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Valuation of "Little Giant" Specialized and Sophisticated Enterprises based on the FCFF-BS Model

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Abstract

Combined with the characteristics of high growth, high R&D investment and strong operational flexibility of "little giant" enterprises, the real option theory is introduced on the basis of the traditional income method to construct an evaluation model suitable for "small giant" enterprises, and the existing value and potential value of enterprises are comprehensively considered. Through the analysis of Fuji-ta enterprises, the rationality of the FCFF-BS model on the enterprise valuation of "Little Giant" is verified, which provides a reference for further enriching the enterprise valuation of "Little Giant".

Keywords

Specialized; Special and New "Little Giant" Enterprises; FCFF-BS Model; Valuation.

1. Introduction

In 2011, the Ministry of Industry and Information Technology issued the "12th Five-Year Plan for the Growth of Small and Medium-sized Enterprises," which first mentioned the concept of "specialized, refined, distinctive, and innovative" enterprises. In 2018, to address challenges in industrial development, the state actively cultivated a group of "little giant" enterprises dedicated to overcoming key core technologies [1]. The report of the 20th National Congress of the Communist Party of China also explicitly stated the need to vigorously develop specialized, refined, distinctive, and innovative enterprises. By 2024, China had selected and nurtured over 14,000 specialized, refined, distinctive, and innovative "little giant" enterprises. These enterprises focus on niche markets and have successively become important pillars of high-quality development in China's manufacturing sector, accelerating the resolution of core technological challenges to some extent, and possessing strong innovation, R&D capabilities, and supporting capacities[2]. At the same time, these "little giant" enterprises, with their outstanding quality and performance levels, have emerged as "vanguard" enterprises in various industries[3], playing a critical role in integrating scientific and technological innovation resources, leading the development of strategic emerging industries and future industries, and accelerating the formation of new productive forces [4].

At present, China attaches more and more importance to the cultivation of "little giant" enterprises, elevates the cultivation and development of "little giant" enterprises to a national strategic level, and has issued a series of policies and measures for the development of "little giant" enterprises [5]. With the strong support of the state, they have initially formed a scale, and have gradually become an area of great concern in China's capital market, and have also become an important driving force for the development of China's real economy. As a type of enterprise that the state has vigorously supported in recent years, "little giant" enterprises should find suitable methods to evaluate the value of "little giant" enterprises, and reasonably evaluate the value of enterprises, which will help investors have a deeper understanding of "little giant" enterprises, help them obtain more external funds, and promote better development of

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enterBased on the comprehensive characteristics of "small giant" enterprises, this paper evaluates them based on the traditional valuation method and the real option method, and uses the gray prediction model to predict Fuji-ta's free cash flow[6]. In order to make up for the shortcomings of traditional valuation methods on the potential value evaluation of "little giant" enterprises, and also make a certain contribution to enriching the value evaluation of specialized, special and new "little giant" enterprises.

2. Analysis of the Characteristics of "Little Giant" Enterprises and the Applicability of Traditional Evaluation Methods

2.1. Characteristics of "Little Giant" Enterprises

"Little giant" enterprises refer to enterprises with the characteristics of "specialization, refinement, specialty, innovation, product and chain". Among them, the proprietary and professional products and technologies of the enterprise enable the enterprise to better gain a foothold in the market and enhance its core competitiveness; The fineness and meticulousness of production technology and management are an important driving force for the steady development and enhancement of efficiency of "little giant" enterprises; The uniqueness of products and processes distinguishes it from other enterprises to provide differentiated advantages of high-quality products and services, and the market share is gained in the subdivided field. The innovative characteristics of technology and strategy determine that it attaches great importance to R&D investment, R&D expenditure is higher than that of ordinary enterprises, and its business model is usually more flexible than that of large enterprises, and can quickly adapt to market changes.

2.2. Applicability Analysis of Traditional Assessment Methods

2.2.1. Market Approach

When applying the market approach for valuation, it requires an open and active market with a substantial number of comparable transaction cases. However, "Little Giant" enterprises (specialized and sophisticated enterprises) exhibit strong innovation capabilities, and even among enterprises with similar levels of innovation, there are significant differences in their technological R&D methodologies. Furthermore, these enterprises possess distinctive products that hold specific positions in niche markets. Their specialization and refinement levels make them difficult to replace, which consequently creates challenges in identifying appropriate comparable enterprises in the market. Therefore, the market approach demonstrates certain limitations when valuing "Little Giant" enterprises.

2.2.2. Cost Approach

When using the cost method, the replacement cost is first forecasted and then the corresponding depreciation is deducted. Since the cost method is mainly based on the historical cost of the enterprise, it ignores the future benefits of the existence of the enterprise. With the deepening of the country's attention to "little giant" enterprises, patents and standards have become strategic resources for the development of "little giant" enterprises and key elements to enhance their competitiveness. However, for the cost approach, it is difficult to estimate the income from intangible assets.If you ignore the future benefits of its existence, you will not be able to properly assess the value of the enterprise.

2.2.3. Income Approach

When using the income method for valuation, the future earnings of the company's assets are mainly considered. Comparing the three traditional valuation methods, the income method can accurately assess the value of the existing assets of the "little giant" enterprise. However, according to the characteristics of the "little giant" enterprise, it can be seen that the company's

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products are distinctive and there is a large investment in innovation and R&D in its daily business activities, so that it cannot be converted into revenue on the basis date of evaluation, so if the income method is only used to evaluate the value of the "little giant" enterprise, the R&D investment brought by it will be ignored Potential value, underestimation of enterprise value.

3. "Little Giant" Enterprise Valuation Model

Compared with the above three traditional valuation methods, the income method is more in line with the value evaluation of "little giant" enterprises than the market method and the cost method. Considering the potential value brought by the innovation and R&D of "little giant" enterprises, this paper mainly introduces the B-S model in the real option method to make up for the undervaluation of the enterprise caused by the income method alone. The main idea of model construction is as follows: the income method and the real option method are combined to evaluate the total value V of the enterprise, in which the two-stage FCFF model is used to evaluate the current value of the enterprise (V1), mainly because the "little giant" enterprises will not always develop at a high growth rate in the development process, and will gradually tend to develop at a stable rate in the later stage of development. Combined with the B-S model to evaluate the potential value of the enterprise (V2), and then the overall value of the enterprise is obtained through V=V1+V2.

3.1. FCFF FCFF Model Assesses the Current Value of Enterprises (V1)

3.1.1. FCFF Model Construction

The FCFF model is primarily based on the company's free cash flow and reflects the current value of the business. In this paper, a two-stage FCFF model is constructed, and the formula for calculating the current value of an enterprise is as follows:

$$V_i = \sum_{n=1}^{N} \frac{FCFF_n}{(1+WAC\ )^n} + \frac{FCFF_{n+1}}{(WACC\ )\times(1+WAC\ )^n} \quad (1)$$

In Equation (1): FCFFt is the free cash flow of the enterprise in year t; WACC is the discount rate; g is the sustainable growth rate of the enterprise after the nth year.

3.1.2. FCFF Model Parameters are Determined

1) Free cash flow

The free cash flow of a firm represents the cash flow available to shareholders and creditors, which can be expressed as the sum of net operating profit after tax and depreciation & amortization, minus capital expenditures and the increase in operating working capital.

2) Determination of Discount Rate

The FCFF model assesses the value of a business based on its free cash flow. When considering the cost of capital, it is necessary to consider all sources of capital, so the weighted average cost of capital is used to calculate. It is calculated as follows:

$$WACC = R_e \times \frac{E}{D+E} + R_d \times (1-T) \times \frac{D}{D+E} \quad (2)$$

In Equation (2): $\frac{E}{D+E}$ is the proportion of equity capital; $\frac{D}{D+E}$ is the proportion of debt capital;T is the income tax rate; Rd is the cost of debt capital; Re is the cost of equity capital, which can be expressed by the formula Re=Rf+β×(Rm-R); Rf is the risk-free rate, and in practice, the five-year Treasury bond rate is often used as the risk-free rate. Referring to the previous practical

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experience, this paper also uses the 10-year treasury bond interest rate as the risk-free rate of return. Rm is the market rate of return, which generally selects a representative index in the securities market, or uses a geometric average to calculate; β coefficient is used to measure the volatility of a company's stock relative to the overall capital market, which can be queried through a database such as Guotaian or software such as Quick.

3.2. B-S B-S Model Assesses the Potential Value of Enterprises (V2)

3.2.1. B-S Model Construction

Traditional FCFF models don't fully reflect the true value of a business because it doesn't take into account the potential value of a business. In contrast, the real option method is able to quantify the underlying value more comprehensively by considering the uncertainty of the underlying asset. The formula is as follows:

$$V_2 = SN(d_1) - Xe^{-r}\ N(d_2) \tag{3}$$

$$d_1 = \frac{\ln\frac{S}{X} + \left(r + \frac{\sigma^2}{2}\right)T}{\sigma\sqrt{T}} \tag{4}$$

$$d_2 = d_1 - \sigma\sqrt{T} \tag{5}$$

In Equation (3)(4)(5): S is the current value of the underlying asset; X is the execution price for the enterprise; T is the expiration date; σis volatility; r is the risk-free rate.

3.2.2. Determination of B-S Model Parameters

1) The current value (S) of the business. The FCFF model is used to obtain the existing value of the enterprise and represent the current value of the enterprise.

2) Strike Price (X). Real option valuation theory treats the value of a firm's equity as a call option. When the liabilities of the business exceed the assets of the business, the business will cease to operate. Therefore, the total liabilities of the enterprise can be considered as the strike price X.

3) Volatility (s). Volatility refers to the standard deviation of the return on the underlying asset and can be calculated based on the historical closing price of the company's stock.

4) Real option expiration date (T). Mainly according to the future development of the enterprise, the duration of the forecast period is selected.

5) Risk-free rate (R). The risk-free rate is usually expressed in Treasury yields depending on the situation.

4. Case Study of "Little Giant" Enterprise Valuation

4.1. Fuji-ta Company Profile

AVIC Fuji-ta Technology Co., Ltd. (hereinafter referred to as "Fuji-ta") was established in 2002 and listed on the Beijing Stock Exchange in January 2021 (stock code: 835640), and was successfully selected into the third batch of specialized and new "little giant" enterprises in 2021. As a "little giant" enterprise, Fuji-ta's products cover high-tech tracks such as military defense, 5G communications, and satellite Internet, and are closely aligned with 5G communicationsnavigation systems and other national strategic needs. The company has formulated 11 IEC (International Electrotechnical Commission) international standards, and is the enterprise with the most IEC standards in the field of RF connectors in China, breaking the long-term dependence on imports for high-end products. Its total number of patents has reached more than 170, of which more than 30 technologies have filled the domestic gap,

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especially in the field of micro connectors, and has accumulated rich experience in production technology. Its technical layout takes into account the existing market and the future growth point of the third generation of semiconductors, and is a benchmark enterprise in the field of electronic ceramics in China, and a communication equipment enterprise at the forefront of the list of "little giant" enterprises. Fuji-ta is not only outstanding in terms of technical strength, but also ranks in the forefront of the specialized and new small giant integrated circuit industry in terms of market value.

4.2. Valuation of the Existing Value of the Enterprise

Based on the above analysis, the two-stage model in the FCFF model is used to evaluate the current value of Fuji-tec enterprises, and the current value of Fujitec enterprises is calculated based on the annual reports of enterprises.

4.2.1. Forecast of Corporate Free Cash Flow

1) Analysis and forecast of operating income

In the process of predicting the future operating income of Fuji-ta, this paper constructs a fitting function to determine the predicted value based on the company's operating income from 2020 to 2024 in the financial statements of the enterprise (see Table 1 Table 2 Table 3).

Table 1. Fuji-tec's annual operating income GM(1,1) model-level ratio table

Serial number	Raw value	The ratio of the grade λ	Raw Value + Shift Value of Translation Conversion (shift=7)	The converted grade ratio λ
2015.0	4.514	-	12.514	-
2016.0	4.788	0.943	12.788	0.979
2017.0	4.145	1.155	12.145	1.053
2018.0	3.925	1.056	11.925	1.018
2019.0	5.181	0.758	13.181	0.905
2020.0	5.414	0.957	13.414	0.983
2021.0	6.033	0.897	14.033	0.956
2022.0	8.085	0.746	16.085	0.872
2023.0	8.151	0.992	16.151	0.996
2024.0	7.628	1.069	15.628	1.033

Table 2. Fuji-tec Operating Income Model Forecast Value Table

serial number	Raw value	Predicted value
2015.0	4.514	4.514
2016.0	4.788	3.830
2017.0	4.145	4.306
2018.0	3.925	4.801
2019.0	5.181	5.316
2020.0	5.414	5.852
2021.0	6.033	6.409
2022.0	8.085	6.989
2023.0	8.151	7.592
2024.0	7.628	8.219
1 stage backwards	-	8.871
2 periods backwards	-	9.550
3 periods backwards	-	10.256
4 periods backwards	-	10.990
5 periods backwards	-	11.754

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Table 3. Operating income forecast

project	2025 years	2026 years	2027 years	2028 years	2029 years
Operating income (100 million yuan)	9.45	12.39	16.26	21.34	27.99

2) Analysis and prediction of costs and expenses

As shown in Table 3, according to the calculation of the company's financial statements, Fuji-ta's operating costs accounted for an average of 6380% of operating income during the period from 2020 to 2024 years. The average of other expenses accounted for 1 01%, 1.08%, 3.04%, 7.97% and 0.38% of operating income, respectively.

Table 4. Fujitec 2018-2022 by cost and its proportion

project	2025 years	2026 years	2027 years	2028 years	2029 years
Operating income	54140	60330	80850	81510	76280
Operating costs	35320	37720	48990	47760	51340
Taxes and surcharges	318.7	524.9	825.2	1026	946.9
Selling expenses	1712	1981	2478	2163	1985
Management	4483	5025	5594	7551	6399
Financial expenses	342.3	294.4	154.6	144.1	149.3
Percentage of operating costs (%)	0.6524	0.6252	0.6059	0.5859	0.6730

According to the previous introduction, Fuji-ta enterprises are not only specialized, special and new small giant enterprises, but also high-tech enterprises, that is, their income tax can be calculated according to the tax rate (15%). According to the forecasted costs, Fuji-ta's net operating profit after tax for 2025-2029 is calculated, as shown in Table 5.

Table 5. Fuji-ta 202 5-2029 Costs and expenses Unit: 10,000 yuan

project	2025 years	2026 years	2027 years	2028 years	2029 years
Operating income	88710	95500	102560	109900	117540
Operating costs	56595.85	60927.78	65431.97	70114.80	56595.85
Taxes and surcharges	894.16	962.60	1033.77	1107.75	1184.76
Selling expenses	2694.91	2901.19	3115.66	3338.64	3570.74
Management	7069.47	7610.58	8173.20	8758.14	9366.99
Financial expenses	334.81	360.44	387.09	414.79	443.62
Income tax	960.39	1033.90	1110.34	1189.80	1272.51
Net operating profit after tax	20160.40	21703.50	23307.97	24976.08	26712.36

3) Depreciation and amortization forecast

From 2020 to 2024, the average ratio of depreciation and amortization to operating income of Fuji-ta enterprises was 3.14%. The depreciation and amortization forecast results for Fuji-tec from 2025 to 2029 are shown in Table 6 and Table 7.

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Table 6. Depreciation and amortization and proportion of Fujitec 2020-202 4 years

Project (10,000 yuan)	2020 years	2021 years	2022 years	2023 years	2024 years
Depreciation and amortization	1246.35	1406.24	2246.23	2943.16	4193.94
Depreciation and amortization (%)	0.0230	0.0233	0.0278	0.0361	0.0550

Table 7. Depreciation and amortization of Fujitec 2025-2029

Project (10,000 yuan)	2025 years	2026 years	2027 years	2028 years	2029 years
Operating income	2781.42	2994.31	3215.67	3445.81	3685.36
Amortization ratio (%)	0.0314	0.0314	0.0314	0.0314	0.0314

4) Capital expenditure forecast

From 2020 to 2024, the average ratio of Fuji-ta's capital expenditure to operating income was 8.62%. According to the results, Fuji-tec's capital expenditure forecast for 202 5-2029 is shown in Table 8 and Table 9.

Table 8. Fujitec's capital expenditure and its proportion in 2020-2024

Project (10,000 yuan)	2020 years	2021 years	2022 years	2023 years	2024 years
Capital expenditure	3626	10479.87	9732.04	7438.82	2708.75
Proportion of capital expenditure (%)	0.0670	0.1737	0.1204	0.0913	0.0355

Table 9. Fujitec's capital expenditure from 2025 to 2029

Project (10,000 yuan)	2025 years	2026 years	2027 years	2028 years	2029 years
Capital expenditure	10131.86	9473.30	8840.59	8232.03	7646.73
Proportion of capital expenditure (%)	0.0862	0.0862	0.0862	0.0862	0.0862

5) Projections of increase in working capital

From 2020 to 2024, the average ratio of Fuji-tec's working capital increase to operating income was 5.56%. Based on the results, the forecast of Fujitec's working capital increase from 2025 to 2029 is shown in Table 10 and Table 11.

Table 10. Fujitec's increase in working capital from 2020 to 2024 and its proportion

Project (10,000 yuan)	2020 years	2021 years	2022 years	2023 years	2024 years
Increase in working capital	15040	-1200	10070	8490	1040
Percentage of increase in working capital (%)	0.2778	-0.0199	0.1246	0.1042	0.0136

Table 11. Fujitec 2025-2029 increase in working capital

Project (10,000 yuan)	2025 years	2026 years	2027 years	2028 years	2029 years
Increase in working capital	4933.47	5311.09	5703.72	6111.92	6536.81
Percentage of increase in working capital (%)	0.0556	0.0556	0.0556	0.0556	0.0556

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6) Calculation of free cash flow

The free cash flow calculation formula yields the free cash flow as shown in Table 12.

Table 12. Fujitec's free cash flow from 2025 to 2029

Project (10,000 yuan)	2025 years	2026 years	2027 years	2028 years	2029 years
Free cash flow	10361.61	11154.70	11979.33	12836.67	13729.04

4.2.2. Determination of the Earnings Period

According to the company's development, the company's earnings period is determined to be five years from 2025 to 2029.

4.2.3. Calculation of Discount Rate

1) Debt cost of capital (Rd). In the process of determining the earnings period above, this paper determines Fuji-ta's earnings period as five years after 2024, so for the cost of debt capital involved in the formula, this paper uses the 5-year loan interest rate announced by the People's Bank of China to determine 3.6%.

2) The cost of equity capital (R)e can be calculated by the following formula:

$$R=R+\beta\times(R-R) \tag{6}$$

In Equation (6): Risk-free return Rf, determined by the 10-year Treasury bond interest rate of 1.68%. According to the β coefficient provided by the Guotaian database, the β value of Fujita from 2020 to 2024 is calculated to be 0.992. The average market yield can be understood as the average rate of return for all stocks and securities. Therefore, based on the average return of the CSI index over the past 25 years from 20 00 to 2024, the Rm is 14.58%. Substituting the numerical calculations yields a Re of 13.55%.

3) Weighted average cost of capital. According to the company's financial statements, the proportion of debt capital and equity capital is 41.45% and 58.55% respectively. WACC is 9.2%.

4)The present value of the enterprise. Based on the previous analysis, the forecasted cash flows of Fujida from 2025 to 2029 are 103.6161 million yuan, 111.547 million yuan, 119.7933 million yuan, 128.3667 million yuan, and 137.2904 million yuan, respectively. The discount rate is uniformly 9.2%. Accordingly, the discounted present values of the cash flows from 2025 to 2029 are calculated as 94.8865 million yuan, 102.1493 million yuan, 109.7008 million yuan, 117.5519 million yuan, and 125.7238 million yuan, totaling 550.0123 million yuan. Thus, the sum of the forecasted cash flows during the projection period is 550.0123 million yuan. Considering the development trend of Fujida, it is expected to gradually enter a stable phase after 2029. The national GDP growth rate of 4.97% is selected as the growth rate for the subsequent stable phase. Substituting the determined parameters into the formula yields V1 = 2,586.2228 million yuan.

4.3. Valuation of the Potential Value of the Enterprise

4.3.1. Present Value (S) of the Underlying Asset

Use the existing value of the enterprise to represent the current value of the enterprise, that is, S = 2586222800 yuan.

4.3.2. Option Strike Price (X)

Since the total liabilities of the enterprise can be regarded as the strike price X of the equity value of the enterprise, the option strike price of Fujitec is X = 520.4 million yuan.

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4.3.3. Volatility of the Underlying Asset(s)

The volatility of the underlying asset is the volatility of the asset stock in the market, and the standard deviation of the future return of the underlying asset is usually selected for measurement. The volatility of the stock is related to the time horizon chosen, so it is reasonable to choose the trading day data of the year before the base date. In this paper, the closing prices of Fuji-ta for 484 normal trading days from 2023 to 2024 are derived from the Guotaian database to calculate the logarithmic return, as shown in Table 12, and STDEVP in Excel is used The function calculates the standard deviation to be 4.04%, which is multiplied by the square root of the annual trading day to calculate the annual volatility of 88.83%.

Table 13. Fujitec 2024 stock closing price

date	Closing	Previous closing price
2023-01-04	16.08	16.08
2023-01-05	15.99	16.08
2023-01-06	15.81	15.99
2023-01-09	15.92	15.81
2023-01-10	16.03	15.92
2023-01-11	16	16.03
.....	.....	.....
2024-12-23	28.93	30.95
2024-12-24	29.86	28.93
2024-12-25	27.77	29.86
2024-12-26	30.34	27.77
2024-12-27	29.72	30.34
2024-12-30	28.9	29.72
2024-12-31	27.26	28.9

4.3.4. Exercise Period

According to the future development of the enterprise, the duration of the forecast period is selected as the execution time of the right of the right to be executed. Therefore, this article sets the exercise time at five years.

4.3.5. Risk-Free Rate

Based on the above analysis, the article mainly uses the 10-year Treasury bond interest rate of 1.68% as the risk-free rate.

4.3.6. Potential Value Assessment Results

Substituting the values of each parameter determined above into the calculation formula of B-S, the result is the potential value, which can be seen from the calculation result to be a potential value of $228,600.

$$d_1 = \frac{\ln\frac{S}{X}+\left(r+\frac{\sigma^2}{2}\right)T}{\sigma\sqrt{T}}=1.84$$

d2=d1-σT=-0.448

V2=SN(d1)-Xe-rTN（d2 ）=228,600 million yuan

4.4. Analysis of Assessment Results

The overall value of Fuji-ta is V1 + V2 = 258622.28 + 228,600 = 48722222800 yuan. Using the Straight Flush software, the average closing price on December 31, 2022 is 27.26 yuan, and the comparative analysis of the evaluation results is shown in Table 13. When the FCFF model is used alone for valuation, the appraised value is 258,622,280,800 yuan, and according

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to Fujitec's financial report for 2024, the total share capital of the enterprise is 187,728,000 shares, which is calculated Fuji-ta's shareholder's equity value is 13.78 yuan per share, with an error rate of 49.4 5% from the enterprise value. However, when using the combination model of income method and real option method to evaluate the enterprise value, Fuji-tec's shareholder equity value is 25.95 yuan per share, with an error value of 4.81%. According to the above evaluation results, it can be seen that when evaluating the "little giant" enterprises, the real option method can effectively evaluate the potential value of the enterprise, reduce the valuation error, and make the evaluation results closer to the real value of the enterprise.

Table 14. Comparative analysis of Fujitec's enterprise valuation results

Evaluate the model	Assessment results (10,000 yuan)	Error rate (%)
FCFF model	258622.28	49.45
FCFF-BS model	487222.28	4.81

5. Conclusion and Prospects

5.1. Conclusion

With the rapid development of science and technology and the strong support of national policies for specialized, special and new small giant enterprises, it is very important to use reasonable and effective methods to evaluate the value of "little giant" enterprises. This paper combines the FCFF model in the income method with the B-S model in the real option method to obtain the value of the "little giant" enterprise. Through the case of Fuji-ta, it is found that there is an error of 49.4.5% when the FCFF model is used only for value evaluation, and the error rate is reduced to 4.81 when the potential value of the enterprise is evaluated by combining the B-S modelIt can be seen that considering the current value and potential value of the enterprise when evaluating the "little giant" enterprise can make up for the shortcomings of the single use of the income method, so that the potential value of the enterprise can be reflected, and the value evaluation of the "small giant" enterprise is relatively more comprehensive. The correct evaluation of the potential value of the "little giant" enterprise can not only enhance the R&D power of the enterprise and increase the market competitiveness of the enterprise, but also enable investors to better understand the core competitiveness of the enterprise and increase investment in the enterprise.

5.2. Outlook

During the evaluation process in this paper, although the combination of free cash flow and real options can enhance the accuracy of valuing "Little Giant" enterprises and highlight their potential value, there is still room for optimization in the assessment process. First, the prediction of operating income in the discounted free cash flow model could be improved by adopting relevant forecasting models to make the results more scientific and reasonable. Second, in the B-S model, the selection of relevant parameters may vary among evaluators, exhibiting strong subjectivity. The impact coefficient of the "Little Giant" cultivation policy on enterprise value could be incorporated into the parameters to refine the B-S model and enhance its objectivity. Lastly, this study selected a company from the integrated circuit industry among the specialized, sophisticated, distinctive, and innovative "Little Giant" enterprises as a case study. Future research could further validate the applicability of the FCFF-BS model for valuing "Little Giant" enterprises in other industries, thereby continuously optimizing the valuation of such enterprises and promoting high-quality economic development.

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