have questioned it, but in any case, leverage is a major factor influencing the enterprise financing and leasing.

An enterprise's cash flow level shows the company's operating conditions, if its cash flow is insufficient, it is easy to fall into a liquidity crisis, the risk of facing bankruptcy will be greatly

increased. According to "bankruptcy theory", enterprises with high risk of bankruptcy prefer financial leasing. Therefore, this paper believes that the indicator of cash ratio will affect the enterprise financing lease, and the listed company with higher liquidity ratio will be less in need of financing lease to finance, on the contrary, the company facing liquidity crisis may be more in need of financing lease.

Table 1: Variable Definition.

Variable	Notation	Meaning
Financial lease	lease_dummy	1 for obtaining a finance lease, 0 otherwise
Policy Support Sectors	policy_support	1 for policy support received, 0 otherwise
Asset growth rate	lna_last	ln (asset size)
ROA	roa1_last	Net profit/average total assets
Sales revenue growth rate	salesgrowratio_last	(Sales revenue of the current period - sales revenue of the previous period)/sales revenue of the previous period x 100%
Tobin's Q	tobinq_last	Market value/reconstruction costs
Leverage	leverage_last	Total liabilities/total assets
Cash ratio	cashratio_last	Cash/total assets

The definitions and notation of the variables in this paper are described in Table 1. Since the explanatory variables are binary variables, Logistic regression is used in this paper and the mathematical expression formulas are respectively:

$$\text{Logistic } P_t = \beta_0 + \beta_1 \text{policy\_support} + \beta_2 \text{lna\_last} + \beta_3 \text{roa1\_last} + \beta_4 \text{salesgrowratio\_last} + \beta_5 \text{tobinq\_last} + \beta_7 \text{leverage\_last} + \beta_8 \text{cashratio\_last}$$

where β_0 is the constant and β_1 to β_8 are the coefficients of the explanatory variables.

3.3. Regression Results and Analysis

Table 2: Regression results.

	Probit_Regression	Logit_Regression
policy_support	0.0558	0.1975
	(0.52)	(0.88)
lna_last	-0.0967*	-0.2158*
	(-1.68)	(-1.81)
roa1_last	-0.5392	-0.5804
	(-0.55)	(-0.29)
salesgrowratio_last	0.1788*	0.3595*
	(1.77)	(1.89)
tobinq_last	-0.0523	-0.1092
	(-1.26)	(-1.22)
leverage_last	0.7921**	1.9122***
	(2.30)	(2.65)
cashratio_last	-1.2166**	-2.7823**
	(-2.28)	(-2.31)
N	1988	1988
pseudo R^2	0.108	0.110

t statistics in parentheses

*$p < 0.1$, ** $p < 0.05$, ***$p < 0.01$

In order to ensure the robustness of the empirical results, this paper also carried out Probit regression. The results of the Probit and Logit regressions are shown in Table 2. From the regression results, we can see that the significance and positivity of the coefficients have not changed much, so we can consider that the regression results pass the robustness test. The coefficients of asset growth

rate and sales revenue growth rate are significant at 10% significance level, and leverage ratio and cash ratio are significant at 5% significance level (leverage ratio is significant at 1% significance level in logistic regression). It is worth noting that the coefficients on sales revenue growth and leverage are positive; the coefficients on asset growth and cash ratio are negative.

4. Conclusion

From the empirical results, we can find that whether finance leasing is popular or not has nothing to do with the company's profitability, specifically, the coefficient of ROE of the two regressions are not significant. However, it is worth noting that the coefficient of asset growth rate is significant and negative, so this paper argues that profitability is not a factor that affects the financing and leasing of listed companies, the growth of asset size is, one of the purposes of financing and leasing of listed companies is to increase the growth rate of assets, and to make the asset size. The coefficients of cash ratio and sales growth rate are significant. The negative coefficient of the cash ratio indicates that the more cash-flow-rich firms do not need financing through leasing. When the enterprise carries out sales expansion, it needs more abundant cash flow, while the coefficient of sales growth rate is positive precisely indicates that finance leasing is more of a short-term financing means for listed companies. Leasing is more of a short-term financing tool for listed companies. Other variables are not significant.

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