

# *A Study on Financial Risk and Maturity Structure of Investment and Financing of Prefabricated Dishes Enterprises*

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**Abstract:** Financial risk and maturity structure of investment and financing are key influencing factors for the robust development of enterprises. The paper takes prefabricated dishes concept listed companies in the A-share market as a sample to systematically explore the financial risks and maturity structure of investment and financing. It is found that (1) the fund structure is relatively stable, financial leverage and capital leverage rise, and the overall financial risk increases; (2) the proportion of short-term financial liabilities rises sharply, the short-term financial risk is great, and the current debt ratio declines, and debt paying ability is weakened; (3) the degree of investment and financing maturity mismatch continues to decline, and the maturity mismatch problem still exists in some enterprises, and the pressure of debt paying, lending risk and operating risk increase with the degree of mismatch. Based on this, this article proposes relevant countermeasures and suggestions.

## 1. Introduction

Prefabricated dishes are finished or semi-finished dishes formed by a series of pre-processing steps such as cutting, mixing, marinating, shaping and so on, with agricultural, livestock, poultry and aquatic products as raw materials. The prefabricated dishes industry covers the entire process from the field to the dining table, linking numerous industry categories such as the food industry, catering industry, and rural industry. It has distinctive characteristics of long industrial chain, involving many subjects and wide radiation scope.

With the profound impact of the COVID-19 on the diet and consumption habits of residents, China's prefabricated dishes industry is developing rapidly. The scale of the national prefabricated dishes market was approximately 345.9 billion yuan in 2021, exceeded 410 billion yuan in 2022. As a "new big hot industry", all walks of life are paying more attention to and participating in the industry. Many local governments have introduced supportive policies and held a series of industry development summits. At the same time, a large amount of private fund has also poured into this industry. According to statistics, the financing amount of the prefabricated dishes industry in 2021

has accounted for about 32% of the catering industry. More and more enterprises are taking prefabricated dishes as a direction of transformation and upgrading.

Enterprise operation status is the foundation of the industry's stability and development. Financial risk refers to the possibility of loss of solvency and the variability of enterprise profit due to borrowing funds. Now, what is the status of financial risk and maturity structure of prefabricated dishes enterprises? What are their main problems and pain points? How to break through? This paper takes 35 listed companies in prefabricated dishes concept stocks sector of East Money Network as of 25 July 2022 as a sample, and selects the financial data of 2019-2021 from the CSMAR. Based on this, this paper first conducts a statistical analysis of financial risks from two aspects: overall funding structure and overall financial risk, and working funding structure and short-term financial risk. Then, starting from the term of investment and financing funds, it conducts an analysis of term mismatch.

## 2. Statistical analysis of financial risk

### 2.1 Total funding structure and overall financial risk analysis

In this paper, financial leverage is calculated by dividing EBIT by profit before tax, and capital leverage is calculated by dividing total fund by own fund<sup>[1]</sup>. And the indicators reflect the size of financial risk of the sample enterprises. The specific calculation formula of the indicators is shown in Table 1.

Table 1: Calculation formula for indicators<sup>[2]</sup>

Indicator name	formula
Proportion of borrowed funds	= (Short-term loans + Dividends payable + Interest payable + Non-current liabilities due within one year + Long-term loans + Bonds payable + Long-term payables) / Total funds
Proportion of own funds	= Own funds/total funds = Owners' equity/total funds
Financial leverage	= EBIT/total profit
Capital leverage	= Total funds/own funds = Total funds/owners' equity

Table 2: Total Funding Structure and Overall Financial Risk, 2019-2021

Project	Proportion of borrowed funds (Unit: per cent)			Proportion of own funds (Unit: per cent)			Financial leverage (Unit: times)			Capital leverage (Unit: times)		
	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
Sample population	33.81	38.05	46.27	66.19	61.95	53.73	1.11	1.06	1.19	1.51	1.61	1.81
Max values	54.64	59.68	58.90	100.00	100.00	99.79	4.43	3.72	22.26	2.20	2.48	2.43
Min value	0.00	0.00	0.21	45.36	40.32	41.10	-3.78	0.46	-19.59	1.00	1.00	1.00

From Table 2, it can be seen that the proportion of borrowed funds has been increasing year by year, while the proportion of own funds has decreased. The total fund structure is relatively stable, both financial leverage and capital leverage are showing an upward trend, and the overall financial risk rises. In 2021, the proportion of borrowed funds is 46.27%, 12.46 percentage points higher than

in 2019; financial leverage is 1.19 times, 0.08 times higher than in 2019 0.08 times; and capital leverage is 1.81 times, up 0.3 times from 2019.

From Figure 1, 22% of the enterprises' borrowed funds accounted for more than 50%, which has a certain degree of financial risk. In terms of financial leverage, there is a significant difference in financial leverage among different enterprises. 3% of enterprises have negative financial leverage. According to the data, it can be seen that the total profit of the enterprise is negative, indicating that EBIT obtained by the enterprise is not enough to repay the interest expense. The enterprise may face the pressure of interest repayment.

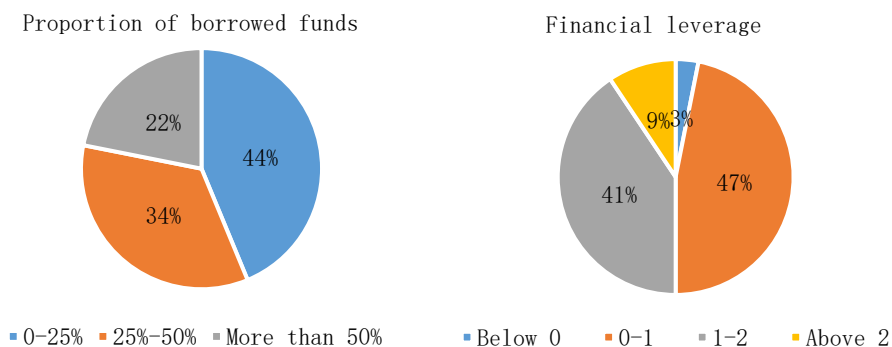


Figure 1: The proportion of borrowed funds and financial leverage in 2021

In conclusion, the total capital structure of the sample enterprises is relatively stable, financial leverage and capital leverage are on an upward trend, the overall financial risk has increased. The financial risk varies from enterprise to enterprise. Some enterprises have high financial leverage and higher financial risk.

## 2.2 Working fund structure and short-term financial risk analysis

In this paper, the proportion of short-term financial liabilities is calculated by dividing short-term financial liabilities by working fund. The proportion of short-term financial liabilities reflects the size of short-term financial risk of the sample firms<sup>[3]</sup>. The formula of the indicator is shown in Table 3.

Table 3: Calculation formula for indicators<sup>[4]</sup>

Indicator name	formula
Proportion of short-term financial liabilities	=Short-term financial liabilities/working capital
Proportion of working fund	= Working capital/working fund
Current ratio of short-term financial liabilities	= Working fund/short-term financial liabilities

From Table 4, it can be seen that the proportion of short-term financial liabilities rises sharply, the current ratio of short-term financial liabilities decreases slightly, and short-term financial risks increases. In 2021, the proportion of short-term financial liabilities is 1230.23%, an increase of 2532 percentage points compared to 2019. The short-term financial risk is extremely high. The working capital accounts for -1130.23% and there is a serious shortage of funds. The current ratio of short-term financial liabilities is 0.08 times, a decrease of 0.29 times compared to 2020. The ability

of enterprises to repay short-term debts has weakened.

Table 4: Working fund structure and short-term financial risk, 2019-2021

Sports event	Proportion of short-term financial liabilities (Unit: per cent)			Proportion of working fund (Unit: per cent)			Current ratio of short-term financial liabilities (Unit: times)		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Sample population	-1301.71	257.52	1230.23	1401.71	167.52	-1130.23	-0.08	0.37	0.08
max values	954.58	225.28	666.62	1203.27	4086.48	1005.46	27202.75	13256.57	420.89
min value	-1103.27	-3986.48	-905.45	-854.58	-125.28	-566.62	-1.20	-1.19	-1.66

From Figure 2, it can be seen that in terms of the proportion of short-term financial liabilities, 13% are in the range of more than 200%, which means that some enterprises have higher short-term financial risks. In addition, 31% of the enterprises have a negative proportion of short-term financial liabilities, which means that the enterprises' working fund is negative, and the solvency capacity is not good. There is a significant difference in debt to current ratio among different enterprises. 31% of enterprises have a current ratio of more than 2 times that have stronger solvency. But there are also 31% of the enterprise's working fund is negative, resulting in a negative current ratio.

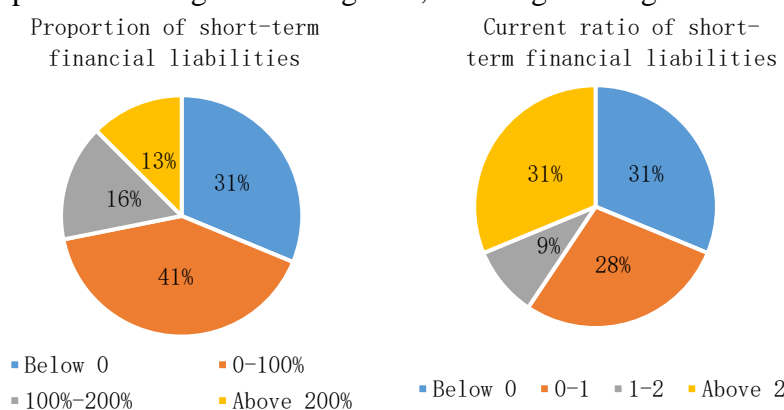


Figure 2: Distribution of short-term financial liabilities and current ratio in 2021

In conclusion, the proportion of short-term financial liabilities of the sample enterprises has risen sharply, the proportion of working capital has declined sharply, and the current ratio of short-term financial liabilities has declined. The short-term financial risk is extremely high. These enterprises' ability to repay debts has weakened.

### 3. Statistical analysis of maturity structure of investment and financing

This paper uses the degree of mismatch in investment and financing terms to analyze the maturity structure. Zhong Kai constructed the SFLI index for the first time in his research [5] to measure the degree of mismatch in investment and financing terms. This paper draws inspiration from Zhong Kai's research and constructs the related indicators to measure the degree of mismatch. Generally speaking, a negative mismatch indicates the existence of maturity mismatch, and the larger the absolute value of the negative value, the more serious the degree of mismatch. The calculation method of the indicator is: "SFLI" = [cash expenditure on investment activities such as the purchase and construction of fixed assets and intangible assets - (increase in long-term loans + increase in equity + net cash flow from operating activities + cash inflow from the sale of fixed assets and intangible assets)] / total assets at the beginning of the period.

From Table 5, it can be seen that the degree of maturity mismatch of investment and financing continues to decrease, the pressure of debt repayment decreases, and the risk of renewal decreases. In 2021, the degree is 0.029, and in general these enterprises have less maturity mismatch problems and lower business risks. From Table 5, it can be seen that in terms of the mismatch degree among the sample enterprises in 2021, 40% are in the range of less than 0. Some companies still have maturity mismatch problems, which means they may face debt repayment pressure and subsequent borrowing risks, and the operational risk is increasing. When the mismatch situation becomes more severe, the company's investment projects cannot generate sufficient cash flow to repay maturing debts, leading to a broken capital chain and even bankruptcy.

Table 5: Degree of maturity mismatch of investment and financing, 2019-2021

Sports event	SFLI			Mismatched allocation of investment and financing terms among sample enterprises	
	2019	2020	2021	2021	Enterprise distribution
Sample population	-0.027	-0.021	0.029	>0.1	25%
Max values	0.332	0.250	0.413	0.1-0	35%
Min value	-0.398	-0.841	-0.297	0—0.1	31%
				<-0.1	9%

In summary, degree of maturity mismatch of investment and financing continues to decline. But some enterprises still face the issue of term mismatch and are under certain debt repayment pressure. Subsequent borrowing and operational risks will continue to increase with the degree of mismatch.

## 4. Conclusions and Implications

### 4.1 Main findings

The paper conducts comprehensive statistics and analysis on the financial data of prefabricated dishes concept listed companies from 2019 to 2021. This paper finds that: the efficiency of the use of funds of prefabricated dishes enterprises is unsatisfactory, the financial risk is large, and some enterprises have the problem of maturity mismatch of investment and financing. The main research conclusions are as follows:

In terms of overall financial risk, the total funding structure is relatively stable, financial leverage and capital leverage are on an upward trend, and overall financial risk has increased.

In terms of short-term financial risk, the proportion of short-term financial liabilities has risen sharply, the proportion of working capital has declined. The short-term financial risk is extremely high.

In terms of maturity structure of investment and financing, the degree of maturity mismatch has continued to decline, and some enterprises still have mismatch problems. Debt repayment pressure and subsequent borrowing risks continue to increase with the degree of mismatch.

### 4.2 Research Implications

For enterprises, when facing opportunities in the prefabricated dishes market, they should correct their motivation and attitude to enter the market, and truly base themselves on the demand for high-quality development. When facing the problem of increased financial risks, first, enterprises should increase the utilization and revitalization of funds, vigorously carry out product innovation, and further optimize the processes. Secondly, enterprises should increase sales channel construction and carry out online and offline sales network construction. Finally, enterprises should reasonably layout their own asset structure, optimize financing structure and methods, and make risk control an

important part of financial management.

For the government, it is imperative to do a good job in the overall planning and layout of the prefabricated dishes industry, establish a good business environment. At the same time, the government should increase financial support for this industry and promote the construction of industry guidance funds. The government should guide and encourage financial institutions to support prefabricated dishes industry and services to create a good financing environment for enterprise development.

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