

# Investment Analysis Report based on the Application of Free Cash Flow Valuation Method (FCFF)

## -- Take Three Squirrels for Example

Danyang Jiang

School of Accounting, Anhui University of Finance and Economics, Bengbu, Anhui 233030, China

### Abstract

With the rapid development of China's economy, the phenomenon of property rights transactions such as corporate mergers and acquisitions is constantly appearing, so how to evaluate the value of the company is particularly important. Scholars at home and abroad have studied the valuation of the company and pointed out that the discounted free cash flow method is a better way to evaluate the value of the company. "Maximization of enterprise value" is a recognized goal of financial management both in academic circles and in practice. How to evaluate the enterprise value scientifically and accurately is necessary for both investors and managers. According to the research ideas from theory to practice, this paper summarizes the relevant theories and methods of enterprise valuation, and takes three squirrel companies in the snack food industry as the object. This paper evaluates the company value of Three Squirrel food companies by using the free cash flow valuation method, evaluates the evaluation results and puts forward relevant suggestions, in order to provide references for the value evaluation of listed companies in China.

### Keywords

FCFF Model; Enterprise Value Evaluation; The Three Squirrels Company; Value Investment.

## 1. Introduce

### 1.1. Research Background

With the rapid development of China's economy, the continuous expansion of the market scale, and the increasing number of corporate mergers and acquisitions, equity transfers and other phenomena, it is particularly urgent to conduct a reasonable value assessment of the company. At the same time, managers also need to make a reasonable analysis of the company's value in order to make a more effective operation and management of the company, so it is very important to seek an effective method to evaluate the company's value.

### 1.2. Research Status

Domestic scholars started their research on free cash flow in the 1990s, established by Liu Quanzhou (1994) Start to evaluate the relative index of the value of the company in China, and use the hierarchical analysis method and other methods to obtain the value of the company. Zhang Xianzhi (2000) conducted relevant research on the value evaluation procedures, cash flow, evaluation period and discount rate used in company value evaluation. Lu Min (2002) proposed to combine quantitative and qualitative indicators to study the discounted free cash flow method. Huang Xi (2015) proposed to combine the company's free cash flow with its strengths and weaknesses.

## 2. Case Introduction and Industry Analysis

### 2.1. Introduction to Three Squirrels

Three Squirrels Co., Ltd. was founded in February 16, 2012, the company headquarters in Wuhu, Anhui province, is China's first positioning in the pure Internet food brand enterprise, but also the current sales scale of China's top food e-commerce enterprises, its main business covers nuts, meat, dried fruits, puffers and other categories of leisure snacks. On December 3, 2019, three squirrels announced that its annual sales exceeded 10 billion, becoming the first enterprise in the snack industry to cross the 10 billion threshold. Three squirrels for 7 consecutive years "Double 11" Tmall food sales first, cumulative sales of nut snack products more than 20 billion yuan, Tmall store fans number one brand.

### 2.2. Analysis of Snack Food Industry

#### 2.2.1. Snack Food Industry Concept

Leisure food, or "snacks", is a kind of impulsive purchase of non-essential consumer goods, convenient to eat in leisure, and easy to carry non-staple food. Mainly grains, fruits and vegetables, meat, konjac, passion flower and other raw materials. Generally speaking, snack food mainly includes baking, candy, nuts, puffs, biscuits and marinated products and other categories.

The upstream of the snack food industry chain mainly leverages the R&D of snack food enterprises to purchase raw materials, the midstream is the production and logistics warehousing process, and the downstream is connected with various consumption terminals. Different enterprises have different participation degrees in each link of the industry chain and different business models, so there are various business models.

Snack food enterprises have two different brand development paths: One is to cut into the middle of the industrial chain, complete the independent research and development of products, processing and production, and build product brands. We will unify this kind of enterprises into modeling enterprises; The other is to enter the market from the downstream of the industrial chain, build their own retail terminals, and create channel brands. We call this type of enterprise channel enterprises.

#### 2.2.2. Snack Food Industry Enterprise Characteristics

##### 1) Low technology content

Because food manufacturing involves some primary raw materials and simple processing technology, with little investment in research and development, the snack food industry has low technology content, which means that the entry barrier of the industry is low, there are a large number of small and medium-sized food enterprises in the market, the snack food industry product homogenization problem is serious, competitive explosive products are less, and the market competition is fierce.

##### 2) Dense distribution network

Sales channels mainly include online and offline omni-channel sales system. Online sales break through the limitations of traditional sales in time and space. On the one hand, the popularity of online shopping has greatly increased the number of enterprises; On the other hand, the expansion of market extension has promoted the rapid growth of the industry.

#### 2.2.3. Enterprise Value Characteristics of Snack Food Industry

##### 1) Brand scale effect

Snack food industry belongs to FMCG, consumers believe in brand quality assurance, brand effect, brand effect is an important source of added value of products. Three squirrels, good food shop and Baicao taste occupy the top three snack food market share, other brands are

difficult to compete, brand scale effect is obvious, but the market concentration is relatively dispersed.

## 2) Integrity of value

Snack food enterprise value evaluation has integrity. The valuation of leisure food enterprises attaches importance to the integrity of assets, not just the sum of individual assets. It is the overall effect value generated by 1+1 greater than 2. The individual assets of an enterprise are not independent individuals, and they fuse with each other in the production and operation process of the enterprise to serve the profit of the enterprise and constantly create more enterprise value.

### 2.2.4. Enterprise Value Composition of Snack Food Industry

#### 1) Existing value

The present value of snack food industry enterprises is the discount of corporate profitability to cash flow during the forecast period. In addition to tangible assets, intangible assets in snack food enterprises also occupy an important part of the existing value. Snack food enterprises also have a large number of intellectual property rights, such as patents, trademarks, etc., which can increase profitability. Human capital creates conditions for the development of enterprise innovation and technology. In addition, the customer base, supply chain relationship, management ability, corporate culture, etc. all form the overall competitiveness of the enterprise, which is the basis of the existing value of the company.

#### 2) Potential value

The potential profit value of snack food enterprises is mainly reflected in the contribution of human capital and intangible assets to profitability as well as the product research and development ability and core competitiveness. Enterprises adjust their decisions according to the dynamic market environment and policy changes in multiple stages, which reflects the potential value of the development process of leisure food enterprises.

Therefore, the value of leisure food enterprises is divided into two parts: existing value and potential value. The economic value mainly comes from the inflow of economic benefits and future economic expectations brought by leisure food for enterprises.

## 3. Selection of Enterprise Value Assessment Methods

At present, the main methods of enterprise value evaluation are income method, cost method and market method. To evaluate the value of the Three Squirrels, we mainly choose the income method. The so-called income method is to estimate the future net cash flow of the enterprise and discount it to a specific date. The income method mainly includes discounted cash flow method, EVA method and so on. Income method scientifically evaluates the capital structure, total assets and management level of the enterprise, so as to realize the comprehensive quantification of enterprise value. The main preconditions of the income method need to satisfy that the expected income is predictable and measurable in money, the risk taken is also predictable and measurable in money, and the expected income period is predictable. This method is widely used in practice, attaches more importance to the sustainable development and income of the enterprise in the future, and can evaluate the real intrinsic value of the enterprise scientifically and reasonably.

### 3.1. Selection of Enterprise Value Evaluation Methods in Snack Food Industry

The FCFF model is suitable for the evaluation of enterprise value in snack food industry for the following reasons: First, the snack food industry is currently in the growth stage, the income continues to be positive, and the discount rate can be reasonably estimated in the income period, and the discounted free cash flow model is more suitable for value evaluation. Second, the value evaluation model has a wide range of application, and it is also more convenient to

calculate when the key value factors are determined by using this model when the financial leverage changes. Third, due to the characteristics of the industry and the attributes of the case enterprises, we can see that the development prospect of the industry is good, and the enterprises of this type are cyclical, which meets the requirements of FCFF model evaluation.

### 3.2. Principles of Enterprise Free Cash Flow Model

The sum of discounted future cash flows is the total value of the enterprise. The model generally makes the following assumptions: sustainable.

Operate as planned; Positive and predictable future cash flows; The macroeconomic environment is relatively stable; Disclosure meeting.

The information is true and reliable. In practice, the two-stage growth model is used more often and the evaluation results are more reasonable. The formula is as follows:

$$V = \sum_{i=1}^n \frac{FCFF_t}{(1+WACC)^i} + \frac{FCFF_n \times (1+g)}{(WACC-g) \times (1+WACC)^n}$$

V: enterprise value;  $FCFF_t$ : future free cash flow; WACC: Weighted average cost of capital; g: growth rate; n: Number of years in the forecast period.

#### 3.2.1. Calculation of Enterprise Free Cash Flow

The methods of calculating enterprise cash flow mainly include quantitative forecasting methods such as time series and linear regression. The formula is as follows:

$FCFF = \text{Net operating profit after tax} + \text{Depreciation and amortization} - \text{Capital expenditures} - \text{Change in working capital}$ .

$FCFF = EBIT \times (1 - \text{income tax rate}) + \text{Depreciation and amortization} - \text{Capital expenditure} - \text{Change in working capital}$ .

#### 3.2.2. Calculation of Discount Rate

The discount rate, also known as the expected return on investment, is generally the weighted average cost of capital (WACC), and the formula is as follows:

$$WACC = \frac{E}{E+D} K_e + \frac{D}{E+D} K_d (1-t)$$

E: market value of equity, D: market value of corporate debt,  $K_d$ : pre-tax cost of debt capital, t: corporate tax rate,  $K_e$ : cost of equity capital. CAPM model is generally used to calculate the cost of equity capital.

$$K_e = R_f + \beta(R_m - R_f)$$

$R_f$ : is the risk-free interest rate,  $\beta$ : the sensitivity of the rate of return to the market, and  $R_m$ : the average rate of return in the market.

### 3.3. Evaluation Ideas based on Modified FCFF Model

#### 3.3.1. Cost of Debt Capital

The cost of debt capital is the cost of borrowing money and issuing bonds. After calculating the proportion of long-term debt and short-term debt, multiply the loan benchmark interest rate stipulated by the bank respectively, and then obtain the debt capital cost of the enterprise through weighted average, so that the debt capital cost is closer to the actual situation of the enterprise. The formula is as follows:

$$K_d = K_l W_l + K_s W_s$$

$K_d$ : pre-tax cost of debt capital;  $K_l$ : long-term debt capital cost;  $K_s$ : cost of short-term debt capital;  $W_l$ : long-term debt ratio;  $W_s$ : short-term debt ratio.

#### 3.3.2. Cost of Equity Capital

The numerical accuracy of risk-free rate of return,  $\beta$  coefficient and market average expected rate of return affects the accuracy of cost of equity capital. The cost of equity capital is calculated as follows:

$$K_e = R_{fc} + \beta(\overline{R_m} - R_{fc})$$

The revised FCFF model evaluation ideas are mainly as follows: First, the fundamentals of the case enterprise are analyzed, and the situation, business model, business strategy and financial performance of the Three Squirrels are introduced. Through the analysis of the three Squirrels business model, combined with the vertical and horizontal comparative analysis of the financial situation in recent years, the potential and sustainability of the enterprise's development in the industry can be known, and the data and parameters required for the valuation of The Three Squirrels can be provided with the basis. Next, the free cash flow is predicted. According to the macroeconomic environment and industry analysis, the future revenue is predicted by the trend forecasting method, and the business model, core competitiveness and financial analysis of the case enterprise are combined, and then the free cash flow is calculated.

## 4. Evaluation Process and Results

### 4.1. Analysis of Factors Influencing the Value of Three Squirrels

#### 4.1.1. Core Competitiveness

Digital empowerment of traditional supply chain: The company accelerates the construction of digital supply chain platform, refers to big data information, upgrades the supply chain by information technology, realizes integrated management, reduces cost and improves efficiency. Two-way force of online and offline operation: Build an omni-channel sales model represented by Tmall, Jingdong, food store, Squirrel Alliance store, etc., to achieve multi-scene and multi-format layout, and then more efficiently meet users' multi-demand experience. Diversified deep exploration of super IP value: with "squirrel little cool", "squirrel little beauty", "squirrel little cheap" animation characters, improve brand awareness with IP, and create brand ecology has become one of the core competitiveness of the company.

R & D and innovation ability: Set up food industry research Institute, develop products, improve processes, and cooperate with industry-university-research. Put forward the squirrel flavor valley system, dug deep consumer evaluation, realized the new 40 sky line, established a mature product update mechanism

#### 4.1.2. Financial Status of the Enterprise

Ratio analysis can provide reference for enterprise performance forecast. Starting from the four major capabilities of enterprise profit, operation, debt repayment and growth, the financial indicators are respectively compared vertically and horizontally, and the analysis is as follows:

##### 1) Profitability analysis

**Table 1.** Profitability of Three Squirrels from 2014 to 2021

Year	2014	2015	2016	2017	2018	2019	2020	2021
Net profit margin on sales(%)	-1.39	0.44	5.35	5.44	4.34	2.35	3.08	4.21
Gross profit margin on sales(%)	24.15	26.90	30.20	28.92	28.25	27.80	23.90	29.38
ROE(%)	-12.65	5.14	56.06	41.26	31.66	16.37	15.16	19.49
ROA(%)	-3.95	1.04	14.74	14.00	11.51	6.02	6.52	8.72
Industry average ROE(%)	-	-	-	-	-	17.01	17.26	13.36

As can be seen from Table 1, the above indicators of return on equity and return on total assets continue to decline from 2014 to 2021. Although the company's sales net profit margin and gross profit margin have changed, they have basically remained stable, and the comprehensive gross profit margin change mainly comes from the impact of changes in nut products. The ROE of Three Squirrels is slightly above the industry average in the industry; Its net profit margin on sales is well below the industry average.

##### 2) Solvency analysis

**Table 2.** Three Squirrels solvency from 2014 to 2021

Year	2014	2015	2016	2017	2018	2019	2020	2021
Current ratio	1.09	1.22	1.50	1.63	1.46	1.54	1.69	1.60
Quick ratio	0.42	0.36	0.57	0.64	0.73	0.60	1.01	0.91
Asset-liability ratio(%)	-12.65	71.80	71.58	62.98	64.10	60.85	52.37	55.13

As can be seen from Table 2, the flow ratio and quick ratio of the three squirrels increased steadily; At the same time, the quick ratio of the enterprise is greater than 1 in 2020, indicating that the enterprise has strong short-term solvency and low financial risk. The asset-liability ratio of the three squirrels has always been maintained at about 50% in 2019-2020, which is more suitable for listed companies in such industries, indicating that the company's asset liability level has maintained a reasonable level and has strong long-term solvency.

##### 3) Operation capability analysis

**Table 3.** The operating capacity of three squirrels from 2014 to 2021

Year	2014	2015	2016	2017	2018	2019	2020	2021
Accounts receivable turnover rate	22.45	36.92	33.69	33.34	31.55	36.08	40.27	46.20
Inventory turnover	2.01	2.97	3.38	3.50	4.32	3.95	3.85	4.51
Total assets turnover	1.98	2.36	2.76	2.58	2.65	2.56	2.12	2.07



According to the comparative analysis in Table 3, it can be seen that the inventory turnover rate of the three squirrels is increasing, the product sales are smooth, the liquidity is stronger, and the liquidity is enhanced. Total asset turnover also showed an upward trend, but showed a slight downward trend in 2019, but generally maintained a high growth rate.

The turnover rate of accounts receivable assets increased greatly, indicating that the three squirrels' payment speed became faster, the investment in current assets increased, and the operating capacity and profitability increased at the same time.

#### 4) Analysis of development capability

**Table 4.** The operating capacity of Three Squirrels from 2014 to 2021

	2015	2016	2017	2018	2019	2020	2021
Total Revenue growth (%)	121.00	116.47	25.58	26.05	45.30	-3.72	-0.24
Net profit growth (%)	169.75	2535.44	27.70	0.61	-21.43	26.21	36.43

As can be seen from Table 4, the revenue of Three Squirrels increased significantly in 2016, and the growth rate of net profit increased rapidly. The reason is that the innovative launch of gift box products in 2016 and the careful design of product positioning and packaging have been welcomed by consumers. From the perspective of net profit growth, the period from 2018 to 2019 was volatile, and the net profit from sales fell sharply in 2018, because since 2017, the expansion of three Squirrels has made its operating income grow rapidly, while the profit margin has not increased due to the scale effect, and even the net profit has declined. The large fluctuation also indicates that the diversified development strategy of the three squirrels in recent years is in a state of unprofit or even loss.

## 4.2. Free Cash Flow Forecast

### 4.2.1. Business Income Forecast

**Table 5.** Three Squirrels operating revenue forecast from 2022 to 2026

Year	2022	2023	2024	2025	2026
Operating income (100 million Yuan)	100.7	114.7	130.3	148.2	168.6

As for the forecast of main business income, the average growth rate of three Squirrels' business income in the past five years is 16.84%, and it will enter a stable period in 2025. Combined with the forecast numbers of 8 institutions collected by Eastern Wealth Network, the forecast value of business income in 2022-2026 can be obtained, as shown in Table 5.

### 4.2.2. Operating Working Capital Forecast

#### 1) Forecast of operating current assets

Monetary funds, accounts receivable, prepayments, other receivables, inventories and other current assets are forecast based on the 2017-2021 average. In order to facilitate the calculation of the proportion of the forecast period, the relevant subjects all use the ratio of the data of the last five years to the operating income.

#### 2) Forecast of operating current liabilities

Three Squirrel Company only in 2015 and 2016, notes payable, are non-recurring, not included in operating current liabilities. With the slowdown of the domestic economy and the fierce competition in the snack food industry, it is less likely that the working capital occupied by large quantities of raw materials will be used during the forecast period. The proportion of the remaining projects in the forecast period is the average value from 2017 to 2021.

#### 4.2.3. Forecast of Net Operating Long-term Assets

Looking at the balance sheet of Three Squirrels from 2017 to 2021, we can see that the average proportion of fixed assets in assets is 8.98%; The average ratio of construction in progress to assets was 2.64%; The third is intangible assets, mainly including private trademarks, patents, computer software Copyrights and domain names. The average proportion of assets accounted for by the project was 2.54%. Capital expenditures for the Three Squirrels forecast period are mainly for these three assets.

#### 4.2.4. Tax Net Operating Profit Forecast

Operating costs: Operating costs accounted for an average 72.35% of operating revenue in the forecast period 2022-2026. Business taxes and surcharges: Taxes and surcharges are projected at an average of 0.47% of operating income for the last five years. Selling expenses: Forecast future selling expenses based on the average selling expenses/operating income of 20.30% in the past five years. Administrative expenses: Forecast future administrative expenses based on the average of 2.07% of administrative expenses in the past five years. Income tax rate: 25% income tax rate.

#### 4.2.5. Depreciation and Amortization Forecast

Fixed assets and intangible assets are depreciated and amortized according to the straight-line method and cannot be changed at will. The amortization period of land use rights is based on the benefit period, and the amortization period of software is 3 years, so the depreciation and amortization of the three squirrels in the future are predicted using the average of nearly two years.

**Table 6.** Depreciation and amortization forecast for 2022-2026

	2022	2023	2024	2025	2026
Depreciation and amortization (100 millions yuan)	0.50	0.57	0.65	0.74	0.84

#### 4.2.6. Forecast of Free Cash Flow

Capital expenditure = current period net operating long-term assets net - previous period net operating long-term assets net

Increase in operating working capital = Net operating working capital for the current period - Net operating capital for the previous period

The Three Squirrels free cash flow forecast results are shown in the table7:

**Table 7.** Three Squirrels Free cash Flow forecast for 2022-2026(100 millions yuan)

	2022	2023	2024	2025	2026
Operating income	100.7	114.7	130.3	148.2	168.6
Operating cost	72.86	82.99	94.27	107.22	121.98
Taxes and surcharges	0.47	0.54	0.61	0.70	0.79
Selling expense	20.44	23.28	26.45	30.08	34.23
Administrative expenses	2.08	2.37	2.70	3.07	3.49
EBIT	4.84	5.52	6.27	7.13	8.11
Income tax expense	1.21	1.38	1.57	1.78	2.03
Net operating profit after tax	3.63	4.14	4.70	5.35	6.08
+: Depreciation and amortization	0.50	0.57	0.65	0.74	0.84
-: capital expenditure	-0.68	0.98	1.1	1.25	1.43
-: increase in operating working capital	-5.57	2.16	2.41	2.77	3.15
FCFF	10.38	1.57	1.84	2.07	2.34



### 4.3. Determination of Discount Rate (WACC)

#### 4.3.1. Capital Structure Forecast

Net operating assets = operating working capital + net operating long-term assets = (operating current assets - operating current liabilities) + (operating long-term assets - operating long-term liabilities).

Net operating assets = debt financing (total borrowings) + equity financing.

According to the above predicted value of net operating assets and total borrowings of the Three Squirrels company in 2022-2026, the amount of equity raised by the three Squirrels Company can be calculated.

#### 4.3.2. Estimation of Cost of Debt Capital

The benchmark interest rate of the 2021 senior and short term equity financing loans is 4.75% and 4.35% respectively, after deducting the income tax rate of 25%, to obtain the after-tax cost of debt capital.

**Table 8.** Three Squirrels after tax cost of debt capital from 2022-2026(%)

Year	2022	2023	2024	2025	2026
Short-term lending rate	4.35	4.35	4.35	4.35	4.35
The proportion of short-term loans	35	35	35	35	35
Long-term lending rate	4.75	4.75	4.75	4.75	4.75
The proportion of long-term loans	65	65	65	65	65
Income tax rate	25	25	25	25	25
After-tax cost of debt capital	3.46	3.46	3.46	3.46	3.46

#### 4.3.3. Estimation of Cost of Equity Capital

Cost of equity capital:  $K_e = R_{fc} + \bar{\beta}(\bar{R}_m - R_{fc}) = 2.98\% + 1.23 \times 1.17\% = 4.41\%$ .

Improved risk-free rate:  $R_{fc} = \sqrt[n]{(1 + nr)} - 1 = \sqrt[10]{(1 + 10 \times 3.14\%)} - 1 = 2.98\%$ .

The data of Shanghai Stock Exchange Index from 2001 to 2021 for nearly 20 years are selected to calculate the market return rate, and the average return rate  $R_m$  is 0.34%.

Annual average return =  $(1 + \text{monthly average return})^{12} - 1 = (1 + 0.34\%)^{12} - 1 = 4.15\%$ .

Risk premium =  $4.15\% - 2.98\% = 1.17\%$ .

By searching the RESSET database data, we can know that the average annual  $\beta$  value of the daily earnings of the three squirrels since their listing is 1.23.

#### 4.3.4. Dynamic Weighted Average Cost of Capital

Based on the above capital structure forecast table and the after-tax debt cost of capital table as well as the estimated value of the cost of equity capital, the forecast value of the dynamic capital cost of the three squirrels in 2022-2026 can be obtained, as shown in the following table 9: Dynamic cost of capital ratio = debt capital ratio x cost of debt capital + equity financing ratio x cost of equity capital.

**Table 9.** Three Squirrels Dynamic capital cost forecast 2022-2025

Year	2022	2023	2024	2025	2026
Debt-to-capital ratio	17.33	17.35	17.35	17.33	17.35
Equity financing ratio	82.67	82.65	82.65	82.67	82.65
After-tax cost of debt capital	3.46	3.46	3.46	3.46	3.46
Cost of equity capital	4.41	4.41	4.41	4.41	4.41
Dynamic cost of capital rate	4.224	4.224	4.223	4.223	4.223

#### 4.4. Calculation of Value Assessment

According to the discounted table of free cash flow sorted out above, from the perspective of future growth potential, the sustainable growth rate is 3% of the pre-epidemic growth rate of Western developed countries. The calculation results are as follows.

$$p = \sum_{t=1}^n \frac{FCCF_t}{(1+W)^t} + \frac{FCCF_{n+1}}{(WACC - g)(1+W)^n}$$

**Table 10.** Three squirrels free cash flow discounted table from 2022-2026

Year	Base period	2022	2023	2024	2025	2026
Free cash flow	-	10.38	1.57	1.84	2.07	2.34
Dynamic cost of capital	-	4.224	4.224	4.223	4.223	4.223
Discounted value	-	9.95	1.44	1.62	1.75	1.90
Present value of ending cash flows	16.68	-	-	-	-	-
Total value	205.93	-	-	-	-	-

Note: (P/F, 4.224%, 1)=0.959; (P/F, 4.224%, 2)=0.920; (P/F, 4.223%, 3)=0.883;  
(P/F, 4.223%, 4)=0.847; (P/F, 4.223%, 5)=0.813; (P/F, 4.222%, 6)=0.780

It can be seen that the enterprise value of Three Squirrels company at the end of 2021 is 20.593 billion yuan, as of December 31, 2021, the total number of outstanding shares of three squirrels is 401 million shares, the total debt is 2.775 billion yuan, and the stock price per share = (205.93-27.75) / 4.01=44.43 yuan/share. The intrinsic value per share of the three squirrels can be predicted to be 44.43 yuan.

#### 4.5. Evaluation Process and Results

**Table 11.** Value assessment of Three Squirrels

Evaluation result	
item	Modified FCCF model
Valuation result	44.43 (RMB/share)

The stock price of three Squirrels per share on December 31, 2021 was 43.62 yuan/share, and the internal value of each share on the base day was 44.43 yuan using the revised FCCF model. The improved valuation had little difference with the stock price on the base day and was slightly higher than the stock price on the base day, indicating that its stock price still had the potential to rise. Therefore, although there is a certain error, the practical enterprise value evaluation should not only be a value that is indistinct from the real intrinsic value of the enterprise, but also be closer to the real intrinsic value of the enterprise by means of evaluation, so as to provide certain reference value for the business decision of the enterprise and the investment activities of investors.

### 5. Outstanding Characteristics and Possible Problems of the Case

#### 5.1. Case Selection is Representative

In this paper, three squirrel enterprises with their own snack food brand R&D, testing, packaging and sales are selected as a case that is more representative of the industry, and the revised enterprise free cash flow discount model is applied to three squirrel enterprises. From the perspective of the three squirrels themselves, the three squirrels adopt active marketing

strategies to occupy the market, and the growth rate will reach 3% before the epidemic in developed countries in the stable long-term stage.

The revised FCFF model can better reflect the value characteristics of the snack food industry and the three squirrels, reduce the possible subjective arbitrariness of model parameter selection, and reduce the influence of practitioners' experience judgment. Based on the analysis of the status of snack food industry and the enterprise value of snack food industry, this paper makes a basic analysis of the general situation of three squirrels and the influencing factors of enterprise value, so as to accurately predict the future free cash flow and sustainable growth rate of enterprises. However, due to the dynamic change of macroeconomic and industry environment as well as the situation of the three squirrels themselves, the free cash flow and discount rate of enterprises also change dynamically, which better corresponds to the dynamic cash flow. This paper proposes a new idea of dynamic discount rate to convert the static discount rate into dynamic discount rate by predicting the future capital structure and capital cost of enterprises.

## 5.2. Possible Problems

First, although this paper introduces the free cash flow model of snack food enterprises, it simplifies the enterprise value composition of three squirrels. The FCFF discount model is used to calculate the current value of the enterprise. However, the potential value in the composition of the enterprise value often fluctuates greatly, and it is difficult to make a judgment. Considering personal ability, this paper focuses on the application analysis of the two-stage enterprise free cash flow revision to the current value of the enterprise.

Second, the free cash flow model is used to evaluate the enterprise value of snack food industry, and non-financial factors such as potential competitors and changes in consumer demand preferences are not fully taken into account. The quantification of these factors and how to integrate them into the enterprise free cash flow model to evaluate the enterprise value of the snack food industry are all areas that need to continue to explore and improve in the future.

## 6. Rationalization Suggestions

First of all, domestic investors tend to focus on high-tech industries, in addition to high-tech industries, other industries are also in urgent need of investor financial support. Especially in the non-high-tech industries in the expansion period, such as the snack food industry, if the enterprise has a good business model and is in the growth period, it also needs continuous investment of funds. Investors can make equity investments in this type of business.

Secondly, the value assessment of practical enterprises should not only be a value that is indistinct from the real intrinsic value of enterprises, but also be closer to the real intrinsic value of enterprises by means of evaluation, so as to provide certain reference value for the business decision of enterprises and the investment activities of investors.

Finally, according to the enterprise free cash flow theory, the overall value of the snack food industry enterprise should include the present value and the future growth opportunities formed by the enterprise free cash flow model. By establishing the framework of different valuation factors and combining with the value composition, the limitations of traditional free cash flow evaluation methods are reasonably demonstrated and revised.

## References

- [1] Wang Wei, XIAO Yuying, Qin Jiayi, et al. Research on Enterprise Value Evaluation Based on FCFF Model: A case study of Z Company [J]. Modern Business, 2021(29):141-144.
- [2] Li Bingxin. Application of Optimized FCFF Model in Enterprise Value Evaluation [J]. Chinese agriculture Accounting, 2021(10):61-62.

- [3] Chinese Institute of Certified Public Accountants. Financial Cost Management [M]. Beijing: China Finance Publishing House, 2021:78.
- [4] Wei Ying Au. Based on discounted free cash flow method Research on the value evaluation of Luckin coffee [D]. Guangzhou: Guangdong University of Foreign Studies,2020. (04):34-35.
- [5] Zhao Cong, Han Xiaochen. Retail enterprise value evaluation Analysis of influencing factors of Value enhancement [J]. Liaoning Engineering Technology Journal of Art University (Social Science Edition). 2019,21(06):446-452.
- [6] Ding Qijun, Yang Huiyuan, ZHANG Yaxian. Free cash Traffic and G Media Enterprise Value Evaluation [J]. Business News,2021(31) : 86-88.
- [7] Xin Lin,aking the Yangtze River Economic Belt as a strategic strategy A case study of listed companies in emerging industries [J]. Accounting Research,2018(9) : 47 -55.
- [8] Chen Hongxing. High cost, reduced profit and serious homogenization of leisure snacks: What to do [J]. Times Economic and Trade,2018(31): 91-93.
- [9] Chen Jing. Research on business model Innovation of traditional retail enterprises in the "new retail" era. Economic Forum, 2018 (03):65-68.
- [10] Cheng Zhiqi. Applicability Analysis of valuation models for different industries [D]. Zhejiang University, 2017. (02):27-32.
- [11] Liang Shuo. Study on Enterprise cost Control under E-commerce model --taking "Three Squirrels" as an example [D]. Wuhan Textile University,2019.(09):15-20.
- [12] Tu Yalin. A study on the value evaluation of Private Equity Investment in snack food industry --taking Dali Food Project as an example [D]. Beijing Jiaotong University, 2019. (02):123-127.