

An Empirical Study on the Impact of Financing Preference of China's Agricultural Listed Companies on Corporate Performance

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Abstract

This paper uses the panel data of China's A-share agricultural listed companies from 2015 to 2019, and from the perspective of financing priority theory, establishes a relevant model to analyze the impact of financing preferences on the performance of agricultural enterprises. Through analysis, it is found that Chinese agricultural listed companies prefer external financing, and especially have a strong preference for equity financing. The equity financing preference of listed agricultural companies in China will lead to irrational corporate capital structure, which is not conducive to improving corporate performance and hindering corporate sustainable development. Therefore, this article suggests that China's agricultural listed companies need to optimize their corporate capital structure and rationally use funds to increase corporate value and enhance the competitiveness of China's agricultural listed companies.

Keywords: *financing preference; corporate performance; capital structure; listed agricultural companies.*

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I. Introduction

Financing preference is an important factor that affects the value of a company. It is not only an important force in determining the cost of capital of an enterprise, but also an important means of corporate governance[1]. Appropriate financing preference is positive for promoting a virtuous circle of corporate cash flow[2]. Corporate financing

preferences reflect the subjective willingness of companies to preferentially choose different financing methods[3]. The main point of the Pecking Order Theory is that the company prefers internal financing first, and dividends are "sticky" [4], so the company will avoid sudden changes in dividends, and generally do not reduce dividends to finance capital expenditures. If

external financing is required, the company will issue the safest securities, that is, to issue debt securities first, then equity securities[5]. If the company's internal cash flow exceeds its investment needs, the excess cash will be used to repay debt rather than repurchase shares. As the demand for external financing increases, the company's selection order of financing tools will be changed from safe debt to risky debt, such as from secured debt to convertible bonds or preferred stocks. Equity financing is the last choice. However, scholars have found that the financing preference of listed companies in China is exactly the opposite of the financing preference order in Pecking Order Theory. Listed companies in China prefer to choose external financing, especially equity financing, and then endogenous financing[6-8]. Listed companies have a strong financing preference. Agricultural listed companies have their own financing characteristics[9]. Do agricultural listed companies have financing preference orders contradicted to the Pecking Order Theory? By studying the financing preferences of agricultural listed companies, it is of great

significance for agricultural listed companies to improve the efficiency of capital operation, optimize the capital structure and increase corporate value.

II. Hypothesis establishment

The production and operation characteristics of agricultural enterprises have the characteristics of heavy assets, and they need to bear the dual risks of the market and the natural environment[10]. The resource allocation of agricultural enterprises needs to give priority to capital investment such as fixed assets. But the agricultural enterprises also need to hold certain liquid assets to respond to the uncertain future risks caused by market and natural disasters, so as to maintain the security of their capital chain and prevent the transmission of financial risks in the industrial chain, which may lead to the formation of agricultural systemic risks. The distinctive characteristics of agricultural enterprises determine that there is a certain degree of instability in the operation of agricultural enterprises[11]. This study collects relevant data of China's agricultural listed companies from 2015 to 2019 and finds that the number one financing channel for China's agricultural listed companies is equity financing, followed by debt financing, and internal financing as is shown in Table 1.

Table 1. Financing channels proportion of agricultural listed companies

Years	Equity financing Ratio	Debt Financing Ratio	Internal Financing Ratio
2015	62.39%	19.88%	17.73%
2016	61.20%	20.27%	18.53%
2017	62.08%	20.21%	17.71%
2018	57.72%	22.61%	19.67%
2019	56.25%	25.95%	17.80%

It can be seen from Table 1 that the proportion of equity financing of listed agricultural companies has been dominant from 2015 to 2019. The proportion of equity financing has dropped from 62.39% in 2015 to 56.25% in 2019, and has fallen by 6.14% in five years. It shows a downward trend, but the proportion is still relatively high. The proportion of debt financing has been increasing year by year over time, from 19.88% in 2015 to 25.95% in 2019, with an increase of 6.07%. The proportion of internal financing fluctuated from 17.73% in 2015 to 17.80% in 2019. It has not changed much, indicating that internal financing has not been valued by agricultural listed companies in China.

At present, China's agricultural listed companies have a strong preference for equity financing, and the proportion of debt financing is increasing year by year, but the proportion of internal financing is too low. The financing preferences of listed agricultural companies in China are contrary to the theory of Pecking Order Theory. According to the theory, company financing will first choose low-risk and low-cost internal financing, and then consider debt financing with relatively low cost, and finally choose the equity financing, which bears the highest potential risks. For the funds obtained by equity financing, the enterprise does not need to repay the loan and the accrued interest, but under this circumstance the new shareholders will share the same profits and growth of the enterprise with the old shareholders, and the cost of equity financing is significantly higher than that of debt financing. Equity financing is easy to decentralize the control of an enterprise, and the instability of control has a certain impact on the normal operation of the enterprise. Different investors have different requirements for business directions and investment returns, which increases the uncertainty of business

operations and thus increases business risks. Therefore, this paper starts with studying the financing preferences of agricultural listed companies and analyzes the impact of equity financing preferences on the performance of agricultural listed companies. The following hypothesis is established: The equity financing preference of agricultural listed companies has negative impact on the company performance.

III. Research design

1. Sample selection

This paper selects the sample data of the agricultural and agricultural manufacturing companies listed on the China Stock Market from 2015 to 2019, and excludes ST and *ST listed companies with special treatment and companies with missing data. A total of 260 sample observations in five years are obtained. The data obtained are from the RESSET financial research database.

2. Variable selection

2.1 Explained variable-company performance

Return on Equity (ROE) is the percentage of net profit to average shareholder's equity. It is the percentage rate of company's after-tax profit divided by net assets. This indicator reflects the level of return on shareholder's equity and is used to measure the company's efficiency of using their own capital. The higher the index value, the higher the return from investment. This indicator can reflect the return on investment of shareholders and is a manifestation of shareholder value maximization. It can be considered that the higher the return on net assets, the higher the investment income that investors will obtain, so the return on net assets can be used to represent the level of company performance.

2.2 Explanatory variable-equity financing preference

China's agricultural listed companies have a strong preference for equity financing, so this paper chooses equity financing preference as an explanatory variable to study the degree of influence of agricultural listed companies' equity financing preference on company performance. There are many ways of equity financing in the capital market, such as public issuance of new stocks (IPO), additional allotment, equity repurchase, capital reserve converted into equity and so on. The equity financing preference refers to the percentage of the company's total equity financing to all financing means. Although equity financing does not require repayment of the loan and interest on time, it will decentralize corporate control and the company's profits will be shared by new and existing shareholders. This article uses Total equity and capital reserve to express the amount of equity financing, the formula is as follows:

$$EQ_t = SC_t + CPR_t \quad (1)$$

In the formula, EQ_t represents the amount of equity financing of the company in the t period; SC_t represents the total equity of the company in the t period; CPR_t represents the capital reserve of the company in the t period.

Debt financing refers to the financing of funds through bank or non-bank financial institution loans or issuance of bonds. Debt financing can be further subdivided into two modes: direct debt financing and indirect debt financing. Generally speaking, companies that have higher expected returns, can afford higher financing costs, and have higher operating risks, and require lower financing risks, tend to choose equity financing; while for traditional companies, operating risks are relatively small and

expected. The income is also small, generally choose the debt financing method with small financing cost for financing. The total amount of corporate debt financing consists of long-term and short-term loans and commercial credit balances. The formula for total debt financing in this article is as follows:

$$DF_t = STB_t + LTB_t + CS_t \quad (2)$$

In the formula, DF_t refers to the debt financing balance of the company in the t period; STB_t refers to the short-term loan of the company in the t period; LTB_t refers to the long-term loan of the company in the t period; CS_t refers to the commercial credit balance of the company in the t period.

The sources of funds for enterprises mainly include internal financing and external financing. The internal financing mainly consists of retained earnings, depreciation and amortization. Internal financing refers to the process by which an enterprise continuously transforms its own funds into investment. Internal financing has the characteristics of primitiveness, independence, low cost and risk resistance to the capital formation of enterprises, and it is an indispensable part of the survival and development of enterprises. According to the pecking order theory, internal financing is the preferred financing method for enterprises and an important source of corporate funds. The internal financing model established in this article is as follows:

$$EF_t = REP_t + DAE_t \quad (3)$$

In the formula, EF_t refers to the amount of internal financing of the company in the t period; REP_t refers to the retained earnings of the company in the t period; DAE_t refers to the depreciation and amortization of the company in the t period.

In summary, the equity financing preference (EP) refers to the percentage of the company's equity financing to the total financing. This paper uses the following calculation formula to calculate the percentage of the company's equity financing to the total financing:

$$EP = EQ / (EQ + DF + EF) \quad (4)$$

3. Model verification

To verify the influence of equity financing preference of listed Chinese agricultural companies on company performance, the following model is established:

$$ROE = \alpha + \beta EP + \varepsilon \quad (5)$$

In the formula, ROE represents the return on equity, which is the dependent variable; EP is the equity financing preference, which is the independent variable; ε is the residual error, which represents random error; β is the EP coefficient, and β is a positive

number, indicating that EP positively affects ROE. β is a negative number, indicating that EP has a negative effect on ROE and has a negative effect.

IV. Empirical analysis

1. Descriptive statistical analysis

Descriptive statistics refers to various activities that use tabulation and classification, graphics, and calculation of summary data to describe data characteristics. Descriptive statistical analysis requires statistical description of the data related to all variables of the survey population, which mainly includes frequency analysis, central tendency analysis, dispersion analysis, distribution and some basic statistical graphics. In this paper, the results obtained by calculation of spss 24.0 are Table 2:

Table 2 Descriptive statistics

	N	Min.	Max.	Mean.	Std.Dev.
ROE	260	-77.16%	51.56%	7.11%	12.86%
EQ	260	16.2997	3,356.95	353.3162	492.271
DF	260	0.0004	938.6313	133.8039	161.8574
EF	260	-977.9166	1,365.67	109.4393	196.0294
EP	260	-17.15%	412.07%	59.77%	34.49%
Valid N (listwise)	260				

It can be seen from Table 2 that the average return on equity (ROE) of China's agricultural listed companies from 2015 to 2019 is 7.16%, the maximum is 51.56%, the minimum is -77.16%, and the standard deviation is 12.86%. It can be seen that the profitability of listed agricultural companies in China fluctuates greatly and is unstable; the average value of equity financing (EQ)

of listed agricultural companies in the past five years is 35.33162 billion yuan, the highest point is 335.694 billion yuan, and the lowest point is 1.62997 billion yuan. The average value of debt financing (DF) of listed agricultural companies in the past five years is about 13.380 billion yuan, the highest point is 93.863 billion yuan, the lowest point is 0.0004 billion yuan, and the

standard deviation is 161.8574; China's agricultural listed companies The average value of internal financing (EF) in the past five years is 19.60294 billion yuan, the highest point is 136.56271 billion yuan, the lowest point is -97.79166 billion yuan, and the standard deviation is 196.0294. Through descriptive statistics, we know that equity financing fluctuates the most, indicating that corporate financing methods prefer equity financing methods.

2. Correlation test

Pearson correlation is an analysis that measures the degree of correlation between two variables, and the pearson correlation coefficient is obtained. This paper uses the Pearson correlation test to verify the correlation between the variables studied in this paper. The results are shown in Table 3.

Table 3 Pearson Correlation coefficient

	ROE	EQ	DE	EF	EP
ROE	1	0.171**	0.128*	0.301**	-0.353**
EQ	0.171**	1	0.639**	0.676**	0.103
DF	0.128*	0.639**	1	0.648**	-0.156*
EF	0.301**	0.676**	0.648**	1	-0.177**
EP	-0.353**	0.103	-0.156*	-0.177**	1

**Correlation is significant at the 0.01 level (bilateral). *Correlation is significant at the 0.05 level(bilateral).

It can be seen from Table 3 that the correlation coefficient between the return on equity (ROE) and the equity financing preference (EP) is -0.353, and there is a significant negative correlation at the 1% level, which fully illustrates there is a significant negative relationship between the return on net assets and the equity financing preference. It can be seen from Table 3 that the correlation coefficient between the return on equity (ROE) and each variable is less than 0.5, and each variable will not

have a serious impact on the regression result. The regression analysis can be directly performed without considering multicollinearity.

3. Regression analysis

According to the data of return on net assets and the amount of equity financing, the regression analysis of formula (5) is carried out, and the analysis results are shown in Table 4.

Table4 The summary of the model

Model (1)	R	R ²	Adjusted R ²	DW
	0.353a	0.125	0.121	2.033

According to the analysis of the relevant data in Table 4, the multi-correlation coefficient of the regression model of the influence of equity financing preference on

company performance is 0.353, indicating that the equity financing preference (EP) of agricultural listed companies is negatively correlated with the return on equity (ROE).

The R² value of the model is 0.125, indicating that the coefficients in the model have missing factors and fail to enter the regression equation. Adjusted R² is 0.121, and it indicates that the variation that can be explained by the regression equation accounts for 12.1% of the total variation. The reason for this is that there are many

factors that affect the return on equity of listed agricultural companies. This study only considers the impact of equity financing on the return on net assets. The DW value of the model is 2.033, which is close to 2, indicating that the model does not have first-order autocorrelation.

Table 5 model (1) one-way analysis of variance

	Sum of squares	degree of freedom	mean-square value	F	Sig.
regression analysis	5342.079	1	5342.079	36.745	0.000b
residual analysis	37508.423	258	145.381		
Total	42850.502	259			

Through the analysis of the relevant results in Table 5, the F statistic value is 36.745, and the P value of the F statistic value is 0.000, which is less than the significance level of 0.01 the significance test is passed.

It shows that the explanatory variables in the model have a significant impact on the explained variables. The overall effect of the regression equation is significant.

Table 6 Model (1) regression coefficient

Model (1)	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Standard Error			
(Constant)	14.987	1.498		10.002	0.000
EP	-0.132	0.22	-0.353	-6.062	0.000

According to the data in Table 6, the P value corresponding to the equity financing preference of agricultural listed companies is 0.000, which is lower than the significance level of 0.01, and the significance test is passed. The results show that the equity financing preference of agricultural listed companies has a significant negative impact on the company's return on equity. From this, the regression equation is:

$$ROE = 14.987 - 0.132EP + \epsilon(6)$$

It can be seen from formula (6) that the corresponding coefficient of equity financing preference is -0.132, which means that when the equity financing preference of one unit is changed, then the return on equity will change negatively to 0.132. Specific analysis shows that the equity financing preference (EP) of listed agricultural companies has a strong negative impact on corporate performance, but the result of R² is not significant. It shows that agricultural listed companies have a strong preference for equity financing, which has a

certain negative impact on corporate management and capital structure, and has a negative effect on corporate performance.

4. Case analysis

In order to demonstrate the correctness of the above analysis through actual cases, this paper selects three representative agricultural listed companies in the IPO year,

one year before the IPO and three years after the IPO for actual analysis (t in Table 7 represents the year, such as IPO year is expressed by IPO_t, and so on). The three representative agricultural listed companies selected in this article are: Xinjiang Korla Pear Company Limited, Xinjiang Guannong Fruit & Antler Group, and Shandong Denghai Seeds. The specific analysis results are shown in Table 7:

Table 7 Comparison of financial performance before and after the initial public offering of the three listed companies (unit: %)

Company name	Time	Return on equity ratio	Return on total assets ratio	Operating profit ratio
Xinjiang Korla Pear Company Limited	IPO _{t-1}	14.7521	10.3962	28.9898
	IPO _t	6.8021	6.3814	27.6014
	IPO _{t+1}	6.6118	5.0194	23.896
	IPO _{t+2}	3.3372	2.428	23.5003
	IPO _{t+3}	0.166	0.0849	7.6037
Xinjiang Guannong Fruit & Antler Group	IPO _{t-1}	15.4697	10.1607	26.5557
	IPO _t	8.003	8.3883	21.0512
	IPO _{t+1}	3.3455	0.659	-0.4976
	IPO _{t+2}	1.492	1.4659	5.0315
	IPO _{t+3}	-9.0694	-3.4077	-11.6216
Shandong Denghai Seeds	IPO _{t-1}	32.289	19.1042	27.6152
	IPO _t	12.9562	13.9328	21.6977
	IPO _{t+1}	0.9331	2.6275	7.9501
	IPO _{t+2}	1.1433	4.1427	12.1098
	IPO _{t+3}	0.3915	5.7607	12.5794

Table 7 shows a summary of the relevant financial indicators of agricultural listed companies before and after the IPO. In order to reflect the performance of the sample companies more accurately, this paper uses three indicators of return on net assets,

return on total assets, and operating profit rate to make evaluations. From the overall situation of the sample companies, the company's performance after the IPO has a greater downward trend than before. Through the analysis, it can be seen that although the company obtains more

available funds through equity financing, it has a strong negative effect on the company's profitability. On the whole, the company's profitability in the year of IPO and the year before it is relatively good. After the IPO, the company's return on net assets has shown a downward trend year by year, which means that the company's equity financing preference will reduce the company's performance. For example, Xinjiang Guannong Fruit & Antler Group, since its IPO on May 26, 2003, the company's return on net assets was 15.4697%, the return on total assets was 10.1607%, and the operating profit rate was 26.5557%. However, the company's return on net assets in the year of the IPO was 8.003%, the return on total assets was 8.3883%, and the operating profit rate was 21.0512%, which was a significant drop from the previous year of the IPO. In Shandong Denghai Seeds, the return on net assets in the year before the IPO was 32.289%, the return on net assets in the IPO year was 12.9562%, and the return on net assets in the year after the IPO was 0.9331%. The company's profitability continued to decline. The profitability levels of other companies in the sample companies have also been declining year by year since the IPO last year, and the overall performance of the companies has continued to decline.

V. Conclusions and suggestions

1. Conclusion

According to the pecking order theory, the company's financing should give priority to internal financing, followed by external financing. However, according to the relevant analysis in this study, it can be seen that China's agricultural listed companies have a strong preference for external financing, especially equity financing. Excessive dependence on equity financing will have a greater negative impact on company performance. Chinese listed

companies generally show a downward trend in corporate performance before and after IPO, and various profitability indicators were not as good as before IPO. Excessive reliance on equity financing makes the capital structure of agricultural listed companies gradually unreasonable, their ability to continue operations is challenged, and the agency problem becomes prominent[12]. At the same time, equity financing will decentralize the control of the company, intensify the conflict between shareholders and the management, and create a conflict between the shareholders' high return requirements and the continuous operation of the company[13]. The preference for equity financing of listed agricultural companies in China is relatively high, which is not conducive to the continuous improvement of business performance.

2. Suggestions

A single financing method based on equity financing will result in a single corporate financing structure, imperfect restraint mechanisms and defects in governance functions, and cannot enjoy the benefits of debt financing such as incentive mechanisms and information transmission functions, and cannot effectively reduce equity agency cost, which is not conducive to alleviating problems such as insider control that severely restrict the healthy development of listed companies[14]. Therefore, listed companies should not stick to equity financing methods, but should strive to develop multiple financing channels, give full play to their diversified financing advantages, improve the efficiency of corporate funds and capital use, and enable the company to achieve sustainable, stable and long-term development. This is of great significance to companies, shareholders and managers. Based on this, this paper puts forward the following suggestions.

2.1 Optimize corporate capital structure and improve governance structure

The listed companies should take a variety of financing methods and should not be confined to equity financing. The optimization of enterprise capital structure refers to the process of rationalizing the capital structure of the enterprise through the adjustment of the capital structure of the enterprise and achieving the set goal. Implementing strategic management of capital structure optimization for enterprises, enabling them to establish a modern enterprise system with clear property rights, clear division of powers and responsibilities, and scientific management in the process of capital structure optimization, and optimize the corporate governance structure formed on the basis of clear property rights. The success or failure of the reform is of great significance. For agricultural listed companies, in the process of optimizing the capital structure, a reasonable corporate governance structure that enables both the restraint and incentive mechanisms to function effectively will be established to promote the enterprise to maximize corporate value.

2.2 Develop long-term institutional investors

The government should deepen the reform of the capital market, develop long-term performance-oriented institutional investors, and rethink the concept of value investment; meanwhile the related authorities should further promote the full disclosure of information, comprehensively purify the market ecology, and build an honest and law-abiding capital market. It is conducive to using market forces to improve the quality of listed agricultural companies, and promote high-quality economic development.

2.3 Strengthen the supervisory function of the China Securities Regulatory Commission and establish sound capital market rules.

Enterprises alone bear the risk of listing and financing, and the government only acts as a regulator. The company can only rely on its own credit and decide whether to go public, issue stocks, or issue additional stocks and allot shares after fully considering its own returns and risks and capital market conditions to. Related authorities should improve the performance evaluation system, improve the financial accounting system, and improve the index system for corporate performance evaluation. The equity financing preferences of agricultural listed companies can be weakened through government policy guidance. Finally, it is necessary to clarify the responsibilities of the company's management, regulate the behavior of intermediaries, and establish a series of related systems for related transactions, refinancing prices, and restrictions on the use of raised funds.

2.4 Appropriate and steady development of the bond market

The development and improvement of the corporate bond market should be promoted by expanding the scale of corporate bond issuance, reducing unnecessary administrative intervention in the operation of the corporate bond market, and improving the legal system, so as to promote the balanced development of the capital market and optimize the financing structure of agricultural listed companies.

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