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Research on the Paths of Financial Marketization Promoting Private Agriculture Enterprise Development

—Empirical Evidence from Exempted Listed Agriculture Companies

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***Abstract*—This article selects A-share listed tax-free private companies of agriculture, forestry, herd and fishery during the period from 2008 to 2010 as a sample. In the absence of income tax effect, this paper explores the avenue of financial development promoting the development of private agricultural enterprises. The findings show that: firstly, financial development promotes the development of private agricultural enterprises by easing financing constraints. Secondly, financial development can improve the debt capacity of strong profitable and financial healthy companies. Empirical results show that easing financing constraints and effective screening profitable and financial healthy enterprises are the two specific paths that financial development promoting private agricultural enterprises development. Compared with other agricultural support policies, financial market exist less rent-seeking and corruption or other agency issues in the resources allocation process. So, in the process of developing private agricultural enterprises, the government has to use the screening function of financial market to improve the allocation efficiency of financial resources and to promote the development of high-quality private agricultural enterprises.**

Keywords—financial development; agricultural enterprises; path

I. INTRODUCTION

From 2004 to 2017, the Chinese Government has released 14 Central Document No. 1 about the "Three Rural Issues" (agriculture, rural areas and farmers). These documents emphasized on enhancing the rural financial system to better resources allocation to promote agricultural economic development. An important aspect of financial services about agricultural development is to guide the social capital into agriculture to develop private agricultural enterprises. The characteristics of long-term, seasonal and natural dependency of agricultural production mean that financing is especially important for agriculture development[1]. The private agricultural enterprises generally face different levels of financing problems[2]. In imperfect financial market, resource allocation is ineffective and private enterprises face the discrimination of debt financing and equity financing against institution[3], the difficulty of private enterprises to obtain financing is much higher than that of state-owned enterprises[4]. In the case of difficulties in financing of agricultural enterprises and private enterprises, we should reveal the specific path of financial market promoting the development of agricultural economy and then confirm the specific direction to develop the financial market and promote the development of agricultural enterprises.

Financial development affects corporate finance behavior and financial resources distribution among enterprises and which induce capital structure adjustment. Income tax will also have an impact on the choice of debt and equity financing. Debt financing is superior to equity financing because of the debt tax shield and the tax advantage increases with the income tax rate[5]. Taxation is one of the most important factors influencing financing options, and the marginal tax rate and corporate debt level are determined at the same time [6]. Therefore, we can't determine whether the financial development or the changes of the marginal tax rate affect the capital structure. And it is important to distinct the financial development influence and tax incentives effect when we research the influence of financial development on the capital structure. However, the marginal tax rate and corporate debt levels are interrelated and empirical research can't effectively separate the tax incentives generated. The "Enterprise Income Tax Law of the People's Republic of China" (hereinafter referred to as the "Tax Law"), which is implemented on January 1, 2008 and which stipulates that agricultural enterprises are exempted from income tax. So, the capital structure of this kind of enterprises is not affected by income tax. Exempt companies offer an opportunity to carry out a study about the impact of financial development on financing behavior and further reveal specific paths of the financial development influence agricultural development.

The Tax Law stipulates that the income from agriculture projects may be exempted persistently. The decisions of capital structure of such enterprises will not be affected by the debt tax shield and which constitutes a unique sample for the study of how financial development affects corporate financing behavior. Therefore, this article selects A-share listed tax-free private companies of agriculture, forestry, herd

and fishery during the period from 2008 to 2010 as a sample. In the context of private enterprises facing financing constraints, we chose the capital structure as observation variables about corporate finance behavior and financial market resource allocation. We also choose the degree of financial market as a proxy variable of the financial development level to study the impact of financial development on the capital structure of tax-free agricultural enterprises to reveal the specific ways that financial marketization affects the development of agricultural enterprises. This paper finds that improving the degree of financial marketization not only alleviate the financing constraints of private agricultural enterprises but also improve the screening ability for high-quality private agricultural enterprises. Compared with other agricultural supporting policies, financial markets support faces less rent-seeking and corruption or other agency issues. Therefore, financial development is one of the most effective ways to promote the development of private agricultural enterprises.

II. Theoretical Analysis and Research Hypothesis

Financial development promotes economic development by reducing the degree of difficulty of corporate finance and the transaction costs. Nowadays private enterprises' financing difficulties is still an indisputable fact[7]. The higher the degree of financial development, the higher proportion of resources allocated by the market and the lower level of the financing constraints of private enterprises. Private enterprises can adjust the capital structure effectively and make full use of financial leverage to improve business value. In the background that the financial sector don't want to provide loans to private enterprises, gradual marketization reform can alleviate the external financing constraints of small and medium-sized enterprises and private enterprises and thus promote their development.

A. Financial development mitigates financing constraints

Financing constraints affects private agricultural enterprises' capital structure decision, and finally reflect on the debt level. Private enterprises usually have low debt level, when facing the difficulty of financing. In the similar conditions, company's debt level is largely influenced by the difficulty of the access to debt financing. In the transition period of China, the financial resources are mostly controlled by the state-owned financial enterprises. Corporate debt financing mainly comes from bank loans because of the imperfect development of the bond market. Sun et al argued that private enterprises are subject to a lot of institutional discrimination in both debt financing and equity financing because of the serious credit rationing[8]. The result is that although the non-state economy contributed more than 70% to China's GDP, less than 20% of the bank's loans have flowed to them and the remaining 80% are obtained by the state sector in the past decade[9]. Obviously, there is a serious deviation between the credit allocation and the output structure.

The mismatch between financial resources and output is not conducive to economic development. The greater is the deviation, the lower is the degree of marketization of the distribution of credit funds. The level of marketization of financial industry reflects the degree of market competition and the degree of marketization of credit fund allocation. Improving the degree of financial marketization can improve the efficiency of financial resource allocation and alleviate the financing problems of private enterprises and thus promote economic development. First, the improvement of the degree of financial marketization will reduce government intervention and increase the proportion of resources allocation of non-state financial institutions and ease the financing constraints of private agricultural enterprises. Second, the higher is the level of financial marketization, the stronger the market competition in the financial industry. Competition reduces the proportion of relationship loans, and promotes the flow of credit funds to high quality enterprises. In addition, developed financial markets can effectively reduce information asymmetry, and then reduce the financing constraints of enterprises[10]. A higher the degree of financial marketization prompts private enterprises to ease the financing constraints. The result is that in the same circumstances, it is easier for private enterprises in the high level of financial development region to get debt and the external constraints is reduced when approaching the optimal level of debt and manifests a higher level of debt. On the basis of this, we put forward the research hypothesis 1:

Hypothesis 1 (H1): In the same conditions, the level of debt of private agricultural enterprises is positively related to the level of financial marketization.

B. Financial development enhances its ability to identify high quality companies

Because of the special characteristics, agricultural enterprises face more serious problems of incomplete information, but financial market support is an important foundation for the development of agricultural enterprises. Aoki pointed out that in developing countries, the risk of financing enterprises is very high and financial business must rely on some non-standardized and non-quantified information, such as the quality and reliability of enterprises and managers. Particularly, agricultural enterprises face information incompleteness because of lacking these "standardized and quantitative information" and the high degree of information incompleteness increases the intensity of the financing constraints.

Information asymmetry will lead to the difference between internal and external financing costs, and the source of funds is no longer a problem can be ignored. Information asymmetry and systemic risk is not conducive to the external financing of agricultural enterprises, which may lead to a mainly dependence on endogenous financing. The essence of financial market is an information market and its development can improve the ability to identify high-quality enterprises and configure resources to them. Financial markets and stock prices can identify accounting information with different robustness. In the information asymmetric credit market, banks can observe the characteristics of private enterprises, such as profitability, financial situation, to judge their repayment ability[4]. In this way, less information asymmetry and well-developed capital market is beneficial to improving screening efficiency and the profitability is very important for the acquisition of internal and external funds.

Generally speaking, financial marketization can promote the quality of observation variables of enterprises and improve screening ability. In general, the profitable companies are more easily to get debt when financial market is well-developed. Moreover, financial development can help businesses raise debt financing capacity. Financial development changes the relationship strength between firm quality and capital structure. Accounting data is difficult to deliver quality signals in less-developed financial market. So, there is a strong correlation between debt and the accounting data (such as profitability). According to this, we put forward hypothesis 2:

Hypothesis 2a (H2a): Financial marketization can beneficial to recognize high profitability private enterprises, and thus improve their debt levels.

Hypothesis 2b (H2b): Financial marketization will improve the debt capacity of the private enterprises with good financial position.

III. Research Design

A. Model Specification

According to theoretical analysis and Smith (2010) and other literature, setting the regression model to test the hypothesis of this paper, the model as shown in (1):

$$\text{Capitalstructure} = \alpha_0 + \alpha_1 \text{Fmarket} + \alpha_2 \text{Fstresspossib} + \alpha_3 \text{Fmarket} \times \text{Fstresspossib} + \Sigma \text{Control} + \varepsilon \quad (1)$$

Capitalstructure={DebtR, SdebtR}, Fstresspossib={Profit, Zscore}, Fmarket×Fstresspossib is the interaction item. Control standards for the control variables, ε is the residual item. Regression controls the industry and the annual effect.

B. Variable Definitions

The definitions of variables are shown in Table 1

TABLE I DEFINITIONS OF MAJOR VARIABLES

Variable symbol	Description	Definition
DebtR	Total debt ratio	Liabilities book value/book value of total assets
SdebtR	Short - term debt ratio	Current liabilities/total assets
LdebtR	Long - term debt ratio	Long-term liabilities/total assets book value
Fmarket	Financial marketization level	The logarithm of financial industry market index
Profit	Profitability	Return on total assets (ROA)
Zscore	Z score	(3.3*EBIT+Revenue+1.4*Retained earnings+1.2*Working capital)/Total assets
Size	Company Size	The natural logarithm of the book value of the total assets
TobinQ	Tobin Q value	(The book value of the liability + the market value of the equity) / total assets
Ddep	Depreciation rate difference	the ratio of depreciation amount to total assets at t period minus the ratio of depreciation amount to total assets at t-1 period
Tangible	Asset guarantee value	Fixed assets/total assets
Curratio	Flow ratio	Current liabilities/current assets; or net operating assets/total assets
Cashvol	Cash flow volatility	The standard deviation of the ratio of cash flow to operating income in the first five years

C. Sample selection and data source

After the implementation of the Enterprise Income Tax Law of the People's Republic of China in 2008, the enterprise's income from agriculture, forestry, animal husbandry and fishery projects is exempted from corporate income tax. This article selected A-share listed tax-free private companies of agriculture, forestry, herd and fishery during the period from 2008 to 2010 as a sample. The data of this paper comes from CSMAR database. The level of financial development comes from index compiled by Fan and Wang.

IV. Empirical Test

A. Regression between Total debt level (DebtR)and Independent Variables

Total debt level (DebtR) regression results are shown in Table 2. According to Model I, DebtR is significantly positively correlated with the level of financial marketization (Fmarket) and the empirical results support the hypothesis 1. The empirical results show that the financial marketization can improve the debt financing ability of private agricultural enterprises and improve the overall debt level. In other words, increasing the level of financial marketization will reduce the financial constraints, so that shareholders will depend more on debt to increase shareholder value. Model I also came out that there exists no significant correlation between the level of debt and profitability of private agricultural enterprises. At a certain level of financial marketization, profitability alone can't improve the debt financing capacity of private agricultural enterprises effectively.

According to Model II, the interaction terms between Fmarket and profitability (that is Fmarket × ROA) is positive at 1% statistically significant. The empirical results show that agricultural enterprises with better profitability in the areas where financial marketization is well-developed can improve their debt financing ability and improve their debt level. Empirical results support hypothesis H2a. Financial marketization has a greater effect on enterprises with strong profitability, while the effect on enterprises with weak profitability is small. Well-developed financial marketization will improve the level of debt of agricultural listed companies, which is efficient to profitability enterprises but not too much to the weaker ones. The results show that the improvement of financial marketization can help financial institutions to identify enterprises with strong profitability, to promote the flow of financial resources to the strong profitability enterprises and optimize the allocation of resources. In the end, companies with strong profitability in areas with high levels of financial market are becoming more and more dominant, and the whole market quality of agricultural enterprises is improved.

According to the Model III, there is negative correlation between the level of liabilities of private agricultural enterprises and Zscore at 1% statistically significant. The result indicates that when the degree of financial marketization is fixed, private enterprises with better financial condition are rely more on endogenous financing, and the level of debt is lower. The results also indirectly show that the financial resources are not configured to high-quality enterprises.

According to Model Ⅳ, the interaction term between financial development (Fmarket) and financial position is positive at 1% statistically significant. The result indicates that the financial market can effectively identify the financial condition of high quality business. The higher the level of

financial marketization is, the more efficiency in identify business with good financial condition. So, those companies with good financial condition have a high debt financing capacity. Empirical results support hypothesis H2b. Financial marketization can change the level of debt of agricultural listed companies, but for the enterprise with good financial situation it works better, and for the enterprise with poor financial situation it works less. This result shows that financial market development can help financial institutions to identify high quality enterprises, and enterprises with good financial situation can get more financial resources, and then make the allocation of resources to be optimized. In the end, companies with good financial situation are becoming more and more dominant in well-developed-market areas, and the whole market is made up of enterprises with good financial situation.

TABLE II TOTAL DEBT LEVEL (DEBTR) REGRESSION RESULTS

Z=	ROA		Zscore	
Model	Model Ⅰ	Model Ⅱ	Model Ⅲ	Model Ⅳ
_cons	-0.9924 (-1.143)	0.6778 (0.929)	-0.3969 (-0.748)	0.2940 (0.575)
Fmarket	0.1171* (1.882)	0.2163*** (2.996)	0.0784** (2.018)	0.1223* (1.947)
Z	-0.4893 (-0.588)	0.0166 (0.033)	-0.1880** (-7.927)	-0.0277 (-0.352)
Fmarket×Z		4.4769*** (3.316)		0.7366*** (3.336)
Size	-0.0221 (-0.406)	-0.0354 (-1.003)	0.0020 (0.061)	-0.0075 (-0.305)
Tangible	-0.9050*** (-2.719)	-0.3666** (-2.431)	-0.2730 (-1.247)	-0.4357** (-2.778)
Curratio	0.0376*** (3.322)	0.1766*** (6.361)	-0.0126 (-1.308)	0.3670*** (5.371)
TobinQ	0.0189 (0.921)	-0.0038 (-0.675)	0.0164 (0.960)	-0.0079 (-0.821)
Cashvol	-0.0082 (-0.917)	0.0025 (0.183)	-0.0005 (-0.111)	0.0190 (1.455)
Ddep	-3.9791 (-1.240)	2.6508 (1.592)	-2.1869 (-1.108)	1.6798 (1.290)
Age	0.5592** (2.117)	-0.1803 (-1.191)	0.2779* (1.980)	-0.2114* (-1.911)
Adj-R^2	0.5492	0.7756	0.7138	0.7869
F	10.34***	18.60***	34.03***	20.60***

Note: The dependent variable is the asset-liability ratio (DebtR); ***, **, * represent 1%, 5%, 10% significant levels respectively; regression controls the industry and year effect; brackets use White (1980) Method to adjust the T difference after the hetero-difference.

B. Current liabilities (SdebtR) regression results

The result of regression short-term debt ratio (SdebtR) on financial development, profitability (ROA) and Z scores are shown in Table 3. According to Model Ⅰ, short-term debt ratio (SdebtR) of private enterprises is positively correlated with the level of financial development (Fmarket). The higher the financial development level is, the stronger the short-term debt financing capacity. The empirical results support hypothesis H1. According to Model II, the interaction term between Fmarket and the profitability (ROA) is positive at 5% statistically significant. The result indicates that financial development can significantly change the strength of the relationship between the profitability and short-term debt financing capacity of the private agricultural enterprises. This result supports the hypothesis H2a. According to Model IV, the interaction term between financial development level (Fmarket) and financial condition (Zscore) is significantly positive at 5% statistically level. The degree of financial marketization has changed the strength of the relationship between financial condition and short-term debt level. Enterprises with good financial position will have high short-term debt capacity in well-developed finance market areas. The result supports the hypothesis H3b.

TABLE III SHORT-TERM DEBT RATIO (SDEBTR) REGRESSION RESULTS

Z=	ROA		Zscore	
Model	Model Ⅰ	Model Ⅱ	Model Ⅲ	Model Ⅳ
_cons	-1.0662 (-1.252)	0.5270 (0.893)	-0.2778 (-0.549)	-0.3061 (-0.578)
Fmarket	0.1337** (2.093)	0.1950*** (3.193)	0.0859** (2.520)	0.1696*** (2.829)
Z	-0.7561 (-1.008)	0.2952 (0.730)	-0.1947*** (-.740)	0.0047 (0.080)
Fmarket×Z		2.9724** (2.155)		0.3750* (1.841)
Size	-0.0147 (-0.287)	-0.0276 (-0.897)	0.0046 (0.172)	0.0071 (0.300)
Tangible	-.8473*** (-2.610)	-.4345*** (-3.488)	-0.1967 (-1.050)	-.4740*** (-3.113)
Curratio	.0310*** (3.067)	.1850*** (7.048)	-.0193*** (-2.811)	0.2937*** (4.127)
TobinQ	0.0251 (1.172)	-0.0069 (-1.303)	0.0195 (1.138)	-0.0026 (-0.416)
Cashvol	-0.0060 (-0.634)	-0.0078 (-0.855)	0.0015 (0.431)	-0.0078 (-1.078)
Ddep	-3.6096 (-1.196)	2.7313 (1.493)	-1.2270 (-0.669)	1.4608 (1.544)
Age	0.5214** (2.043)	-0.1185 (-0.912)	0.1979* (1.694)	0.0283 (0.289)
Adj-R^2	0.5292	0.7712	0.7338	0.7646
F	9.62***	28.06***	38.90***	26.54***

Note: The dependent variable is short-term asset-liability ratio (SdebtR); ***, **, * represent 1%, 5%, 10% significant levels respectively; regression controls industry and year; brackets use White (1980) Method to adjust the H difference after the hetero-difference.

V. CONCLUSION AND RECOMMENDATIONS

This paper studies the influence of the financial marketization on the capital structure decision of the tax exempted private agriculture enterprises. The empirical results show that financial marketization level has significantly influence on debt level of private enterprises. It shows that due to the financing difficulty of private enterprises in China, private enterprise capital structure decision affected by financing constraints. The study also finds that financial market can find profitability enterprises and better financial condition companies and distribute the credit funds to them. It implies that the development of financial market can improve the allocation efficiency of finance resources in agricultural enterprises. In emerging countries, the financial market can filter high-quality enterprises, through configuring financial resources to the profitable and financial stable enterprises. Financial system plays an important role in improving the quality of the enterprise in the whole market and then promotes economic development.

On the basis of conclusions of this paper, the following policy suggestions are proposed. First, we should keep on improving financial marketization and breaking the monopoly of state-owned banks to alleviate the financing constraints of private agriculture enterprises. Because marketization of the financial industry itself forms a screening mechanism to ensure that the debt financing contract exert incentive function at a lower cost, financial marketization is one of the important ways to solve the agricultural problem. Second, we should reform the state-owned financial enterprises and reduce government intervention and improve the efficiency of the allocation of financial enterprises. Financial market can ensure private agricultural enterprises obtain financial resources fairly.

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