

Internal Financial Performance Evaluation Model of Small Enterprises under New Financial Accounting System

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Abstract: In order to study the internal financial data of small enterprises better, this paper puts forward an internal financial performance evaluation model of small enterprises based on the new financial accounting system. Firstly, the financial performance evaluation algorithm of the new financial accounting system is optimized based on the measurement dimension principle, so as to obtain the parameter characteristics of financial budget and information management. According to the parameter characteristics, the concept is defined under the performance evaluation standard principle, so as to effectively integrate and classify the financial performance information, and finally realize the design of the internal financial performance evaluation model for small enterprises. Finally, the experiment proves that the internal financial performance evaluation model of small enterprises under the new financial accounting system is more accurate and practical than the traditional performance evaluation model.

Keywords: Financial accounting; Small businesses; Financial performance; Financial performance

1. Introduction

Enterprise financial management mode is an organic combination of management system, management department, management personnel, project division of labor and other elements designed to realize the overall strategic and financial objectives of the enterprise, which exists within the overall management framework of the enterprise [1]. Therefore, the financial management mode of an enterprise must conform to the general environment, be modular and renewable, be determined by the strategic objectives of the enterprise, and react on the strategic objectives of the enterprise. In the small situation, the traditional enterprise financial management theory needs to be updated urgently. The traditional enterprise financial management model has been difficult to adapt to the needs of the times. Therefore, exploring the management, survival and development of small enterprises, especially the financial management model suitable for small enterprises, has both theoretical and practical necessity [2]. Starting from the relevant theories of financial management, this paper decomposes the financial management mode of small enterprises into six aspects: financial organization mode, accounting information disclosure mode, budget management mode, enterprise performance evaluation mode, financial information management mode and capital management mode, and studies the interaction mechanism of the above sub-modes [3]. On this basis, it puts forward assumptions and verifies them through empirical research. Starting from the new finan-

cial accounting system, it analyzes the logical starting point of accounting theory. It also analyzes network finance theory, corporate governance and financial governance theory, accounting information disclosure theory, comprehensive budget management, enterprise performance evaluation theory, etc., and then discusses small and information theory. This paper analyzes the specificity of small enterprises and defines the scope of the small enterprises studied in this paper [4]. After that, it analyzes the differences between the financial management process of small enterprises and that of traditional enterprises, determines the characteristics of the financial management process of small enterprises, and describes the financial management process of small enterprises.

2. Internal Financial Performance Model of Small Enterprises Based on New Financial Accounting System

2.1. Financial performance evaluation algorithm of new financial accounting system

To a large extent, the improvement of financial performance level can be regarded as a sign of the rapid growth of small and medium-sized enterprises. The improvement of financial performance of small and medium-sized enterprises and the growth of small and medium-sized enterprises can be regarded as different manifestations of the same thing. The two are highly consistent [5]. Therefore, financial activities and financial performance in a dynamic sense not only have an important impact on the

growth of SMEs, but also can reflect the growth of SMEs [6]. It is necessary to point out in particular that, except for the financial resources invested by the founders of the enterprise when the enterprise was established, the increment of the financial resources of the enterprise results from the profits created by the enterprise or the external financing behavior of the enterprise, and the stock of financial resources formed in the development process

of the enterprise will affect the financial activities and financial performance of the enterprise in the future. Therefore, financial resources in a static sense are intrinsically related to financial activities and financial performance in a dynamic sense. Finance plays an extremely important role and significance in the growth of small and medium-sized enterprises, as shown in the figure.

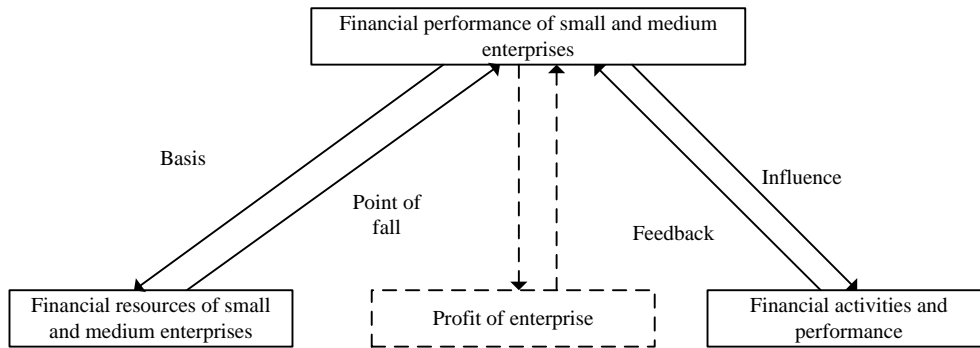


Figure 1. Enterprise financial performance structure

Whether it is reasonable to regard small and medium-sized enterprises as living organisms, here we answer this question. In order to analyze the life characteristics of small and medium-sized enterprises, we first need to clearly understand the essence of life [7]. At present, there is no clear definition of life. Researchers from different disciplines often emphasize one aspect of life from this discipline when defining life. there are n samples of listed companies. each sample observes p index variables X1, X2, ..., Xn to obtain the original data matrix

$$X = \begin{pmatrix} x_{11}, x_{12}, x_{13}, \dots, x_{1p} \\ x_{21}, x_{22}, x_{23}, \dots, x_{2p} \\ \dots \\ x_{n1}, x_{n2}, x_{n3}, \dots, x_{np} \end{pmatrix} = (x_1, x_2, x_3, \dots, x_p) \tag{1}$$

Where x represents the company's nth financial value. Because the dimensions of each index are different, and the differences between the data are also great, standardization should be carried out before calculation, so that indexes with different dimensions can be converted into indexes with the same measurement, and the indexes are comparable [8]. After standardization, the average value of each variable is, and the variance is, approximately obeying the standard normal distribution. Standardized treatment is as follows

$$T_{ij} = \frac{x_p - ER}{2\sqrt{DX}} \tag{2}$$

Where DX is the original financial data and ER is the expected financial data. Its algorithm is:

$$ER = \frac{1}{2n} \sum_{n=1}^p X + DX$$

$$= \frac{1}{n-1} \sum_{n=1}^p (2X_p \oplus DX)^2 (i=1,2,\dots,n; p=1,2,3,\dots, j) \tag{3}$$

Let T_{ij} be the index processed by the enterprise financial standard, and calculate the financial sample [9]. Let the correlation coefficient algorithm between the standardized enterprise financial index parameters I and J be as follows:

$$e = \frac{\text{cov}(T_{ij})}{2\sqrt{ER * DX}} = \text{cov} X(T_i, T_j) \tag{4}$$

According to the above algorithm to design the relationship coefficient matrix, the algorithm is:

$$W = \text{cov} \begin{bmatrix} T_{11}, T_{12}, T_{13}, \dots, T_{1j} \\ T_{21}, T_{22}, T_{23}, \dots, T_{2j} \\ \dots \\ T_{i1}, T_{i2}, T_{i3}, \dots, T_{ij} \end{bmatrix} = \text{cov} \frac{1}{2n} T_{ij} \tag{5}$$

Combined with the above algorithm, the key financial parameters are extracted, and the feature importance is set to a1≥a2≥a3 at one time. The main component acquisition algorithm of the unit feature vector is as follows:

$$a_1 = \begin{pmatrix} a_{11} \\ a_{21} \\ a_{31} \\ \dots \\ a_{p1} \end{pmatrix}, a_2 = \begin{pmatrix} a_{11} \\ a_{22} \\ a_{23} \\ \dots \\ a_{p2} \end{pmatrix}, a_3 = \begin{pmatrix} a_{1p} \\ a_{2p} \\ a_{3p} \\ \dots \\ a_{p2} \end{pmatrix} \quad (6)$$

According to the above algorithm to calculate the financial component parameters, select the first K main characteristic components, and calculate the contribution rate of all the observed index information, so as to obtain:

$$h = \sum_{n=1}^p (a_1 \rightarrow a_2 \rightarrow a_3) / \prod 2We \quad (7)$$

According to the above algorithm, the internal financial information of small enterprises can be effectively collected and the relationship between characteristic parameters can be obtained so as to evaluate performance parameters. In order to ensure the accuracy of estimation, performance evaluation standards need to be further standardized.

2.2. Performance evaluation standards and norms based on new financial accounting system

According to the previous algorithm, the performance parameters are classified into grades so as to standardize the characteristic parameters of different grades [10]. The following principles shall be followed in the process of setting the financial performance evaluation standards:

Principle of Identity: As a kind of economic organization, the production and sale of products or services required by the society is the inevitable way for small and medium-sized enterprises to survive and grow, which requires the input of capital, equipment, technology, talents and other factors. These resources are essential for any small and medium-sized enterprise. Therefore, the above-

mentioned problems should be taken into account in the evaluation process, and performance parameters should be designed and evaluated.

The principle of orderly structure: small and medium-sized enterprises have many different functional departments, and each functional department has a specific responsibility to complete a certain part of tasks in the enterprise operation process. Different functional departments communicate with each other and coordinate with each other to form an orderly whole. In the process of evaluation on this basis, the structural sequence should be standardized.

Stress principle: small and medium-sized enterprises need to respond to changes in the external environment, take advantage of opportunities arising from environmental changes and avoid risks brought about by them, so as to achieve better survival and growth. Compared with large-scale enterprises, small and medium-sized enterprises often have more sensitive irritability, which is manifested in their more flexible management mode and can change with the environment at any time.

Steady-state principle: small and medium-sized enterprises in the process of rapid development with the environment and dynamic changes become an inevitable choice, but maintaining a certain stability is still a prerequisite for their normal operation. In the long run, the organizational structure of small and medium-sized enterprises is dynamic, but in a certain period of time the organizational structure still needs to maintain sufficient stability, otherwise the enterprise may fall into confusion with unclear departmental responsibilities.

According to the above principles, the financial system model of small and medium-sized enterprises is constructed, as shown in the figure.

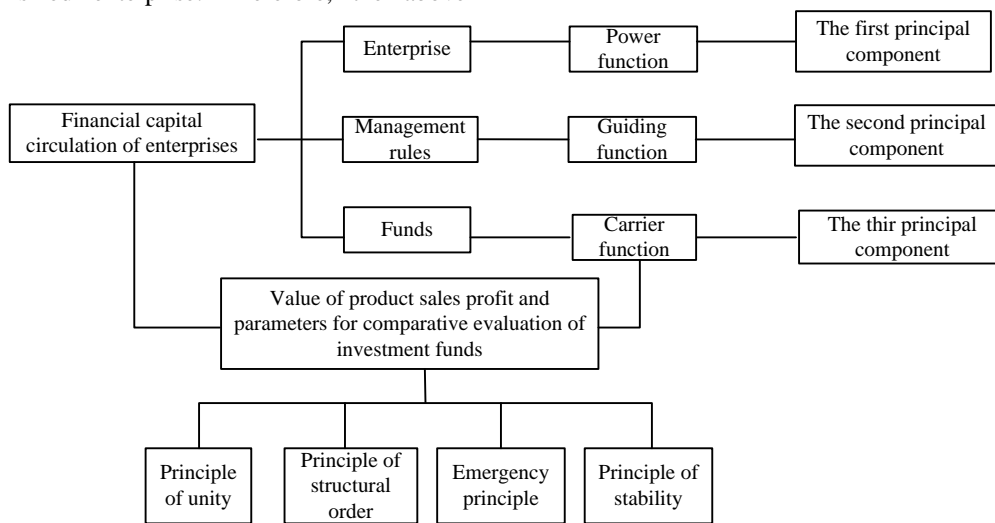


Figure 2. Operating rules of small enterprise financial system

According to the above rules, grade evaluation is conducted. If the coefficient of the first principal component of the financial performance parameter has the same number, under the influence of the coefficient, if the first principal component score value is negative and the absolute value is larger, the better the comprehensive financial performance is, so first principal component can be named as the principal component of the comprehensive financial performance. Analyzing the coefficient of the second principal component, the coefficient corresponding to debt paying and operating ability index is positive sign, and the coefficient corresponding to profitability and growth ability index is negative sign. According to the emerging enterprise theory in the field of strategic management in recent years-enterprise core competence theory, the core competence of an enterprise is a combination of a series of complementary skills and knowledge within an organization, and is a knowledge system that can provide enterprise competitive advantages. Financial core competence is an important component of the core competence of an enterprise. It is the sustainable profitability and growth capability of an enterprise. It is a combination of profitability and growth capability. It can directly bring sustainable competitive advantages to an enterprise. The comprehensive function of profit and

growth is called sustainable profit growth ability, which is the core financial ability of an enterprise. Under normal circumstances, the smaller the score value of the second principal component in the enterprise's financial performance evaluation, the stronger the listed company's financial core competence. The third principal component reflects the financial management objective of an enterprise under the multi-objective theory, which is based on the coordination of debt paying and profitability, or on the coordination of operation and growth. Debt service and profitability are indicators of concern to external stakeholders of listed companies, while operation and growth capability are indicators of concern to internal operators. If the score value of the third principal component is larger, it indicates that the financial management objective pursued by the listed company is the coordination of debt service and profitability, while if the score value of the third principal component is smaller, it indicates that the financial management objective pursued by the listed company is the coordination of operation and growth capability. List and compare the grade parameters of enterprise financial performance evaluation components. The specific information is shown in the following table:

Table 1. Grade parameters of financial performance evaluation components for small enterprises

Indicator name	The First principal component	The Second principal component	The Third principal component
Quick ratio	0.1250	0.2545	0.3589
debt ratio	0.1514	0.2854	0.3648
Equity Ratio	0.1548	0.2564	0.3484
turnover rate of funds	0.1245	0.2454	0.3145
turnover of fixed assets	0.1254	0.2453	0.3454
Total asset turnover	0.1561	0.2481	0.3647
Profit margin	0.1402	0.2481	0.3451
Net profit	0.1345	0.2634	0.3824
Net assets	0.1394	0.2849	0.3484
Increase business	0.1429	0.2745	0.3548
Growth rate of capital accumulation	0.1397	0.2487	0.3647

According to the above table, the financial performance coefficient is divided. If the coefficient corresponding to debt service and profitability index is negative, then the performance evaluation result is relatively poor and vice versa.

2.3. Realization of financial performance evaluation

It is of course important to evaluate the financial performance of listed companies and meet the information needs of all stakeholders. However, it is also a topic of great concern to the theoretical and business circles to explore the influencing factors of the financial performance of companies and provide basis for improving the financial performance and management of companies. In recent years, experts and scholars at home and abroad

have conducted a large number of studies, which have been combed in the literature review. The main factors that affect enterprise performance include external and internal factors. The external environment is complex and changeable, and has an important impact on enterprise performance. In summary, the external factors that affect enterprise performance mainly include institutional factors, policy and legal factors, economic operation environment, culture and values, and other internal factors include organizational structure and organizational form, human resources and management, financial policy and financial management, enterprise culture and innovation mechanism, etc. This article does not discuss the external environmental factors that affect the company's financial performance, but focuses on the internal reasons that

affect the company's financial performance. In view of the quantification and availability of indicators, this paper only discusses the influence of internal factors on the financial performance of listed companies from the as-

pects of equity structure, proportion of independent directors, executive compensation, capital structure, enterprise scale, etc., and studies its relevance. The specific structure is as follows:

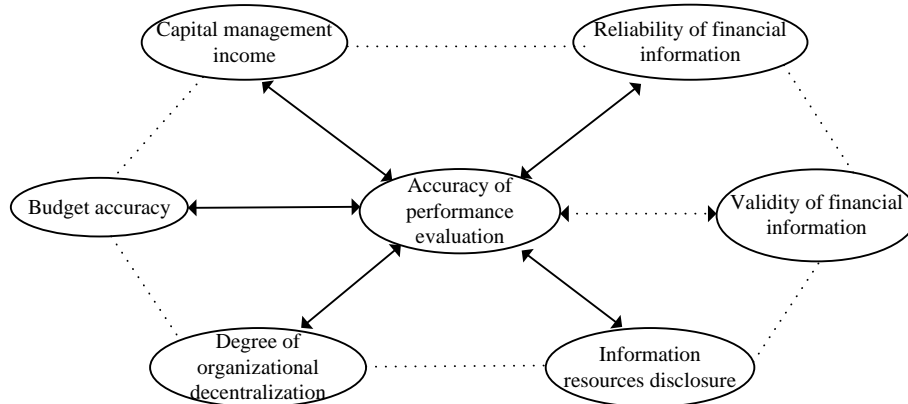


Figure 3. Relationship analysis of influencing factors of financial performance evaluation

Assuming that there is an interaction between the modes of the connection, the arrow pointing indicates the direction of action, i.e. the mode emitting the arrow acts on the mode pointed by the arrow. What needs to be explained is that according to the literature, there is no clear correlation between the level of capital management income and the reliability and validity of financial information. Capital management income is a part of enterprise performance. Although its level has obvious influence on enterprise performance, it has nothing to do with the accuracy of performance evaluation. No significant correlation was found between budget accuracy and voluntary disclosure of accounting information. Therefore, in the assumption, there is no connection to the above relationship. However, capital management indirectly affects the accuracy of performance evaluation by acting on budget accuracy, while the reliability and validity of financial information indirectly affects the voluntary degree of information disclosure by acting on the accuracy of performance evaluation. According to the above-mentioned evaluation influencing factors, the financial performance evaluation of small enterprises is optimally designed with specific structure as follows:

According to the above steps, the internal information and development trend, market positioning, environmental factors and other information of the enterprise are integrated and analyzed. As performance evaluation depends on the accuracy of first-hand information, namely, the reliability and validity of financial information. Generally speaking, if an enterprise has a high degree of informatization, a reasonable financial management pro-

cess and an effective integration of capital flow, logistics and information flow, it is conducive to the correct preparation of financial statements. Therefore, the accuracy of performance evaluation will be relatively high. As the accuracy of enterprise performance evaluation is closely related to the degree of informatization, in order to ensure the accuracy of performance evaluation, the hypothesis of financial performance evaluation is tested on the basis of the previous methods, specifically as follows:

- Hypothesis 1a: The degree of decentralization of financial organizations has a significant positive impact on the voluntary degree of accounting information disclosure.
- Hypothesis 1b: The learning ability of financial organizations has a significant positive effect on the voluntary degree of accounting information disclosure.
- Hypothesis 1c: The degree of financial organization decentralization has a significant negative impact on budget accuracy.
- Hypothesis 1d: Financial organizational learning ability has a significant positive impact on budget accuracy.
- Hypothesis 1e: The degree of financial organization decentralization has a significant positive impact on the accuracy of enterprise performance evaluation.
- Hypothesis 1f: Financial organizational learning ability has a significant positive impact on the accuracy of enterprise performance evaluation.
- Hypothesis 1g: The degree of decentralization of financial organizations has a significant positive impact on the reliability of financial information.

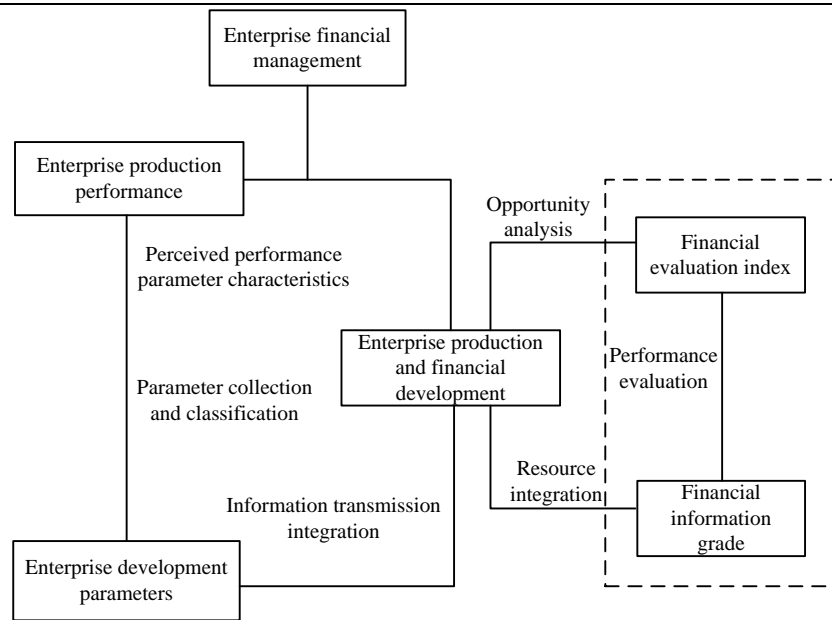


Figure 4. Internal financial performance evaluation method for small enterprises

Hypothesis 1j: Financial organizational learning ability has a significant positive impact on the validity of financial information.

Suppose 1k: The degree of decentralization of financial organizations has a significant positive impact on capital management income.

Suppose 1l: Financial organizational learning ability has a significant positive impact on capital management income.

Hypothesis 2: Budget accuracy has a significant positive impact on the accuracy of enterprise performance evaluation.

Hypothesis 3: The accuracy of enterprise performance evaluation has a significant positive impact on the voluntary degree of accounting information disclosure.

Hypothesis 4a: The reliability of financial information has a significant positive effect on the voluntary degree of accounting information disclosure.

Hypothesis 4b: The validity of financial information has a significant positive effect on the voluntary degree of accounting information disclosure.

Hypothesis 4c: The reliability of financial information has a significant positive impact on budget accuracy.

Hypothesis 4d: The validity of financial information has a significant positive impact on budget accuracy.

Hypothesis 4e: The reliability of financial information has a significant positive impact on the accuracy of performance evaluation.

Hypothesis 4f: The validity of financial information has a significant positive impact on the accuracy of performance evaluation.

Hypothesis 5a: Capital management income has a significant positive effect on the voluntary degree of accounting information disclosure.

Hypothesis 5b: Capital management income has a significant positive impact on budget accuracy.

According to the above assumptions, screening and comparison will be carried out item by item to achieve an accurate evaluation of financial performance.

3. Analysis of Experimental Results

In order to verify the accuracy of the internal financial performance evaluation model of small enterprises under the new financial accounting system, a comparative experiment was conducted. 12 small financial enterprises in a city were randomly selected for data collection, and a six-month follow-up survey was designed to record the financial performance parameters. The traditional performance evaluation method and the method in this paper were respectively used for comparison and detection. For convenience of recording, the traditional method was marked A and the method in this paper was marked B. Collect, classify and evaluate financial information. In the evaluation process, KPI, EVA and BSC parameters are the most important evaluation index parameters. It has a direct impact on the accuracy of its evaluation results, so the three parameters are compared in the experimental process, and the results are as follows:

Observing the above comparative test results, it is not difficult to find that although KPI, EVA and BSC curves are relatively high compared with the test results of group a, the normalization characteristics among the three are relatively poor. In other words, in the above circumstances,

es, the performance evaluation of the internal finance of an enterprise is prone to the phenomenon of many conclusions, which makes it difficult to accurately know the financial information and development of the enterprise.

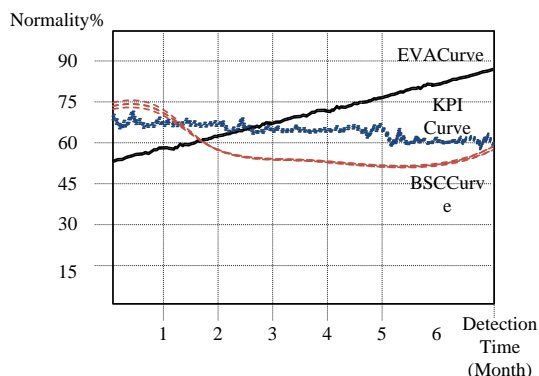


Figure 5. Test result A

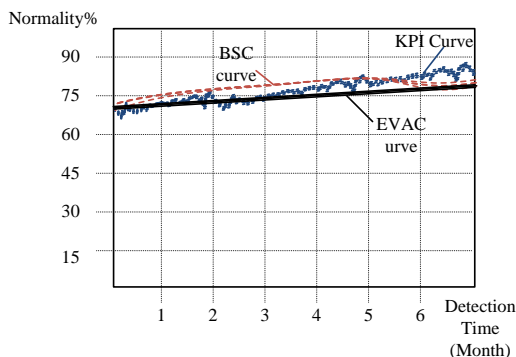


Figure 6. Test result B

Moreover, in the test results of group a, the EVA curve has a very high rise rate. However, BSC and KPI curves are in a slow downward trend, among which BCS curves are obviously unstable. In this case, performance analysis based on its evaluation results is easy to cause problems such as poor analysis effect, too large error parameters and so on, and the reliability of its output evaluation information is not high. On the contrary, the realization result B shows that the three important curves are basically in the same direction, showing a slow upward trend, and the normalization effect is significantly higher than that of group A. This proves that the internal financial performance evaluation model of news enterprises based on the new financial accounting system has higher accuracy and stability than the traditional model, and can better carry out integrated analysis and performance evaluation on financial information.

4. Conclusion

This paper analyzes the characteristics of the financial management of small-sized enterprises in our country, recombs the business process of the financial management of enterprises, and reveals the components of the financial management mode of small-sized enterprises in our country. And combined with the new financial accounting system to define the concept of each sub-model and extract the dimensions, and then build the mechanism model of each sub-model. On this basis, assumptions are put forward and verified by empirical research. Finally, experiments prove that the internal financial performance evaluation model of small enterprises based on the new accounting system has higher accuracy and use value, and fully meets the research requirements.

References

- [1] Wang Lijun, Gao Jinglan. Construction of enterprise financial performance evaluation system based on balanced scorecard. *China International Finance and Economics* (Chinese and English). 2017, 24(3), 231-232.
- [2] Li Wei, Ou Ling. Research on performance evaluation of enterprise financial sharing center-based on balanced scorecard. *Foreign Trade and Economic Cooperation*. 2017, 22(11), 161-166.
- [3] Wu Pengjuan. Research on the problems and countermeasures in the performance evaluation of the company's financial management. *Modern Economic Information*. 2017, 16(12), 222-222.
- [4] Wang Mengqian, Ding Shuo, Yue Ningning, et al. Research on financial performance evaluation of listed companies based on cloud computing concept. *Times Finance*. 2017, 14(33), 160-162.
- [5] Meng Tingyu, Zhu Jiaming. Research on financial performance evaluation of GEM listed companies based on factor analysis. *Journal of Anhui Science and Technology University*. 2018, 141(2), 108-112.
- [6] Fan Shuhai, Ling Ning. Enterprise financial performance evaluation based on AHP-TOPSIS model. *Friends of Accounting*. 2018, 23(6), 78-80.
- [7] Che Meng, Li Xiaoshuai, Zhang Yan. Financial performance evaluation and countermeasure analysis of listed companies in electric power industry. *Finance and Finance*. 2018, 172(02), 51-55+91.
- [8] Li Meiyang. Research on the establishment of benefit evaluation system for enterprises based on central enterprise financial performance evaluation index system. *Accounting Learning*. 2018, 45(12), 30-30.
- [9] Meng Zeni. Research on financial performance evaluation of listed companies based on radar chart method-taking petrochina as an example. *Business Accounting*. 2018, 25(7), 42-44.
- [10] Ma Liying, Guo Huizhen. Financial performance evaluation of enterprises based on factor analysis-taking unmanned vehicle industry as an example. *Journal of Chizhou University*. 2018, 32(04), 45-50.