Research Article

Development of Comprehensive Evaluation Model of Free Trade Port Investment under Macroeconomic Support

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The financial benchmark rate of return is gradually declining, and the free trade port policy is not enough to improve the investment financial benchmark rate of return. Therefore, a comprehensive evaluation model for free trade port investment under the support of macroeconomics is proposed. A theoretical model of free trade port investment price fluctuations and monetary policy response is constructed under the support of macroeconomics, and the model is used to observe the impact of changes in free trade port investment prices on the economic effects of monetary control policies; thus, free trade port investment price fluctuations are constructed and as a result, a theoretical model of investment price fluctuations and interest rate policy responses in the free trade port is constructed to observe the impact of changes in investment prices in the free trade port on the economic effects of interest rate regulation policies; a theoretical model of investment and fiscal and taxation policy responses in the free trade port is constructed to observe the impact of changes in investment in the free trade port on the economic effects of fiscal and taxation policies. Explore the path of optimizing the comprehensive investment evaluation environment in the pilot free trade zone, and realize the development of a comprehensive evaluation model for investment in the free trade port. The experimental results show that the model can realize the comprehensive evaluation of free trade port investment under the support of the macroeconomy and has a good evaluation effect.

1. Introduction

Building a free trade port is the basic requirement for the country to participate in international economic integration at a high level and in a deep range. Hainan has the first free trade port to be completed in China. Without the reference of other mature trade reference and management systems, there are still many drawbacks that need to be improved in the development process of the free trade port policy, especially, with the support of the macroeconomy, the free trade port policy plays a major role in the institutional framework [1, 2]. Further analysis of the free trade port policy of the free trade port has a very important theoretical value and practical significance and has played a great role in establishing a complete set of comprehensive investment evaluations and financial management mechanisms for the Hainan free trade port [3, 4]. However, the construction history of the free trade port is relatively short compared

with the international community, and there is a lack of experience accumulation. The existing investment comprehensive evaluation model cannot fully meet the development needs of the free trade port policy [5, 6]. We must learn from the experience of the developed countries in the world and combine the actual situation of the free trade port policy to study its impact on the financial benchmark rate of return. It plays a positive role in improving the financial benchmark rate of return of the free trade port.

Tang et al. [7] put forward a comparative analysis of locational factors and their external influence on free trade port zones in China. This study analyzes the locational factors of the Shanghai and Ningbo-Zhoushan free trade ports using an econometric model. The corresponding external influences of locational factors are examined as well. Based on our analysis and comparison of the location characteristics and locational value of the Shanghai and Ningbo-Zhoushan free trade ports, three constructive

suggestions are made to enhance the locational value of free trade ports based on the actual situation of the Ningbo-Zhoushan free trade port. These suggestions can also maximize the value of free trade ports' locations and promote high-quality regional economic growth. The results show that the regional economic development level, industrial structure, institutional policies, market scale, market consumption potential, and market openness are important factors affecting the location value of the free trade zone. Tang et al. [8] put forward the value element system and development path of free trade port location, gave the element system of the location value of Ningbo-Zhoushan Port Bonded Port, analyzed the elements and influencing factors that affect the location value of the bonded port, and constructed the location value evaluation system of the bonded port. Using the factor analysis method, this paper makes an empirical analysis of the location value of Ningbo-Zhoushan port and nine major ports in China. Finally, the specific development path of Ningbo-Zhoushan port is given. The research shows that analyzing the factor system and development path of the free trade zone will help to improve the value-added capacity of the free trade port and promote the development of the regional economy [9, 10]. Although the above research has made some progress, in order to consider the policies supported by the macroeconomy, it is still necessary to clarify the construction objectives, specific positioning, key tasks, opinions, and practical measures of the free trade port. With the impact of the free trade port policy on the financial benchmark rate of return as the theme, further study the influencing factors of the financial benchmark rate of return, to improve the comprehensive benchmark yield of free trade port investment.

2. Research Method

2.1. Theoretical Model of Investment Price Fluctuation and Monetary Policy Response in Free Trade Port. Monetary policy is a combination of macrodemand and management, which plays an important role in the financial management system of the investment industry. The ultimate goal of monetary policy is the purpose of direction and the core of the function of the banking system. The ultimate goal of monetary policy will change with the country's economic situation. With the support of macroeconomy, build a theoretical model of investment price fluctuation and monetary policy response of free trade port, regard the model as a small macroeconomic system, and observe the impact of changes in investment price of free trade port on the economic effect of monetary control policy [11, 12].

When constructing the theoretical model of investment price fluctuation and monetary policy response of free trade ports, we need to comprehensively consider commodity prices, macromonetary control policies, and their actual influencing factors [13–15]. The model is an economic system including an inflation equation, currency equation, investment equation, and consumption equation.

First, based on the absolute income theory, the consumption equation is constructed by considering the wealth factor, as shown in the following formula:

$$A_{SD} = \alpha_1 \times V_Z + \alpha_2 \times V_X + \alpha_3 \times V_Y. \tag{1}$$

In formula (1), V_Z represents the total consumption in Z period, V_X represents the investment commodity price in X period, V_Y represents the basic investment raw material commodity price in Y period, α_1 represents the corresponding action delay of the wealth effect of the basic investment commodity price in the first period, α_2 represents the corresponding action delay of the wealth effect of the basic investment raw material commodity price in the first period, and α_3 represents the corresponding action delay of the wealth effect of the investment commodity price in the third period.

Consider the interest rate variable to build the following investment equation:

$$H_{ZXY} = \lambda_1 \times W_A + \lambda_2 \times W_B + \lambda_3 \times W_C. \tag{2}$$

In formula (2), W_A represents the total income of investment commodities in A period, W_B represents the total income of basic investment raw material commodities in B period, W_C represents the total income of investment commodity prices in C period, λ_1 represents the interest rate coefficient of investment commodities in the first period, λ_2 represents the interest rate coefficient of basic investment raw material commodities in the second period, and λ_3 represents the price interest rate coefficient of investment commodities in the third period.

Simplify the monetary policy into a single target inflation equation, as shown in the following formula:

$$P_O = K_L + \theta_1 \times E_{ab}. \tag{3}$$

In formula (3), P_O represents the inflation rate, K_L represents the response function of monetary policy, θ_1 represents the stability coefficient of currency value, and E_{ab} represents the fluctuation coefficient of commodity price in i period [16, 17].

The monetary equation constructed is as follows:

$$H_B = \beta_0 + \beta_1 \times \theta_i + \beta_2 \times E_{ab}. \tag{4}$$

In formula (4), H_B represents the growth rate of money supply, β_0 represents the money supply coefficient, β_1 represents the growth coefficient of interest rate [18, 19], and β_2 represents the reduction coefficient of interest rate [20, 21]. Therefore, the development of an economic system including an inflation equation, money equation, investment equation, and consumption equation is completed.

2.2. Theoretical Model of Investment Price Fluctuation and Interest Rate Policy Response in Free Trade Port. Build a theoretical model of investment price fluctuation and interest rate policy response in free trade port and observe the impact of changes in commodity prices on the economic effect of interest rate regulation policy [22, 23]. The theoretical model of commodity price fluctuation and interest rate policy response includes total supply equation, total demand equation, and asset price composition equation.

The total supply equation is as follows:

$$Q_{AS} = \chi_i \times v_i - \chi_i \times \Delta q_i \times H_B. \quad (5)$$

In formula (5), χ_i represents the total supply of goods in i period, v_i represents the influence coefficient of the change of real output in the short term on inflation, χ_i represents the gap of real output, and Δq_i represents the corresponding effective exchange rate of the indirect pricing method [19, 24].

The design of the total demand equation is as follows:

$$D_i = w_1 \times d_i - w_2 \times n + \sum_{i=1}^{n} w_3 f_i + w_4 a_i + Q_{AS}. \quad (6)$$

In formula (6), D_i represents the total demand for commodities in i period, d_i represents the total demand for commodities in i period, w_1 represents the nominal interest rate coefficient, w_2 represents the short-term fluctuation coefficient of commodities, n represents the number of commodity types, w_3 represents the elasticity coefficient of commodity price fluctuation, f_i represents the corresponding exogenous impact of the effective exchange rate in i period [25], w_4 represents the elasticity coefficient of inflation, and a_i represents the corresponding exogenous impact of the commodity asset price.

The design of the asset price composition equation is as follows:

$$Z_i = Z_{i-1} \times A_{i+1} + L_i \times D_i. \quad (7)$$

In formula (7), Z_i represents the commodity asset price in i period, Z_{i-1} represents the commodity asset price in $i-1$ period, L_i represents the exogenous shock of commodity asset price in i period, and A_{i-1} represents the corresponding exogenous shock of the commodity asset price in $i-1$ period [26]. Therefore, the model development including the total supply equation, total demand equation, and asset price composition equation is completed.

2.3. Theoretical Model of Investment and Fiscal and Tax Policy Response in Free Trade Port. Build a theoretical model of commodity price fluctuations and fiscal and tax policy responses and observe the impact of changes in commodity prices on the economic effects of fiscal and tax policies.

The constructed theoretical model of commodity price fluctuation and fiscal and tax policy response is as follows:

$$F_{i+1} = \frac{F_i z_0 + A_1 C_1 + A_2 C_2 + A_3 C_3 + \vartheta_i}{Z_i}. \quad (8)$$

In formula (8), F_{i+1} represents the fiscal tax amount in $i+1$ period, F_i represents the fiscal tax amount in i period, z_0 represents the economic growth rate, A_1 represents the intercepted item of energy commodities, A_2 represents the intercepted item of basic raw materials commodities, A_3 represents the intercept item of agricultural and sideline commodities, C_1 represents the year-on-year growth rate of the consumption index of energy commodities, C_2 represents the year-on-year growth rate of the consumption index of basic raw materials commodities, C_3 represents the year-

on-year growth rate of the consumption index of agricultural and sideline commodities, and ϑ_i represents the year-on-year growth rate of fiscal taxes.

In the influence of the price-based policy in the free trade port policy on the financial benchmark rate of return of the investment industry, on the one hand, according to the internal value determination theory of the investment industry and the financial benchmark income discount model [27, 28], the internal value of the investment industry is the present value of the future financial benchmark income. When the loose price-based policy is adopted, the decline of the financial benchmark rate of return leads to the decline of the discount rate. As a result, the discount value of the financial benchmark rate of return of the investment industry will become larger in the future, and the intrinsic value of the investment industry will rise. As the actual financial benchmark rate of return of the investment industry cannot deviate too far from it, the financial benchmark rate of return of the investment industry will rise accordingly [29]. The impact of price-based policies on the financial benchmark rate of return of the investment industry in the past five years is shown in Figure 1.

On the other hand, from the perspective of the investment industry, when the financial benchmark return rate decreases, the financing cost of the investment industry will be reduced, which is conducive to the growth and profitability of the investment industry, and finally the financial benchmark return of the investment industry rise is made. If the price-based policy is in a tight state, the rise of the financial benchmark rate of return will increase the discount rate, the discount value of the financial benchmark rate of return will become smaller in the future, and the intrinsic value of the investment industry will decline. When the financial benchmark yield rises, the financing cost of the investment industry will increase [30, 31]. At this time, it is unfavorable to the growth and profitability of the investment industry, and eventually the financial benchmark yield of the investment industry will decline.

3. Results and Analysis

3.1. Optimizing the Environmental Path of Investment Comprehensive Evaluation with Macroeconomic Support. In the market economy, with the support of macroeconomy, one of the important conditions for development is to optimize the investment comprehensive evaluation environment and improve the investment comprehensive evaluation environment by establishing a new development path, which is also the development trend of the investment comprehensive evaluation environment under the development of the current market economy. The current comprehensive evaluation environment of free trade port investment is shown in Table 1.

According to the overview of the investment comprehensive evaluation environment of the free trade port in Table 1, explore the path to optimize the investment comprehensive evaluation environment under macroeconomic support. Only by forming a good investment comprehensive evaluation environment, we can attract market players, concentrate on production factors, summarize development ideas, and promote an economic development.
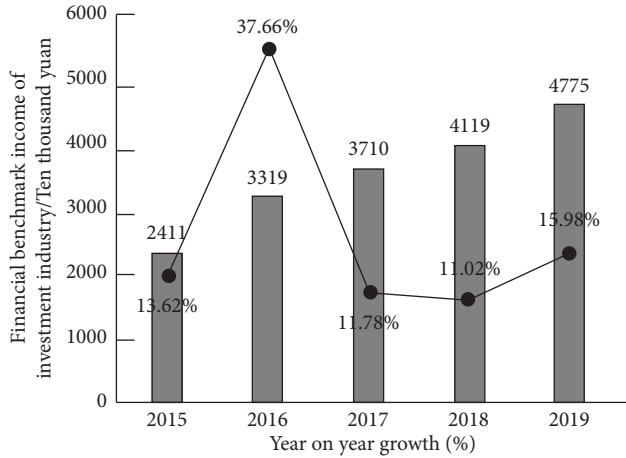
FIGURE 1: The impact of price-based policies on the financial benchmark rate of return of the investment industry in the past five years.

TABLE 1: Overview of investment comprehensive evaluation environment of the free trade port.

Index	2021	2020	2019	2018	2017
Comprehensive indicators	44	57	73	81	82
Build license	120	172	178	181	128
Grade permission	27	41	42	42	45
Tax revenue	112	135	137	135	136
Cross-border trade	66	87	110	117	118
Execution of contract	6	5	5	4	4
Access to credit	73	65	60	41	35

3.2. Building a Comprehensive Evaluation Model of Free-Trade Port Investment. In order to analyze the impact of macro-economic effects, a comprehensive evaluation model of free trade port investment involving multiple industries and departments is established. Each industry produces only one type of goods. The investment policy of the free trade port is usually funded by financial allocation, and the funds raised for society are very few. At present, in the venture capital structure of the free trade port policy, the capital sources are mainly large state-owned enterprises and governments, some are listed companies and foreign-funded enterprises, and only a small part is from private capital. The capital source of venture capital is shown in Figure 2.

The venture capital policy has a certain impact on the development of free trade ports, mainly as follows:

First, it can solve the financial capital problem of free trade port investment. Due to the lack of tangible assets in the free trade port and the lack of guarantee strength of the industry itself, the management risks, market risks, and technical risks faced in the development process are relatively prominent, which has made the free trade port difficult in financing and reduced the financial benchmark rate of return. The funds brought by the venture capital policy to the free trade port can not only meet the multiround capital needs of the free trade port at different stages of development but also
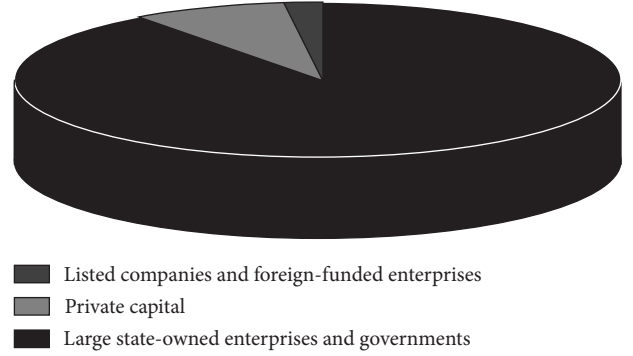

FIGURE 2: Capital sources of venture capital.

help to cultivate the follow-up financing capacity of the free trade port.

The second is to provide human resources for the free trade port. The venture capital policy can not only provide funds for the free trade port but also provide a large number of management talents. The venture capital policy can provide a free aid mechanism for the free trade port. For the partners of the free trade port, they can supplement the free trade port through social networks, which not only solves the problems in the management and development of the free trade port but also improves the financial benchmark rate of return of the free trade port.

Third, it is conducive to improving the management level of the free trade port. The purpose of venture investors' participation in the management of free trade ports is not to operate their own enterprises but to promote the rapid growth of free trade ports from the aspects of financial management and development strategy, so as to improve the management level of a free trade port.

The impact of monetary policy on the financial benchmark yield of free trade port is mainly reflected in the impact of the monetary policy transmission mechanism, which can be divided into two ways: monetary channel and credit channel, as shown in Figure 3.

The influence of the monetary policy transmission mechanism on the financial benchmark yield of free trade ports is manifested in the demand of free trade ports for the holding and allocation structure of monetary assets, which changes the financial benchmark yield of free trade ports and affects the real economy of a free trade port.

In the development of the comprehensive evaluation model of free trade port investment, the production process of labor, enterprise capital, and intermediate products input to various industries is described. According to this process, the model is obtained, and the expression is

$$U_i = \frac{X_i}{A_P} \times \frac{C_X}{P_U}. \tag{9}$$

In formula (9), X_i represents the initial input, A_P represents the factor input coefficient of intermediate products, C_X represents the cost, and P_U represents the input price of
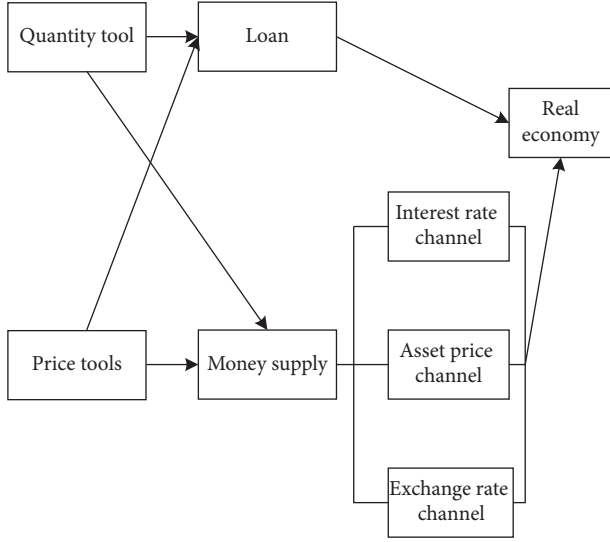
FIGURE 3: Transmission mechanism of monetary policy.

synthetic products in the intermediate stage. Thus, the comprehensive evaluation model of free trade port investment with macroeconomic support is completed.

4. Experiment and Analysis

In order to analyze the impact of free trade port investment on enterprise debt structure from the perspective of the macroeconomy, firstly the changing trend of debt structure from some free trade ports in a city in the five years from 2017 to 2021 is studied by statistical analysis method, and the effectiveness of the constructed comprehensive evaluation model of free trade port investment supported by macro-economy is judged.

4.1. Data Sources and Research Samples. The data used for empirical research in this paper are still based on the investment panel data of 3844 effective free trade ports in the five years from 2017 to 2021.

4.2. Design of Variables. At present, for most enterprises in China, including free trade port investment, long-term loan financing is still one of the most important financing methods. In the asset-liability structure, the long-term loan ratio L_{BR} is also the most critical indicator. Therefore, taking the long-term loan ratio as the alternative indicator of the explained variable enterprise debt structure, at this time, the explained variable indicator L_{BR} can be expressed as follows:

$$L_{BR} = \frac{L_{BR_1} + L_{BR_2}}{L_C} \times 100\%. \tag{10}$$

In formula (10), L_{BR_1} and L_{BR_2} represent the sum of long-term borrowings of enterprises, including long-term borrowings due within one year and bank borrowings due within one year, and L_C represents the sum of enterprise liabilities. There are two explanatory variables involved, namely, monetary policy variables and political correlation variables. In this paper, D_{MT} index is used to replace monetary policy as one of the explanatory variables in the design model.

$$D_{MT} = \frac{\Delta c}{c} - \left(\frac{\Delta \eta}{\eta} + \frac{\Delta \varsigma}{\varsigma} \right). \tag{11}$$

In formula (11), Δc and c, respectively, represent the net increase of money and the total amount of money supply, $\Delta \eta$ and η, respectively, represent the net increase and total increment of GDP within the study area, and $\Delta \varsigma$ and ς, respectively, represent the increment and the present value of China's domestic consumption index. According to the definition of D_{MT} index, the higher the index value, the looser the country's monetary policy at this stage, the lower the financing difficulty of the free trade port, and can improve the structural proportion of long-term loan financing and optimize the debt structure; the smaller the D_{MT} index value, the tighter the monetary policy adopted by the country, and the financing difficulty of the free trade port increases.

For the variables of political relevance, this paper replaces them with indicators S_1 and S_2, respectively, where indicator S_1 indicates whether the core managers in the investment and loan enterprises of the free trade port have experience in performing their duties in government departments. When the indicator S_1 is 1, it is proved that they have work experience, and when indicator S_1,S_1 is 0, it is proved that they have no work experience. Indicator S_2 indicates whether there are any core managers in the investment and loan enterprises of the free trade port who have served in banks or financial institutions or have performed their duties. When the indicator S_2 is 1, it indicates that they have served or performed their duties, and when S_2 is 0, it indicates that they have not served or performed their duties. Other control variables related to the explained variables in the empirical study are shown in Table 2.

Financial listed companies are excluded from the selected samples. The sample observations from 2017 to 2021 are shown in Table 3.

Analysis Table 3 shows the changes in the overall debt structure long-term debt structure, short-term debt structure of the 3844 valid study sample over the five-year period from 2017 to 2021. In the analysis of the overall debt structure of the sample data, three indicators, asset liability ratio, long-term debt ratio, and short-term debt ratio, are selected for analysis and research. The calculation formulas of the selected three indicators are as follows:

$$E_V = \frac{A_1}{Z_C} \times 100\%, \tag{12}$$

$$H_V = \frac{F_i}{A_1} \times 100\%, \tag{13}$$

$$K_V = \frac{F_j}{A_1} \times 100\%. \tag{14}$$

In the above formulas, E_V represents the average asset-liability ratio, H_V represents the average long-term debt

TABLE 2: Design of model control variables.

Symbol	Variable	Explain
Size	Enterprise size	Value is the natural logarithm of total assets
Top5	Shareholding ratio of top 5 shareholders	Calculated according to the proportion of the actual total holdings
F_{AR}	Shareholding ratio of fixed assets	Proportion of fixed assets in total assets
E_{PA}	Profitability of enterprises	Calculated using the return on total assets indicator
G_{RO}	Development capacity of enterprises	Calculated by using the operating revenue growth rate indicator

TABLE 3: Sample observations of empirical research.

Particular year	2017	2018	2019	2020	2021
Number of observations	767	782	759	791	745

ratio, K_V represents the average short-term debt ratio, A_1 represents the total liabilities, Z_C represents the total assets, F_i represents the total noncurrent liabilities, and F_j represents the total current liabilities. According to the above formula, the overall average debt structure of the collected samples is shown in Table 4.

According to Table 4, considering the data of the overall debt structure level of the sample enterprises, the highest value of the average asset-liability ratio index is 53.24%, and the lowest value is 49.85, maintained at about 50%, which is a relatively ideal equity and debt structure ratio; from the perspective of the average short-term debt ratio, it is still at a relatively high level, with the lowest value of more than 73%, indicating that most free trade port investments still have difficulties in financing, and banks and other financial institutions have taken a more cautious attitude towards long-term loans for their free trade port investments. However, considering the trend of debt structure change, the average long-term debt ratio of free trade port investment has shown an increasing trend due to the gradual easing of the country's overall monetary policy in recent years. The reason for the high proportion of average short-term debt is also related to the business category of free trade port investment. Compared with long-term debt, the interest of short-term debt is lower. In addition to continuing to hold a large number of funds at the initial stage of development, enterprises prefer to hold short-term debt to replace long-term debt, so as to reduce interest expenses. However, holding a large number of short-term liabilities will also have certain risks for free trade port investment; that is, it is easy to fall into the dilemma of liquidity debt financing.

The debt structure change trend of free trade port investment is further analyzed from two aspects: long-term debt structure and short-term debt structure. The indicators selected for the long-term debt structure mainly include long-term loans, long-term accounts payable, bonds payable, and special accounts payable; the analysis indicators of short-term debt structure mainly include short-term loans, commercial credit, other payables, and taxes payable. After statistical analysis, the proportion of indicators in the long-term debt structure and short-term debt structure is shown in Figures 4 and 5.

From the changes in the structural proportions of the constituent elements of long-term liabilities in the 3,844 effective research samples from 2017 to 2021 shown in

Figure 4, it can be seen that long-term loans occupy an absolutely dominant position, which shows that the free trade port still relies mainly on banks and other financial institutions in the choice of financing methods. In addition to relying on market risk factors, bank strategic decisions and loan standards largely depend on national macrocontrol policies and credit rationing systems. Therefore, the political relationship between the free trade port and the government and financial institutions cannot be avoided. However, from the development and change trend of the long-term debt structure, it can be seen that the proportion of long-term loans still shows a slight downward trend, while the proportion of long-term accounts payable, bonds payable, and special accounts payable continues to increase, indicating that the financing channels of long-term funds invested in the free trade port are expanding, alleviating some external factors to a certain extent. The negative impact of human factors on the optimization of the FTA investment debt structure. From the proportion relationship of short-term debt structure in the sample data shown in Figure 5, the two main short-term debt financing methods, short-term borrowing and commercial credit, are in a relationship of ebbing and flow. From the analysis of the long-term evolution trend, the proportion of short-term borrowing has decreased slightly, while the proportion of commercial credit and other payables has shown an increasing trend.

Through comparative analysis, we can see that the current debt structure of China's free trade port is obviously unreasonable. Although this changing trend has improved in recent five years, the short-term average debt of more than 70% will bring a huge capital gap to the investment of the free trade port, which is not conducive to the development and growth of the free trade port. In the long-term debt financing structure, the free trade port investment also has the problem of too single a financing channel. In addition, considering the fairness of the market and the competitive relationship between enterprises, some enterprises that have close relations with the government or have long-term stable cooperation with financial institutions are often more able to get the financial support of the bank, so as to adjust the debt structure of the company to the best.

Through the experimental data to estimate parameters, set different commodity price fluctuations of free trade port investment and explore the impact mechanism of commodity price fluctuations on the economic effect of macroeconomic regulation. The data of money supply growth rate, commodity interest rate, commodity tax point, and economic growth rate in 2021 and 2022 are shown in Table 5.

When the annual growth rate of commodity prices exceeds 5%, the model is used to predict the growth rate of

TABLE 4: Analysis of the overall average debt structure of the collected samples.

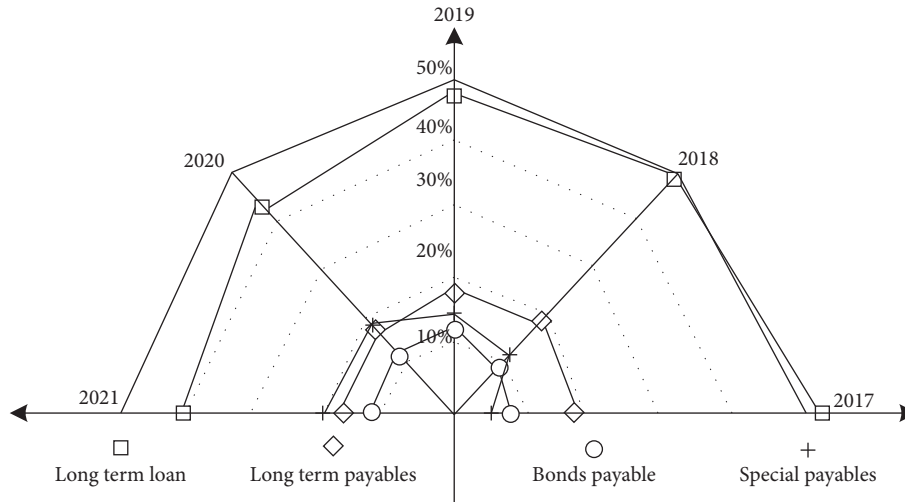| Particular year	Average asset-liability ratio (%)	Average short-term debt ratio (%)	Average long-term debt ratio (%)
2017	51.30	81.95	20.65
2018	53.24	81.22	20.90
2019	52.48	80.08	22.61
2020	50.45	77.92	24.24
2021	49.85	73.25	28.97

FIGURE 4: Structural proportion relationship of indicators in a long-term debt structure.
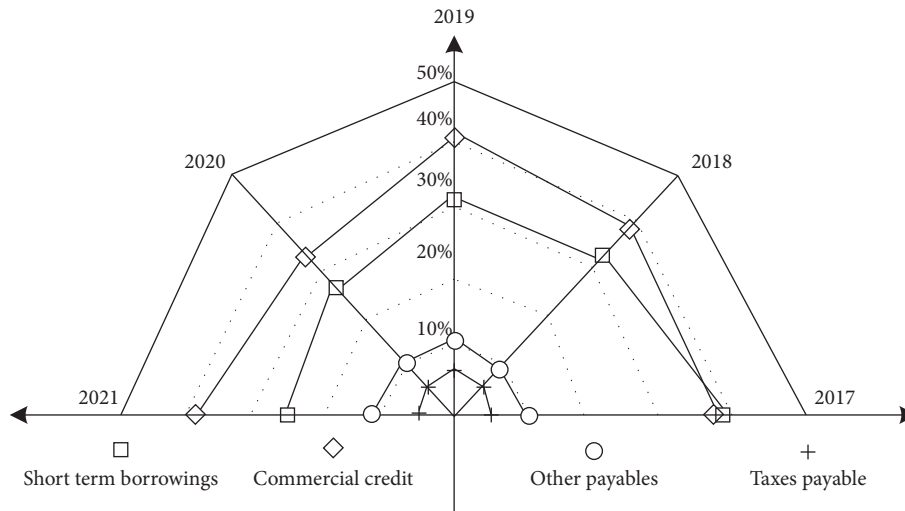
FIGURE 5: Structural proportion relationship of various indicators in a short-term debt structure.

money supply, commodity interest rates, commodity tax points, and economic growth rate in the next five years, and the prediction results are verified. The forecast results of the money supply growth rate, commodity interest rate, commodity tax point, and economic growth rate are shown in Table 6.

According to the prediction results in Table 6, the growth rate of money supply, commodity interest rate, commodity tax point, and economic growth rate can be predicted through the theoretical models of commodity price fluctuation and monetary policy response. The forecast results show that when the annual growth rate of commodity prices exceeds 5%, the growth rate of money supply, commodity interest rates, commodity tax points, and economic growth rate will increase accordingly. It shows that the comprehensive evaluation of free trade port investment under macroeconomic support can be achieved through the theoretical model of commodity price fluctuation and monetary

TABLE 5: Money supply growth rate and economic growth rate in the past two years.

Particular year	Money supply growth (%)	Commodity interest rate (%)	Commodity tax point	Economic growth rate (%)
2021	58.63	0.52	0.35	10.36
2022	58.35	0.54	0.36	10.39

TABLE 6: Prediction results.

Particular year	Forecast growth rate of money supply (%)	Commodity interest rate (%)	Commodity tax point	Forecast rate of economic growth (%)
2023	58.39	0.54	0.368	10.40
2024	58.42	0.54	0.369	10.40
2025	58.45	0.55	0.371	10.41
2026	58.49	0.55	0.374	10.41
2027	58.52	0.55	0.375	10.41

TABLE 7: Test results of time series stationarity.

Inspection items	Forecast data of money supply growth	Forecast data of commodity interest rate	Forecast data of commodity tax points	Forecast data on economic growth rate
ADF statistics	−6.34	−5.23	−3.32	−3.32
5% critical value	−3.21	−3.25	−3.20	−3.25
Stationarity	Stable	Stable	Stable	Stable

policy response, the theoretical model of commodity price fluctuation and interest rate policy response, and the theoretical model of commodity price fluctuation and fiscal and tax policy response.

In order to verify the accuracy of the evaluation results, the test method is used to test the stability of the time series. The specific test results are shown in Table 7.

According to the time series stability test results in Table 7, the time series of money supply growth rate, commodity interest rate, commodity tax point, and economic growth rate prediction data is stable, indicating that the prediction results are relatively accurate as a whole, and the model has a good evaluation effect.

To sum up, the average asset-liability ratio index under the model of this paper is maintained at about 50%, which is ideal equity and debt structure ratio; the free trade port still mainly relies on banks and other financial institutions in the choice of financing methods. Considering the overall debt structure level data of the sample enterprises, it is an ideal ratio of equity and debt structure; the time series of the growth rate of money supply, commodity interest rate, commodity tax point, and economic growth rate forecast data is stable, indicating that the forecast data is stable. The results are generally more accurate.

5. Discussion

5.1. The Influence of Monetary Policy on the Investment Debt Structure of Free Trade Ports. As a rational market entity, the free trade port will inevitably consider the structure of debt financing in the process of fundraising. The debt structure will not only be affected by internal factors such as the size and nature of the free trade port and the risk appetite of the management but also by the influence of some external

institutional factors and noninstitutional factors. The country's monetary policy at different stages is one of the important noninstitutional factors that affect the investment and financing methods and debt structure of the free trade port. Especially in the period of social and economic transformation or the period of severe fluctuations in the international financial market, the government will adjust the monetary policy relatively frequently, in order to achieve the aim of stabilising China's domestic economic order. This adjustment will inevitably affect the total money supply in the market and the level of market interest rates and promote the diversification and complication of the national macro-adjustment effect. The level of risk control will indirectly affect the financing method and debt structure system of enterprises, especially free trade ports.

5.2. The Influence of Political Connections on the Structure of Investment Debt in Free Trade Ports. The government plays an important role as a coordinator and referee in the operation of the market economy. A large number of research results show that in the historical process of China's reform and opening up, the social and economic system has been transformed from a planned economy to a market economy, and political connections have played a role. An important and crucial role, especially at a stage when the market economy is not yet perfect and political relations are a necessary macroregulatory tool. At present, China's social economy has entered a historical stage of a new normal. In the national macrocontrol, economic and legal means should be used as much as possible to reduce the interference of administrative means in the market. However, it is undeniable that various backgrounds and forms of enterprise organization coexist in China at the present stage. Compared

with ordinary private enterprises, enterprises with state-owned assets holding background, or enterprises with other political connections. Whether enterprise, there are obvious advantages in terms of scale, profitability, market competitiveness, financing ability, and financing difficulty. These free trade ports with political connections have a more reasonable debt structure and lower financing costs and interest costs. In view of the importance of political connections in the existing economic environment, free trade ports often try to establish a relationship with the government through various means, in order to achieve the purpose of improving and optimizing the debt structure.

6. Conclusion

(1) Considering the data of the overall debt structure of the sample enterprises, the average asset-liability ratio index is maintained at about 50%, which is a relatively ideal equity and debt structure ratio.

(2) The change in the structural proportion of each constituent element of long-term liabilities shows that long-term loans occupy an absolute dominant position, which indicates that the free trade port still mainly relies on banks and other financial institutions in the choice of financing methods. Considering from the data of the overall debt structure of the sample enterprises, it is an ideal ratio of equity and debt structure; the change of the structural proportion of each constituent element of long-term liabilities shows that long-term loans occupy an absolutely dominant position, which indicates that the free trade port still mainly relies on banks and other financial institutions in the choice of financing methods. From the perspective of the proportion of short-term debt structure in the sample data, the two main short-term debt financing methods, short-term borrowing and commercial credit, are in a trade-off relationship.

(3) Through the theoretical model of commodity price fluctuation and monetary policy response, the theoretical model of commodity price fluctuation and interest rate policy response, and the theoretical model of commodity price fluctuation and fiscal and tax policy response, the comprehensive evaluation of free trade port investment under macroeconomic support can be realized. The time series of money supply growth rate, commodity interest rate, commodity tax point, and economic growth rate prediction data is stable, indicating that the prediction results are relatively accurate as a whole.

Although the above research has made some progress, there are still shortcomings. The next research work needs to be further studied. The specific contents are as follows:

(1) We will promote the development of the logistics system and supporting facilities and actively play the pivotal role of an international shipping center. Build a transportation network between the free trade port and its hinterland, and improve the logistics service function of the free trade port.

(2) The next step needs to create a good policy environment and vigorously promote the development of free trade port ecological zone, logistics park, and other industries.

(3) Under the background of the steady rise of economic conditions and the gradual strengthening of opening up, the development of free trade ports is the driving force of economic construction, which makes the comprehensive evaluation of an investment in free trade port develop better and better.

Data Availability

The data used to support the findings of this study are included within the article.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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