

Financial Risk Evaluation of Real Estate Enterprises under Supply-Side Reform

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Abstract: In recent years, driven by supply-side reform and deleveraging and other macro policies, real estate enterprises are faced with great financial risks due to their low capital turnover, significant debt ratio and unbalanced cash flow. This paper selects 65 A-share listed real estate companies as samples, constructs a comprehensive evaluation model of real estate enterprises' financial risks based on factor analysis method, and expects to evaluate and prevent the financial risks of real estate enterprises from both theoretical and practical perspectives, so as to provide some guidance and suggestions for the healthy and orderly development of real estate enterprises.

1. Introduction

Document No. 18 of The State Council clearly points out that "the real estate industry has become the pillar industry of China's national economy," which shows that real estate enterprises have played an important role in driving economic development. According to the 2020 China Statistical Yearbook, the number of real estate companies in China has reached nearly 100,000, and the number is increasing every year, and the market has reached a saturation state. In recent years, many macro-control policies have been introduced in the real estate sector. In 2015, the supply-side reform put forward the target requirements of "destocking and deleveraging "; in 2018, policies such as purchase and loan restrictions were adopted across the country to prevent bubbles in first - and second-tier cities due to rapid housing price growth. In the 2020 annual government work report, the basic residential function of houses is emphasized again. The formulation and implementation of these policies are directly related to the operation and development of real estate companies.

Facing the severe situation of macro-control in our country and the changes of social investment environment, financial risk is a common problem in the real estate industry. The asset-liability ratio of real estate enterprises has been rising year by year, reaching 82.7 percent by the end of 2021, far exceeding the "safety line". Recent data from the central bank show that 80% of China's real estate companies purchase land through bank loans, while real estate enterprises will also issue stocks, bonds and other financial instruments to attract funds. If there is a break in the capital chain, the credit risk will further increase, causing a systemic financial crisis, and even posing a threat to the

macro economy of the whole country. In addition, from the perspective of capital recovery, the vacancy rate of urban housing in China showed an increasing trend year by year from 2017 to 2021.

Therefore, it is necessary to establish a set of financial risk evaluation system suitable for the real estate industry, to provide investors with scientific and reliable decision-making basis, so as to improve the ability of real estate enterprises to resist risks and promote their healthy and sustainable development.

2. Review of Literature

2.1. The Definition of Financial Risk of Real Estate Enterprise

The definition of the concept of financial risk of real estate enterprises can be summarized in the following aspects: first, based on the various capital activities of real estate enterprises, Chen Zhicbin [1] defined the financial risk of listed real estate companies as the risk in capital activities, including capital investment and capital raising; Second, it is defined according to the main business characteristics of real estate development companies. Wang Lingling [2] pointed out that the risks faced by real estate development enterprises mainly include capital realization risk, capital shortage risk, unreasonable capital structure, investment risk, etc. Zhao Hongyan [3] pointed out that the financial risks of real estate enterprises are mainly caused by their long operation cycle, the immobility of their products, the high debt characteristics of capital operation and other reasons.

2.2. Financial Risk Evaluation Model

Many scholars have built models from different dimensions to measure financial risks. Foreign scholar William Beaver [4] made pioneering research results in financial risk early warning. He selected 14 representative real estate financial early warning indicators and believed that the best variable of enterprise financial crisis state was the ratio of cash flow to total liabilities, and its prediction accuracy exceeded 87%. Subsequently, Olson and Wu [5] proposed that the real estate investment risk assessment model based on support vector machine could solve the classification and regression problems and improve the risk prediction ability of real estate investment. Olson was the first to apply the Logistic model to the financial crisis prediction of real estate enterprises, and achieved good results.

Compared with foreign countries, Chinese scholars Wu Shinong and Lu Xianyi [6] used multiple linear regression analysis, Fisher linear judgment analysis and other methods to conduct empirical analysis on 70 companies in financial crisis and 70 sample matching companies, and gave them financial early warning. CAI et al [7] proposed that although the Z-score model can well identify financial risks, its accuracy depends on whether the market in which the company is located is sound. Chinese scholars Meng Zhiqing et al [8] used the CVaR model to measure the risk of real estate investment, conducted an optimal risk portfolio analysis, and finally obtained the optimal composition proportion of real estate portfolio.

To sum up, domestic and foreign scholars' research on financial risk mainly focuses on the concept definition and the establishment of financial risk early warning model, but there are few empirical studies and the lack of comprehensive evaluation indicators of influencing factors. Therefore, based on the above research background, this paper chooses the factor analysis method to conduct empirical research on the cases of 65 listed real estate companies, deduces the comprehensive financial risk evaluation model suitable for real estate companies, and hopes to use this model to provide reference for the financial risk management of real estate companies.

3. Research and Design of Financial Risk Evaluation System for Real Estate Enterprises

3.1. Introduction of Research Methods and Reasons

By reading references and combining the characteristics of the real estate industry, this paper finally chooses the factor analysis evaluation model for research. Factor analysis is an analysis method that reduces the dependence between the original correlation matrix by reducing the dimension and explains the overall complex variable factors with a few factors [9].

There are three main reasons for selecting the factor analysis method: first, this paper selects a total of 14 financial indicators representing the level of capital source, core profit, sustainable development ability and operation of the enterprise. Due to the large number of indicators, the use of factor analysis method can maximize the retention of information in the indicators, and at the same time, it can simplify the indicators to achieve dimensionality reduction of the data; Second, the financial indicators of the real estate enterprises studied in this paper meet the assumptions of the factor analysis model; Third, compared with other financial risk early warning models, the factor analysis model has higher accuracy and strong applicability, which is conducive to overcoming the limitation of a single model.

3.2. Selection of Evaluation Indexes and Design Variables

This paper starts from the principle of index composition, referring to the financial index evaluation system in the "State-owned Capital Performance Evaluation Criteria" jointly issued by the Ministry of Finance and other four ministries and commissions, selects the indicators that can reflect the financial situation of real estate enterprises[10].

Different from traditional research, this paper refers to the theoretical framework of enterprise financial condition quality analysis to divide the level of financial risk [11]. In terms of core assets, the matching degree of a company's capital structure and capital source structure will change due to the difference of the company's life cycle and external environment. The core profits of real estate companies come from the implementation of their business strategies, and the core profits of enterprises must be maintained in the continuous competition. Therefore, the risk at the core level of the enterprise is further divided into the risk at the level of capital source, the risk at the level of core profit, the risk at the level of sustainable development and the risk at the level of operation.

3.3. Explanatory Variables

3.3.1. Risks at the Level of Funding Sources

We choose to use the risk of capital source to measure the debt paying ability of real estate enterprises, and adjust X2 quick ratio, X3 cash ratio and X4 asset-liability ratio: the prepaid accounts of real estate enterprises are different from the debts generated by ordinary enterprises, and the calculation of asset-liability ratio and other indicators of general companies will overestimate the leverage level of real estate enterprises. This paper chooses to deduct the accounts received in advance from the numerator and denominator of the formula, which can more accurately reflect the financial leverage level of real estate companies [12].

3.3.2. Risk at the Core Profit Level

This paper chooses the risk at the core profit level to measure the profitability of real estate enterprises, and selects two representative indicators, namely, return on total assets of X8 and operating gross profit margin of X9, to measure the profitability of real estate enterprises. The

stronger the ability of real estate enterprises to create core profits is, the lower the risk of core profits is. In the calculation of EBIT in X8 index, adjustments are made to exclude items such as net investment gains and losses and fair value changes.

3.3.3. Risks at the Sustainable Development Level

This paper chooses the risk of sustainable development to measure its growth ability, and selects representative X10 main business income growth rate, X11 net profit growth rate and X12 net cash flow growth rate to measure the growth ability of real estate enterprises.

3.3.4. Operational Risk

Different from the traditional operational risk indicators, this paper chooses X13 receivables turnover and X14 sales recovery rate, because the real estate industry is different from the ordinary industry, most of them are receivables in advance, and this index uses the current scale of receivables to measure the remaining inventory.

The X14 sales recovery rate index is added: due to the special characteristics of the real estate industry, certain receivables will be formed. Therefore, the sales recovery rate can better reflect the cash received from the sales of houses and reflect the operating capacity of real estate enterprises.

To sum up, based on the principle of quantification, a total of 14 financial evaluation indicators covering the four possible levels of capital source, core profit, sustainable development and operational risk of real estate enterprises are selected. The calculation formula is shown in Table 1.

3.4. Data Source and Data Processing

In order to facilitate the acquisition of financial data and the comparison of research results, this paper selects the financial data of A-share listed real estate companies as research samples, and defines ST companies in Shanghai and Shenzhen stock markets as companies with financial crisis, while "non-ST" refers to enterprises with good financial conditions.

Based on the above principles, this paper takes A-share listed real estate companies from 2017 to 2021 as the research object, selects 65 of 126 listed real estate companies as samples based on the integrity and availability of data, conducts empirical analysis on them, and constructs A financial risk evaluation system reflecting the comprehensive ability of enterprises. The financial indicators in this paper are mainly calculated by factor analysis using SPSS.26 software.

4. Financial Risk Evaluation and Analysis of Real Estate Enterprises

4.1. Feasibility Test of Factor Analysis

Firstly, KMO and Bartlett's test of sphericity are used to test the original data to determine whether the factor analysis method is applicable to the data. The higher the KMO value tends to 1, the higher the correlation degree among variables is, the more suitable for factor analysis is. The more the KMO value tends to 0, the lower the correlation between the variables is, and the less suitable for factor analysis [13].

The correlation coefficient variables of 14 financial indicators were measured by KMO test, and the index values of the original variables were processed by SPSS software, and the following results were obtained. The variable index KMO measure value is 0.632, greater than 0.6, indicating that the factor analysis can be continued; The spherical test showed $P < 0.05$, indicating significant differences among the indicators, indicating that the data of each indicator in this study can be used for factor analysis. The test results are shown in Table 2.

Table 1: Financial risk evaluation index system

Type of indicator		Name of indicator	Formula of calculation
Risk assessment indicators at the level of capital sources	X1	Net debt ratio	$(\text{interest-bearing liabilities} - \text{monetary funds}) / \text{owners' equity}$
	X2	Adjusted quick ratio	$(\text{Current assets} - \text{Inventory}) / (\text{Current liabilities} - \text{Accounts received in advance})$
	X3	Adjusted cash ratio	$(\text{Cash} + \text{cash equivalents}) / (\text{Current liabilities} - \text{Accounts in advance})$
	X4	Adjusted asset-liability ratio	$(\text{Total liabilities} - \text{Accounts in advance}) / (\text{Total assets} - \text{accounts in advance})$
	X5	Short-term debt service rate during the period	$\text{Operating inflows} / (\text{current liabilities} - \text{Accounts received in advance})$
	X6	Cash guarantee ratio of short-term liabilities	$\text{Net cash flow from operating activities} / (\text{current liabilities} + \text{long-term liabilities})$
	X7	Interest-bearing debt ratio	$\text{Total interest-bearing liabilities} / \text{total liabilities}$
Risk evaluation index at the level of core profit	X8	Return on total assets	$\text{EBIT} / \text{average total assets}$
	X9	Gross operating profit margin	$(\text{Operating income} - \text{operating cost}) / \text{operating income}$
Risk assessment indicators at the level of sustainable development	X10	Main business income growth rate	$\text{Growth of main business income} / \text{Total main business income of last year}$
	X11	Net profit growth rate	$\text{Increase in current year's net profit} / \text{net profit at the beginning of the year}$
	X12	Net cash flow growth rate	$\text{Increase in net cash flow from operating activities for the current period} / \text{net cash flow from operating activities for the current period}$
Operational risk assessment indicators	X13	Accounts in advance turnover	$\text{Operating income} / \text{average prepaid accounts}$
	X14	Sales recovery rate	$\text{Sales receipts} / \text{accumulated sales amount}$

Table 2: KMO and Bartlett's test

KMO sampling appropriateness quantity		0.632
Bartlett's test of sphericity	Approximate chi-square	548.310
	Degree of freedom	91
	Sig.	0.000

4.2. Factor Extraction

The principal component factor method was used for factor extraction. As can be seen from Table 3, when the eigenvalue exceeds 1, a total of 5 principal factors are extracted, which explain the total variance rate of the original 14 variables: 24.853%, 39.6%, 53.557%, 63.797%, 73.345%. The cumulative rate reached 73.345%, more than 60%, indicating that these five main factors can be selected to evaluate the financial risk of companies in the real estate industry.

Table 3: The extracted principal components

	Initial eigenvalue			Extract the sum of squared loads			Sum of squared rotational loads		
	Total amount	Percentage variance	Accumulation %	Total amount	Percentage variance	Accumulation %	Total amount	Percentage variance	%
1	4.154	29.671	29.671	4.154	29.671	29.671	3.479	24.853	24.853
2	1.985	14.181	43.852	1.985	14.181	43.852	2.065	14.747	39.600
3	1.509	10.775	54.627	1.509	10.775	54.627	1.954	13.958	53.557
4	1.375	9.822	64.449	1.375	9.822	64.449	1.434	10.240	63.797
5	1.245	8.895	73.345	1.245	8.895	73.345	1.337	9.547	73.345
6	0.905	6.465	79.810						
7	0.860	6.141	85.951						
8	0.639	4.564	90.515						
9	0.426	3.043	93.558						
10	0.319	2.280	95.838						
11	0.280	2.000	97.838						
12	0.223	1.594	99.431						
13	0.065	0.465	99.896						
14	0.015	0.104	100.000						

4.3. Factor Naming and Interpretation

By substituting the sample data into SPSS software, the cumulative contribution rate calculated by principal component analysis method is 73.345%, and there are 5 principal components, that is, replacing the original 14 financial indicators with these 5 principal components. The five extracted common factors are set as F1, F2, F3, F4 and F5 respectively, and the calculation results are shown in Table 4.

It can be seen from the data in Table 4 that the loadings of cash ratio, quick ratio and asset-liability ratio in the first factor are relatively high, and the absolute values of the loadings are 0.889, 0.874 and 0.869 respectively, which are all greater than 0.7, indicating that these indicators have a good correlation with the first factor.

The loadings of short-term debt repayment rate and cash preservation rate of short-term debt in the second factor are relatively high, and the absolute values of the loadings are 0.97 and 0.964

respectively, both greater than 0.7, indicating that these indicators are well correlated with the second factor, so the second factor F2 is named short-term solvency factor.

The loadings of net profit growth rate and sales recovery rate in the third factor are relatively high, with loadings of 0.803 and 0.759 respectively, both greater than 0.7, indicating that these indicators are well correlated with the third factor. Therefore, the third factor F3 is named as the comprehensive factor of operation and growth capacity.

Prepaid accounts turnover has a high loading in the fourth factor, which is 0.74, greater than 0.7, indicating that this indicator is well correlated with the fourth factor. Therefore, the fourth factor F4 is named as the operating capacity factor.

The loading of main business income growth rate and operating gross margin in the fifth factor is relatively high, with the loading of 0.74, both greater than 0.7.

Table 4: Rotated composition matrixa

	Composition of ingredients				
	1	2	3	4	5
X3 Cash flow ratio	0.889				
X2 Quick rate of action	0.874				
X4 Asset-liability ratio	-0.869				
X1 Net debt ratio	-0.573			-0.521	
X5 Short-term debt service rate during the period		0.970			
X6 Cash guarantee ratio of short-term liabilities		0.964			
X11 Net profit growth rate			0.803		
X14 Sales recovery rate			-0.759		
X8 Return on total assets	0.345		0.680		0.384
X13 Accounts in advance turnover				0.740	
X7 Interest-bearing debt ratio	-0.544			-0.559	
X12 Net cash flow growth rate				0.506	
X10 Main operating revenue growth rate					-0.779
X9 Gross operating profit margin	0.537		0.352		0.745

4.4. Factor Scoring and Factor Model Construction

Table 5 shows the factor score coefficient matrix. According to the data in Table 5, defined as X1-X14 in the order of components, the factor score function can be written:

$$F1 = -0.012X1 + 0.303X2 + 0.295X3 - \dots + 0.131X14 \quad (1)$$

$$F2 = -0.016X1 - 0.011X2 + 0.029X3 + \dots - 0.094X14 \quad (2)$$

$$F3 = 0.008X1 - 0.134X2 - 0.129X3 - \dots - 0.453X14 \quad (3)$$

$$F4 = -0.334X1 - 0.136X2 - 0.124X3 - \dots + 0.041X14 \quad (4)$$

$$F5 = 0.158X1 - 0.049X2 - 0.137X3 - \dots + 0.244X14 \quad (5)$$

Finally, the score of each factor is calculated based on the above formula, and the final score is calculated according to the variance contribution rate obtained above. The financial risk evaluation model can be constructed, and the formula is as follows:

$$F\text{-score} = 0.339 F1 + 0.201 F2 + 0.191 F3 + 0.14 F4 + 0.13 F5 \quad (6)$$

Table 5: Coefficient matrix of factor scores

Financial Indicators	Composition of ingredients				
	F1	F2	F3	F4	F5
X1 Net debt ratio	-0.012	-0.016	0.008	-0.334	0.158
X2 Quick rate of action	0.303	-0.011	-0.134	-0.136	-0.049
X3 Cash flow ratio	0.295	0.029	-0.129	-0.124	-0.137
X4 Asset-liability ratio	-0.281	0.097	-0.012	0.107	0.087
X5 Short-term debt service rate during the period	-0.073	0.494	0.029	0.001	0.001
X6 Cash guarantee ratio of short-term liabilities	-0.042	0.480	0.018	-0.004	0.018
X7 Interest-bearing debt ratio	-0.098	-0.009	-0.044	-0.364	0.227
X8 Return on total assets	0.035	-0.066	0.326	-0.001	0.275
X9 Gross operating profit margin	0.144	-0.087	0.108	0.004	0.405
X10 Main operating revenue growth rate	0.068	-0.064	0.051	-0.041	-0.580
X11 Net profit growth rate	-0.085	0.019	0.453	-0.068	0.014
X12 Net cash flow growth rate	-0.108	0.073	-0.051	0.390	0.005
X13 Accounts in advance turnover	-0.035	-0.088	-0.040	0.533	0.111
X14 Sales recovery rate	0.131	-0.094	-0.453	0.041	0.244

To sum up, the F value reflects the financial risk score of listed real estate companies. Based on the comprehensive assessment of the financial risk F value of the company, and combined with the financial data of the real estate enterprise, the annual F value of each company can be calculated. The larger the F value is, the smaller the financial risk faced by the enterprise is; otherwise, the greater the financial risk is.

5. Empirical Results and Analysis

5.1. Real Estate Enterprise Financial Risk Grade Assessment

The above model is used to calculate the financial risk coefficient of 65 real estate companies, and the calculation result F is analyzed at a hierarchical level. Based on the regulations of China Securities Regulatory Commission in 1998 and relevant literature theories, this paper gives a risk warning to listed real estate companies, divides the risk levels by the boundaries of -0.1, -0.2 and -0.5[14], and divides them into four levels, as shown in Table 6 below:

Table 6: Financial risk classification table

Score of factor(F-score)	$F \geq -0.1$	$-0.1 \leq F < -0.2$	$-0.2 \leq F < -0.5$	$F \leq -0.5$
Financial risk level	Low risk	Risk in general	High risk	Serious risk

The final calculation results and risk levels are shown in Table 7 below:

Table 7: Each factor score of some selected real estate listed companies

Ranking	Name of stock	FAC1_1	FAC2_1	FAC3_1	FAC4_1	FAC5_1	Score	Financial risk level
1	Wanye	4.628	1.617	-0.779	-1.219	1.179	1.73	Low risk
2	Shunfa Hengye	2.182	3.406	-0.099	-0.121	0.390	1.44	
3	Shirong Zhaoye	2.077	-1.523	0.933	0.327	1.655	0.84	
4	Wolong real estate	0.957	-0.542	0.292	3.105	0.741	0.80	
5	Hualian Holdings	2.113	-1.019	0.181	-0.010	1.427	0.73	
48	Zhongzhou Holdings	-0.522	-0.247	0.034	-0.655	0.722	-0.22	High risk
49	Rhine sports	0.148	-0.158	-0.445	-0.476	-0.656	-0.22	
50	Zhongnan Construction	-0.712	0.309	-0.216	0.217	-0.451	-0.25	
51	Aoyuan Beauty	0.715	-0.949	-1.285	-1.028	0.446	-0.28	
52	Sunshine city	-0.783	0.176	-0.402	-0.012	-0.298	-0.35	Serious risk
60	Lvjing holding	0.030	-1.427	-0.619	-0.332	-5.780	-0.52	
61	China Calxon Group	-1.084	0.309	-0.646	-0.459	-0.638	-0.58	
62	Chengtou Holding	0.023	-2.957	0.069	-1.405	0.409	-0.72	
63	Langold Real Estate	-0.222	0.510	-3.818	0.625	-1.133	-0.76	
64	ST Taihe	-1.584	-0.120	-0.162	-1.847	0.417	-0.80	
65	CFLD	-1.053	-0.107	-1.627	-1.415	0.310	-0.85	

5.2. Analysis of Results

5.2.1. Overall Result Analysis

In the above table, only the top few listed real estate companies in each financial risk level are selected. The final score shows that there are 25 companies with F-score >0, indicating that the financial risk of these companies is above the average level, accounting for 38.5% of the total sample; There are 40 companies with F value <0, indicating that the financial risk is below the average level, accounting for 61.5% of the total sample. From the data, there is a great difference between the financial status and financial risk of real estate companies.

5.2.2. Analysis from the Nature of Enterprise Ownership

Among the 65 listed real estate development enterprises, there are 31 private enterprises and 34 state-owned holding enterprises. Among the high-risk enterprises, private enterprises account for 42.86%, while state-owned holding enterprises account for 64%. From the scoring results, the top five enterprises with comprehensive scores in the real estate industry are as follows: Wanye Enterprise, Shunfa Hengye, Shirong Zhaoye and Wolong Real Estate are all private enterprises. Compared with state-owned holding enterprises, private enterprises do a better job of controlling financial risks during the current period. Generally speaking, the amount of capital occupied by state-owned real estate development is very large, and the development cycle is long and the investment is large. As the supply and demand market of funds and macroeconomic environment are constantly changing, financing will face certain risks. If real estate enterprises cannot control risks well, there will be problems such as poor capital circulation and failure to pay principal and interest on schedule. Although it is easier for state-owned real estate enterprises to obtain financing than private real estate enterprises, due to their lower proportion of self-owned funds and stronger dependence on banks, once the real estate market environment and bank credit policies change greatly, state-owned holding enterprises will be greatly affected.

Due to the characteristics of its own internal composition and operation, state-owned real estate enterprises have problems such as imperfect internal management and lack of scientific decision-making mechanism, which make them have great risks in operation. Although it is much easier for state-owned real estate companies to obtain financing than private enterprises, their own capital proportion is relatively low and their dependence on banks is relatively high[15]. Even for a leading enterprise like Vanke, it is found that its financial risk ranks 15th through model calculation. Its 2021 financial report shows that the asset-liability ratio is as high as 79.74%, higher than the average of the industry. Since 2017, Vanke's net cash inflow from investment activities has been negative, and the net cash flow generated from financing activities has also been negative for the first time, which indicates that the financial risks faced by state-controlled enterprises cannot be ignored.

5.2.3. Based on the Impact Factor Analysis of Real Estate Enterprises

First, comprehensive factor analysis of solvency. According to the standardized data, there are 21 real estate enterprises with positive liquidity ratio and 44 with negative liquidity ratio; In the quick ratio, there are 17 positive values and 48 negative values; There are 11 companies with a positive asset-liability ratio and 54 companies with a negative ratio. It can be seen that among real estate enterprises, the asset-liability ratio index has the most significant impact on their solvency. Among them, the factor F1 represents the solvency factor, with the highest value being 4.63 and the lowest value being - 1.05. Comprehensive analysis of the scores of various factors shows that only 6 of the 65 companies have debt paying factors F1 and F2 above 0, which indicates that they generally have the problem of weak debt paying ability. The capital structure of real estate enterprises is unreasonable, the liquidity of assets is very weak, and the relationship between short-term liabilities and liquid assets is unreasonable, which will reduce the solvency of the company and further increase the financial risk of the company. Therefore, the unreasonable structure of capital source caused by abnormal debt repayment index is an important reason for the deviation of financial risk from early warning.

Second, comprehensive factor analysis of operating capacity. Mainly through the advance accounts turnover rate and sales recovery rate of these two indicators to judge, after the standardization of enterprise index data, it is found that the advance accounts turnover rate has 20 positive values, there are 45 negative values; Among the sales return rate, 28 are positive and 37 are negative; It can be seen that the index that has the greatest impact on the operating capacity of real estate enterprises is the turnover ratio of accounts received in advance, followed by the sales recovery rate. Due to the influence of inventory pressure and weak budget management awareness and other factors, the real estate operation risk mostly occurs in the real estate development, construction and sales. At the same time, we can observe that the vast majority of real estate enterprises have a low sales recovery rate. If they cannot be sold in time, or cannot be recovered in time after the sale, it will have an impact on the original investment project, and even lead to problems in the project capital chain, which will affect the operating efficiency of the company.

Third, comprehensive factor analysis of profitability and development capacity. In the sample data, there are 25 positive and 40 negative values for the growth rate of main business income and net profit, so it can be seen that these two indicators have a great impact on the company's profit and development. F3 and F4 respectively represent the comprehensive factors of operation and growth ability of enterprises. Among them, the core profit creation ability of several low-risk enterprises such as Wanye, Vanke and Gemland Group is positive, while the core profit creation ability of 11 high-risk and serious financial risk enterprises such as Lane Sports, Lvjing Holdings and Jiakai City is negative, which fully shows that their core profit creation ability is insufficient.

The main reason is that the rate of return of these enterprises is relatively low, and most of the indicators of sustainable development ability are negative.

6. Real Estate Enterprise Financial Risk Prevention and Suggestion

Through the observation of the comprehensive scoring results, combined with the comparative analysis of each factor score and related variables, the main reasons leading to the financial risk of real estate enterprises are obtained, and the corresponding countermeasures and suggestions are given.

6.1. We Will Adjust the Structure of Funding Sources

In terms of capital source structure, China's listed real estate companies generally have problems such as high asset-liability ratio, single financing channel, and bank lending. In order to reduce the risk of capital source level, reduce debt as much as possible, make investment decisions prudently, and avoid the actual return caused by blind optimism that is far lower than expected. If enterprises need a large amount of funds to maintain the normal operation of engineering projects, they must adopt diversified financing methods to avoid the break of capital chain caused by the problem of single financing channel. When borrowing, we should pay attention to the reasonable allocation of short-term debt and long-term debt, in order to prevent the debt burden caused by excessive short-term debt, resulting in the risk of inability to repay. In addition, effective use of financial markets. On the one hand, enterprises can actively expand financing channels, reasonably adjust the source of funds, and enhance the company's solvency; On the other hand, it is also possible to try to use a variety of financial instruments to improve the efficiency of capital flow and reduce the danger of capital chain rupture [16].

6.2. Strengthen Control of Risks at the Core Level of the Enterprise

Risks and benefits coexist, and the ultimate purpose of risk assessment is not to eliminate the risks of enterprises, but to formulate corresponding countermeasures according to the results of risk assessment, so as to enhance the risk tolerance of the company. The core risks of real estate enterprises can be controlled, which shows that they have a strong ability to resist risks. At the same time, enterprises can also allocate resources and capital structure reasonably according to the risk level of the core level of the project. When the risk at the core level of the real estate enterprise or project is very large, the asset-light management can be adopted to obtain the required long-term assets through outsourcing, leasing and other ways. When the core risk of real estate enterprises or projects is relatively large, operating leverage and financial leverage can be appropriately increased.

6.3. Develop Appropriate Financial Risk Response Strategies

Different enterprises have different problems, and the company should choose the appropriate strategy according to its own actual situation. In view of the risks at the level of creating core profits, enterprises can increase sales revenue through innovative marketing means, and can also achieve this through appropriate cost reduction. As the price of China's real estate market continues to rise, the profitability of the company can be effectively improved and financial risks can be reduced through reasonable control of the cost of engineering projects, such as selecting high-quality and inexpensive land and improving cost accounting. At the level of enterprise operation ability, it can accelerate the turnover speed by strengthening the management of inventory and fixed assets. In terms of sustainable development ability, enterprises should keep pace with The Times according to

the actual situation, formulate long-term plans, concentrate funds, ensure financial transparency, and constantly adjust the company's business strategy to meet the company's capital needs and reduce financial risks.

7. Conclusions

China is in the process of economic structural transformation, in order to realize the sustainable, healthy and stable development of our country, put forward the supply-side reform to adjust the economic structure. Based on the background of supply-side reform, this paper selects 65 A-share listed real estate companies as research samples, and selects A total of 14 financial evaluation indicators covering four levels of possible capital source, core profit, sustainable development and operational risk of real estate enterprises. This paper constructs a comprehensive evaluation model of financial risk of real estate enterprises based on factor analysis method, and makes a comprehensive evaluation of the financial risk and its causes of sample companies from two perspectives of theory and practice. It is found that China's real estate industry has achieved rapid growth with too high leverage for a long time, and high leverage has brought huge profits, which has promoted China's economic development. At the same time, excessive leverage also contains huge financial risks. In view of the existing problems, combined with the economic significance of supply-side reform, this paper puts forward many measures and suggestions to reduce the financial risks of the real estate industry, hoping to reduce the financial risks faced by the real estate industry through "deleveraging" and "destocking" in the real estate industry, promote the smooth progress of China's supply-side reform, and realize the healthy development of the real estate industry as a whole.

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