

# Evaluation and Analysis of the Quality of Profitability in CNFC Overseas Fisheries

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## Abstract

**In the context of high-quality economic development, the study of earnings quality of listed fishery companies is of great practical significance to the sustainable development of the entire pelagic fishery and economy. This paper selects CNFC Overseas Fisheries as the research object, uses entropy value method to comprehensively evaluate the performance of CNFC Overseas Fisheries 's earnings quality in different years, and then selects financial indicators to quantitatively analyze the performance of its earnings quality in various dimensions, and combines with the characteristics of the pelagic fishery industry, and qualitatively analyzes the influencing factors of the earnings quality by using the PESTEL model. The results of the study found that: in the past five years, the profitability quality of the CNFC Overseas Fisheries has shown a trend of decreasing and then increasing, and overall there are problems such as low asset utilization efficiency, low degree of cash flow security, and insufficient motivation for the development of the main business, etc. Moreover, these problems are especially obvious in the early stage, and have gradually improved in recent years with the improvement of the epidemic situation. Based on its own development, this paper puts forward targeted policy recommendations to improve asset utilization efficiency, strengthen the degree of cash security, broaden sales channels, accelerate the transformation and upgrading, etc., with a view to providing reference for the CNFC Overseas Fisheries and other listed companies in the same industry to improve the quality of profitability.**

## Keywords

**CNFC Overseas Fisheries; Earnings Quality; Entropy Method; Financial Analysis; PESTEL Model.**

## 1. Introduction

Since the 18th National Congress of the Communist Party of China (CPC), under the guidance of Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era, China has always adhered to the path of green and sustainable development of pelagic fisheries, and has committed itself to the scientific conservation and sustainable utilization of fishery resources in an effort to realize high-quality development of pelagic fisheries. On October 24, the State Council Information Office released a white paper on "China's Oceanic Fisheries Development", pointing out again that China will continue to increase its efforts to guarantee the development of oceanic fisheries, and strive to realize the high-quality development of oceanic fisheries by optimizing the industrial structure, deepening its participation in international fisheries governance, and improving the policy system. Against this background, "What is the performance of the profit quality of listed companies in the pelagic fishery industry? How to improve its earnings quality?" has become an important issue that we need to pay attention to. From a macro point of view, the high-quality development of enterprises is the key to promoting the high-quality development of the capital market, and the core performance of

high-quality development of enterprises is to improve the quality of earnings.[1] From the micro point of view, analyzing earnings quality can provide suggestions for enterprise operation and investor decision-making, which in turn affects the company's economic efficiency. Pelagic fishery is a real industry with strong driving effect, and the study of earnings quality of its listed companies is of great strategic and practical significance to promote the high-quality development of pelagic fishery economy.

"Earnings quality is a key factor in revealing the true operating performance of an enterprise.[1] The concept of "earnings quality" was probably introduced in the United States in the 1930s, and since then, with the continuous development of the capital market, the analysis and study of earnings quality have been increasingly emphasized by external users of information, such as investors, creditors and other institutions. Regarding the evaluation of earnings quality, Siegel (1997) advocated the evaluation of earnings quality by calculating six indicators such as cash flow and return on total assets. Among them, regarding cash flow, many subsequent scholars have also focused on the study, Hossein Beheshti Fakher et al. (2018) proved through their study that the higher the proportion of cash flow in profit, the higher the quality of earnings, thus pointing out that collectability is an important indicator of earnings quality; Dewi (2021) et al. also argued that the correlation between accounting profits and cash flow Dewi (2021) and others also believe that the higher the correlation between accounting profit and cash flow, the better the earnings quality will be. In addition to cashability, other scholars have also studied from the perspectives of structural and authenticity of earnings, etc. Massimiliano Bonacchi et al. (2019) confirmed through their study that the revenue structure will have a significant impact on the quality of earnings, and thus advocated that the quality of earnings can be improved by optimizing the revenue structure, improving the core competitiveness, and increasing the proportion of income from the main business; Kai Du et al. (2019), on the other hand, believe that the authenticity of profit indicators is an important prerequisite for guaranteeing the quality of earnings, and only by improving the authenticity of the economic situation of enterprises can the quality of earnings be effectively improved. Unlike foreign scholars, domestic scholars' research on earnings quality is more systematic, Zhang Xinmin (2003) advocates the analysis of earnings quality from three perspectives: asset value-added quality, earnings structural quality and cash-acquisition quality; with the continuous deepening of the research, the research on the evaluation of earnings quality has gradually been systematized, and Wen Subin et al. (2016) constructed a systematic evaluation of earnings quality from the perspective of the process of profit formation, including cash flow, structural, continuity and stability, based on which, Li Hui (2019) added the evaluation dimension of profitability level from the perspective of stakeholder satisfaction, and finally formed a five-dimensional comprehensive evaluation model of profitability quality; in addition, Han Jianli (2014) and others took the lead in introducing profitability risky indicators of cash flow and financial behaviors into the evaluation of profitability quality In addition, Han Jianli (2014) and others took the lead in introducing the profitability risk indicator and financial behavior into the evaluation of earnings quality, and constructed a six-dimensional comprehensive evaluation system including earnings authenticity, collectability, collectability risk, continuity, persistence, and financial behavior, which makes the evaluation system of earnings quality more complete. Unlike other scholars who focus on the quantitative analysis of finance as the research focus of earnings quality, Ni Min (2006) believes that neglecting the analysis of qualitative indicators will reduce the evaluation effect of earnings quality, and thus advocates that the evaluation of earnings quality should be from both financial and non-financial perspectives, and that the evaluation and analysis of the non-financial and financial perspectives are equally important.

A review of the existing literature shows that the results on the evaluation system of earnings quality of listed companies have been more fruitful, providing reference value for the writing

of this paper. However, in the process of reviewing the literature, it is found that in the existing case studies on earnings quality, there are more studies on pharmaceuticals, culture and media, manufacturing and service enterprises, and fewer studies on offshore fisheries, based on which, this paper selects CNFC Overseas Fisheries industry as the research object, adopts the entropy value method to comprehensively evaluate the earnings quality of CNFC Overseas Fisheries in the past five years, and utilizes the financial indicator analysis method to quantitatively analyze its earnings quality from six dimensions, and then combines the PESTEL model and the industry characteristics to analyze the earnings quality of the Chinese water fishery company in the past five years. quality is quantitatively analyzed, and then combined with PESTEL model and industry characteristics, a qualitative analysis of CNFC Overseas Fisheries is carried out as a way to make the analysis of earnings quality more comprehensive, and at the same time, further improve the case study of earnings quality.

## 2. Selection of Cases and Data Sources

This paper takes CNFC Overseas Fisheries as the main research object, and takes Kaichuang International as the comparative object in the same industry. Considering the availability of data collection, it selects its financial data from 2018 to 2022 for comparative analysis, and the relevant data are mainly obtained from Juchao Information Network, Sina Finance, Read Financial Report and other relevant websites, and some other indicators cannot be obtained from the above websites, and they are mainly calculated and collated by ourselves from the corresponding data in the company's annual report. Some other indicators cannot be obtained from the above websites, and are mainly calculated and organized by ourselves by selecting corresponding data from the annual reports of the Company.

" CNFC Overseas Fisheries ", the full name of " CNFC Overseas Fisheries Co., Ltd ", is a listed joint-stock enterprise mainly engaged in offshore fishing and international economic and trade cooperation and development, and its main business is offshore fishing production and operation, with the main products including tuna and other seafood and processed products. The main products are tuna and tuna species and other seafood and processed products, the existing low-temperature tuna fishing, ultra-low-temperature tuna fishing, aquatic products trade in three major business segments, is the largest scale, the widest range of operations in the country, the highest output of products, the most complete range of tuna tuna tuna longlining specialized companies. In addition, the comparison company "Kaichuang International" full name " Shanghai Kaichuang Marine International Co.,Ltd ", and its business and CNFC Overseas Fisheries is generally similar, mainly engaged in offshore fishing, aquatic products processing and sales and related trade.

## 3. Case Studies

### 3.1. Comprehensive Evaluation of Earnings Quality based on the Entropy Value Method

#### 3.1.1. Selection of Indicators

The entropy method is an objective empowerment algorithm, which overcomes the problems of arbitrariness and complexity and tediousness of subjective methods. In order to further analyze the performance and change of the profit quality of CNFC Overseas Fisheries in different years, this paper chooses 2018-2022 as the evaluation interval, and selects 24 indicators from the six evaluation dimensions of profitability, presentability, structure, safety, continuity, and truthfulness to provide comprehensive scores on the performance of the profit quality in different years, so as to improve and supplement the analysis of the single indicators in the following. The specific evaluation index system is shown in the following table:

**Table 1.** Evaluation system for the quality of profitability of CNFC Overseas Fisheries

Level 1 indicators	Secondary indicators	coding	Indicator properties
profitability	return on assets	A1	forward
	return on total assets	A2	forward
	return on assets	A3	forward
	Net sales margin	A4	forward
collectibility	cash flow ratio	A5	forward
	Main operating cash flow rate	A6	forward
	Accounts receivable turnover ratio	A7	forward
	Return on operating cash flows from assets	A8	forward
	Surplus cash cover multiple	A9	forward
structural	Share of profit from main business	A10	forward
	Share of main business income	A11	forward
	Share of operating costs	A12	negative direction
	Share of three costs	A13	negative direction
	Gross sales margin	A14	forward
safety	current ratio	A15	forward
	quick ratio	A16	forward
	Interest coverage multiple	A17	forward
	asset-liability ratio	A18	negative direction
sustainability	Growth rate of main business income	A19	forward
	Gross margin growth rate	A20	forward
	Operating EBIT growth rate	A21	forward
	Net profit growth rate	A22	forward
	Growth rate of net cash flow from operations	A23	forward
validity	Share of virtual assets	A24	negative direction

**3.1.2. Evaluation Process**

(1) Data standardization. Since different indicators have different units and cannot be directly compared and calculated, it is necessary to implement dimensionless processing of various indicators to reduce the impact caused by differences in the scale and make the data comparable.

For positive indicators, the following formula is followed:

$$X_{ij} = \frac{x_{ij} - \min j}{\max j - \min j}$$

For negative indicators, the following formula is followed:

$$X_{ij} = \frac{\max j - x_{ij}}{\max j - \min j}$$

(2) Calculate the weight  $P_{ij}$  for the data in period  $i$  under the  $j$ th indicator, Eq:

$$P_{ij} = \frac{X_{ij}}{\sum_{i=1}^n X_{ij}}$$

(3) The entropy value  $e_j$  for the  $j$ th indicator is calculated with the formula:

$$e_j = \frac{-1}{\ln(n)} \times \sum_i^n P_{ij} \ln(P_{ij}) \text{ (math.) } \text{genus } 0 \leq e_{ij} \leq 1.$$

(4) Calculate the coefficient of variation  $g_i$  for the  $j$ th indicator with the formula:

$$g_i = 1 - e_j$$

(5) Calculate the weight  $W_j$  of the  $j$ th indicator, Eq:

$$W_j = \frac{g_j}{\sum_{j=1}^m g_j}$$

(6) Calculate the composite score  $S_i$  for each period with the formula:

$$S_i = \sum_{j=1}^m w_j P_{ij}$$

The following table shows the weights and scores of the indicators for each dimension of earnings quality:

**Table 2.** Earnings Quality Evaluation Indicator Score for CNFC Overseas Fisheries 2018-2022

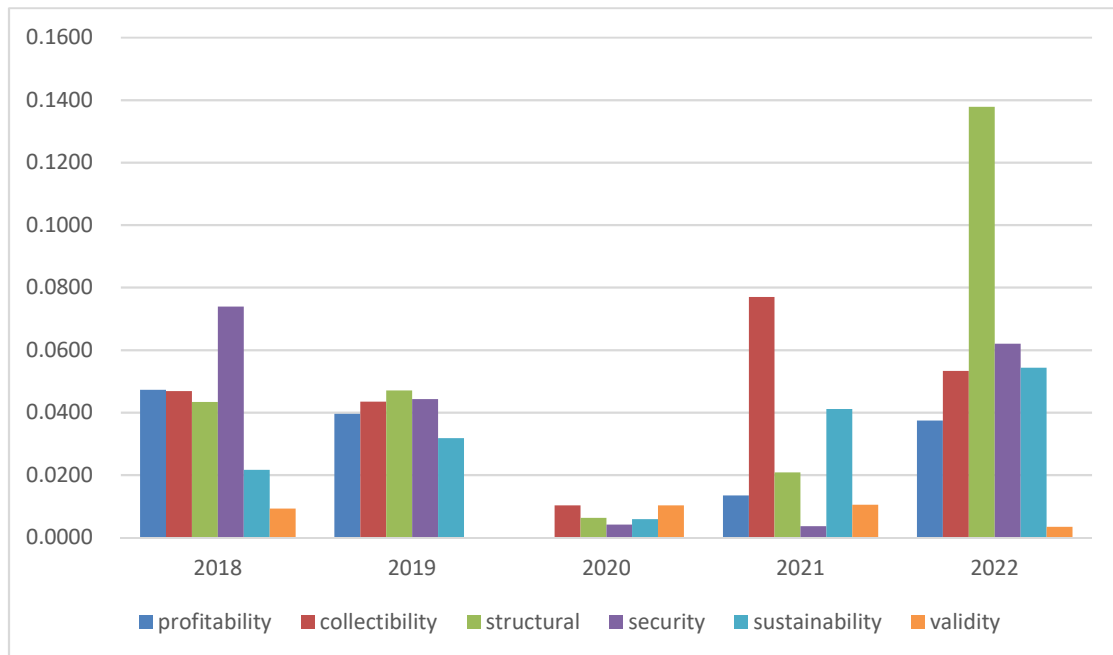
	Weights	2018	2019	2020	2021	2022
profitability	0.1378	0.0473	0.0396	0.0000	0.0135	0.0375
collectibility	0.2308	0.0468	0.0435	0.0103	0.0769	0.0534
structural	0.2553	0.0433	0.0470	0.0063	0.0208	0.1378
security	0.1880	0.0739	0.0443	0.0042	0.0036	0.0620
sustainability	0.1547	0.0216	0.0318	0.0059	0.0411	0.0543
validity	0.0335	0.0093	0.0000	0.0103	0.0104	0.0034
aggregate score	1	0.2422	0.2062	0.0369	0.1664	0.3483
rankings		2	3	5	4	1

Source of data: EXCEL calculations.

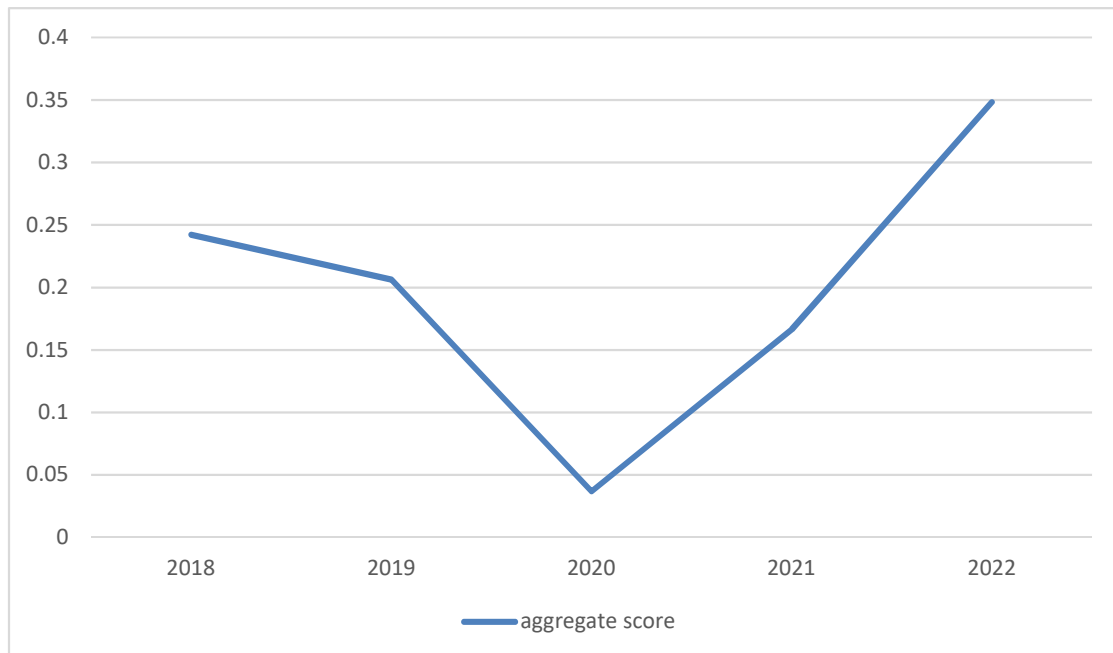
### 3.1.3. Evaluation Results

From the table, it can be seen that the collectability and structural of earnings quality have relatively high weights in the process of assigning weights, which indicates that the dimensions of collectability and structural have an important role in evaluating the earnings quality of the industry. Combined with the trend of change, CNFC Overseas Fisheries has the highest comprehensive score of earnings quality in 2022, which is mainly reflected in the outstanding performance of the structural dimension; the overall earnings quality in 2018 and 2019 is better, and the performance of the indicators of all dimensions is more stable; in 2020, due to the impact of the epidemic, the earnings quality of the enterprise declined sharply, and the performance of profitability was terrible, and the cash receivability, safety, structural and continuity faced a larger risk; in 2021, although the situation has improved, earnings quality is still at a low level. Overall, the level of profitability quality of CNFC Overseas Fisheries shows a trend of increasing and then decreasing from 2018 to 2022, with the worst performance in 2020. In terms of specific dimensions, the overall change in the authenticity index is relatively smooth, the trend of profitability, structure, continuity and safety is basically consistent with the trend of the overall score change in earnings quality, and the cash collection is also roughly

in the same trend of decreasing and then increasing with 2020 as the demarcation point, but then in 2022, a downward trend is seen again.



**Figure 1.** Earnings Quality Evaluation Indicator Score by Dimension, CNFC Overseas Fisheries, 2018-2022



**Figure 2.** Trend of CNFC Overseas Fisheries ' Composite Score for Earnings Quality, 2018-2022

### 3.2. Quantitative Analysis of Earnings Quality based on Financial Indicators

#### 3.2.1. Profitability Analysis of Earnings

Profitability of earnings mainly reflects the ability of enterprises to obtain profits in the process of daily production and business activities, equivalent to the traditional sense of profitability. The volume size of profit acquisition has a direct impact on determining the final outcome of corporate profitability[3] The volume of profit acquisition has a direct impact on determining

the final outcome of enterprise profitability. This paper selects the return on net assets, return on total assets and other indicators to analyze, generally speaking, the larger the value of these indicators, the stronger the profitability.

As can be seen from Table 3, the overall trend of profitability indicators of CNFC Overseas Fisheries before 2020 is decreasing year by year, analyzed in conjunction with its annual report, on the one hand, it is affected by the epidemic, and the unit price of main products tuna sales has dropped significantly, the market for aquatic products has shrunk extremely, and the self-owned trade and processing business has been dealt a heavy blow, and on the other hand, the fishing season has made the fishing volume of the low-temperature tuna project decline under certain conditions, which ultimately After 2020, the remuneration of each operating income increased year by year and turned from negative to positive in 2022, which indicated that the operating condition of the main business had been improved, mainly because with the improvement of the epidemic, the sales price of tuna was further restored along with the supply and demand relationship in the market, which led to the continuous improvement of the profit situation.

In a side-by-side comparison, the values of the indicators of Kaichuang International only fluctuate in a small range and do not show negative values, which indicates that the ability of CNFC Overseas Fisheries to obtain net income and the overall profitability of the utilization of assets is not as good as that of Kaichuang International. However, from the recent year's data, all the indicators of Kaichuang International have declined year-on-year, while CNFC Overseas Fisheries has shown an upward trend, although relatively low, which to a certain extent indicates that the future development trend of CNFC Overseas Fisheries 's profitability is favorable.

**Table 3.** Comparison of Profitability of Earnings between CNFC Overseas Fisheries and Kaichuang International 2018-2022 (in %)

	Particular year	return on net assets	return on total assets	return on assets	Net sales margin
CNFC Overseas Fisheries	2018	8.01	5.18	5.71	8.66
	2019	2.99	1.81	2.28	3.52
	2020	-22.43	-13.76	-12.84	-35.25
	2021	-15.73	-8.78	-7.07	-19.22
	2022	1.37	0.53	2.21	1.19
Kaichuang International	2018	8.89	6.33	7.75	7.64
	2019	10.02	7.09	10.07	8.25
	2020	7.74	5.19	5.80	7.42
	2021	9.67	6.73	8.86	10.00
	2022	5.08	3.33	4.13	5.65

### 3.2.2. Profitability Analysis

The presentability of earnings measures the ability of profits to generate cash flows, reflects the actual cash flow situation, and is the primary consideration when analyzing the quality of earnings; if a company generates profits that are only reflected in its books and do not generate real cash flows, it is difficult to consider its earnings to be of high quality[4]. In this paper, we have selected the cash flow ratio, main business cash flow rate and other indicators to analyze, in general, the larger the value of these indicators, the stronger the cash flow, the higher the degree of cash flow to profit protection.[5] The greater the value of these indicators, the stronger the collectability and the higher the degree of cash flow guarantee for profit.

As can be seen from Table 4, the company's main business cash collection rate and accounts receivable turnover ratio outperforms Creation International, with the main business cash

collection rate showing an overall upward trend, and the accounts receivable turnover ratio decreasing and then increasing as a whole, with the turnover efficiency improving at the later stage. While the cash flow ratio and operating cash flow return on assets are overall volatile, with negative values of -15.05% and -5.51% respectively in 2020, indicating that the company's cash recovery ability of operating assets is deteriorating, firstly, because of the backlog of inventory at the end of the period in 2019, the reduced efficiency of the use of assets led to weakened cash liquidity, and secondly, due to the impact of the epidemic, the decline in the sales volume and price of fish goods made the operating activities Cash inflows decreased. 2021 saw an improvement in asset collectability, but 2022 saw another abnormal decline and a deterioration in the cash collection position. What is more worrying is that the surplus cash security multiplier has dropped to -100.22% and -502.22% in the past two years, which indicates that the degree of security of cash income of CNFC Overseas Fisheries is extremely unstable, and the company may have the situation of virtual profit and loss, and the profit is only "rich on the face of the book".[6] The profit is only "rich on the books". On the contrary, although there are fluctuations in the cash security multiples of surplus in the past five years, the overall number is kept above 100%, and there is enough cash security for the earnings in each period in Kaichuang International.

On the whole, CNFC Overseas Fisheries 's main business cash collection and accounts receivable turnover performed well, while other indicators performed poorly, the level of cash return was not high and extremely unstable, the degree of cash flow security of profits was worrying, and the overall profitability of the cash collection ability was not as good as that of KIC, and thus there is still a lot of room for improvement.

**Table 4.** Comparison of Earnings Collectibility between CNFC Overseas Fisheries and Kaichuang International 2018-2022 (in %)

	Particular year	cash flow ratio	Main operating cash flow rate	Accounts receivable turnover ratio	Return on operating cash flows from assets	Surplus cash cover multiple
CNFC Overseas Fisheries	2018	5.70	98.87	29.35	1.2	23.24
	2019	-1.60	101.34	26.71	-0.38	-20.74
	2020	-15.05	99.36	18.09	-5.51	40.07
	2021	25.04	105.89	16.94	8.8	-100.22
	2022	-11.37	107.20	32.85	-2.65	-502.02
Kaichuang International	2018	67.16	101.24	16.59	8.26	130.47
	2019	53.45	99.84	20.08	7.56	106.72
	2020	50.95	104.20	16.00	11.59	223.31
	2021	52.67	98.33	16.92	7.63	113.47
	2022	17.53	102.79	16.71	3.53	110.56

### 3.2.3. Structural Analysis of Earnings

The structural nature of earnings measures the share of earnings generated by each of the producing and other activities in total net earnings.[7] . This paper selects the proportion of profit from main business, the proportion of income from main business and other indicators to analyze, in general, the higher the proportion of income and profit from main business, the stronger the core competitiveness, the stronger the profitability of the main business; the lower the proportion of all other costs and expenses, the better the ability to control costs and expenses, and the higher the quality of profitability will be.



Empirical data suggests that the proportion of main business income and profit should be above 70% with better earnings quality. From Table 4, it can be found that the proportion of main business income of CNFC Overseas Fisheries has performed well overall, stabilized between 80% and 100% for many years, the proportion of main business profit fluctuates greatly, showing a three-stage development trend, the proportion of 2020 declined sharply, which indicates that the company's main business is not in a good operating condition in the period, and the contribution of profit brought by the company is relatively low, which is also closely related to the negative sales gross margin during this period. This is also closely related to the negative sales margin during this period; in 2022 there was a substantial increase, and reached the highest value of 360.22% in the past five years, which indicates that mainly with the improvement of the epidemic, the main business operating conditions have improved, and the contribution to profitability is gradually increasing, and the main business has a greater potential for development. In general, costs and expenses should be relatively fixed relative to the main business income[8] In general, the cost and expense should be relatively fixed relative to the main revenue, abnormal increase or decrease need to pay extra attention to, abnormal increase may be the deterioration of business conditions, abnormal decrease may be to strengthen the management of cost and expense, it may also be the result of manipulation of profits. The cost and expense ratio of CNFC Overseas Fisheries basically shows the same proportion of the first increase and then decrease in the trend of change, in 2020, because of the impact of the epidemic, the increase in the cost of various costs and expenses led to the highest cost and expense ratio, the overall and the change in the trend of revenue and profit ratio complement each other, so it can be considered that the cost and expense is a normal change, and there is no obvious reduction in the quality of profitability. Moreover, compared with Kaichuang International, the cost ratio of CNFC Overseas Fisheries is at a lower level, and the cost control ability has a certain competitive advantage over other companies in the same industry.

From a comprehensive point of view, CNFC Overseas Fisheries earnings structural performance compared to Kai Chuang International is slightly inferior, the main business operation is not stable in the early period, the level of cost and expense control needs to be improved, but the later stages of the structural indicators of the data to improve, the proportion of profits from the main business growth, cost and expense accounted for a decline in the proportion of gross profit margins on sales has also reached a nearly five-year maximum level, these signs indicate that the earnings of the structure of the stability of the continuous improvement.

**Table 5.** Structural Comparison of Earnings between CNFC Overseas Fisheries and Kaichuang International 2018-2022 (in %)

	Particular year	Profit from main operations proportion	Share of main business income	business costs proportion	Three costs proportion	gross margin
CNFC Overseas Fisheries	2018	65.60	99.41	94.15	17.18	5.85
	2019	103.18	99.26	96.00	19.63	4.00
	2020	56.78	98.99	119.61	22.15	-19.61
	2021	70.31	98.82	113.23	20.06	-13.23
	2022	360.22	83.08	89.30	13.37	10.70
Kaichuang International	2018	464.51	98.48	61.72	28.88	38.28
	2019	329.91	98.81	65.30	29.64	34.70
	2020	484.64	99.07	63.40	27.34	36.60
	2021	283.25	99.42	65.50	28.49	34.50
	2022	522.54	99.64	67.72	28.05	32.28

### 3.2.4. Profitability Security Analysis

The safety of earnings measures the degree of safety of earnings quality under the guarantee of the company's operating solvency. In this paper, current ratio, quick ratio and other indicators are selected to evaluate the security. In general, the higher the solvency and the stronger the operating ability of the company, the probability that the quality of earnings is at a higher level, on the contrary, the weak solvency and weak operating ability of the company's earnings quality tends to be at a lower level.[9] The opposite is true for companies with weaker solvency and weaker operations.

From Table 6, it can be seen that the current ratio and quick ratio of CNFC Overseas Fisheries around 2020 are less than 1, and the short-term solvency is poor. The overall performance of the gearing ratio is relatively stable, but by the impact of the domestic economic environment under the epidemic, the relative expansion of the scale of debt has led to an increase in the asset-liability ratio in 2020 and 2021, and the negative value of the interest coverage multiple, indicating that the company's ability to make profits to repay the debt due to the degree of guarantee is worrying, and in 2022, the debt servicing situation improves, and the indicator turns from negative to positive.

On the whole, the solvency of CNFC Overseas Fisheries is first decreasing and then increasing, and the increasing trend in recent years shows that the company's profitability has been improving the degree of guarantee for repayment of maturing debts, and the security of profitability is increasing, but compared with the comparative companies, there is still a lot of room for progress in the security of profitability.

**Table 6.** Comparison of Profitability Security between CNFC Overseas Fisheries and Kaichuang International 2018-2022

	Particular year	current ratio	quick ratio	Interest coverage multiple	asset-liability ratio
CNFC Overseas Fisheries	2018	2.04	1.25	11.99	0.24
	2019	1.47	0.66	5.59	0.27
	2020	0.79	0.30	-12.67	0.42
	2021	0.69	0.28	-5.95	0.45
	2022	1.89	1.20	3.03	0.29
Kaichuang International	2018	3.96	2.36	68.55	0.28
	2019	3.67	2.28	17.85	0.29
	2020	2.24	1.48	19.19	0.32
	2021	3.11	2.09	17.47	0.32
	2022	2.15	1.41	10.70	0.38

### 3.2.5. Profitability Sustainability Analysis

Earnings sustainability is mainly measured by synthesizing the performance of past indicators to determine whether their earnings have continued to grow. Companies with better sustainability have relatively strong capital appreciation, relatively low business risks, relatively high quality of services and products, and are more able to gain the support of stakeholders, thus forming a good development cycle, and the better the quality of earnings is 错误!未找到引用源。 The better the quality of earnings. In this paper, we select the growth rate of main business income, gross profit margin growth rate and other indicators to evaluate the sustainability, generally speaking, the higher the value of these indicators, the stronger the sustainability, the better the growth, and sustained and stable growth means that the company has a better profitability prospect.[10] The higher the value of these indicators, the stronger the

sustainability and growth, and the sustained and stable growth means that the company has a better profitability prospect.

As can be seen in Table 7, the overall change trends of the growth rate of income from main business, the growth rate of gross profit margin and the growth rate of operating EBIT are roughly the same: a slight increase in 2019, a significant downward trend in 2020, and then an increase year by year, and reached the highest value in the past five years in 2022. The change in the growth rate of net profit, on the other hand, shows a clear decline followed by an increase, and similarly reaches its highest value in 2022. Generally speaking, compared with net profit, which is likely to have the water of profit manipulation, the main business income and gross profit margin are less affected by surplus management, and analyzing the trend of their changes can more objectively reflect the development of profitability. Combined with the analysis of the above indicator data, it can be seen that the fluctuation of profits before and after 2020 is large, and the realized profit is unstable and faces greater risks[12]. In addition, the growth rate of operating net cash flow is negative in all four years except 2021, which is closely related to the reasons mentioned in the previous analysis of profitability that lead to the low and unstable level of operating cash return. Moreover, the abnormal negative growth rate of this indicator in 2022 also contrasts with the steady improvement of other indicators, which again verifies that the company has certain problems in cash flow.

In a side-by-side comparison, the performance of various indicators of Kaichuang International is also unstable, but in contrast, although the indicator data of CNFC Overseas Fisheries is unstable in the early stage, its performance in the later stage is relatively good, and the performance of all indicators except the growth rate of net cash flow from operations is better than that of Kaichuang International, which indicates that the growth momentum of its daily production and operation activities has been strengthening, and the stability of the income generated from its main core business has been improving, and the sustainability of its earnings is expected. The sustainability of its earnings is expected.

**Table 7.** Comparison of Profitability Sustainability between CNFC Overseas Fisheries and Kaichuang International 2018-2022 (in %)

	Particular year	Growth rate of main business income	Gross margin growth rate	Operating EBIT growth rate	net profit growth rate	Growth rate of net cash flow from operations
CNFC Overseas Fisheries	2018	-16.30	-55.51	-1068.24	8.20	-91.53
	2019	-7.59	-31.62	-18.14	-62.45	-133.51
	2020	-23.05	-590.25	-86.76	-817.18	-1389.96
	2021	3.84	32.53	17.41	43.38	241.62
	2022	29.05	180.88	64.17	108.02	-140.19
Kaichuang International	2018	6.85	2.57	2.72	15.71	-4.87
	2019	15.82	-9.35	-30.09	24.97	2.22
	2020	-10.99	5.48	29.01	-19.91	67.59
	2021	0.58	-5.74	-28.90	35.51	-31.15
	2022	-1.99	-6.43	-20.56	-44.59	-46.02

### 3.2.6. Earnings Realism Analysis

Evaluation of the authenticity of earnings, this paper focuses on two angles: first, analyzing the proportion of virtual assets, that is, the proportion of long-term amortized expenses to net profit, which is less than 10%, indicating that the company's use of virtual assets to manipulate the possibility of profit is small, and the authenticity of earnings is relatively high. Second, focus

on some other non-accounting matters, such as like accounting firm replacement[13] The second is to pay attention to some other non-accounting matters, such as the change of accounting firm, the type of audit opinion of the CPA, etc., which can also reflect the authenticity of the company's profitability to a certain extent.[14] The second is to focus on some other non-accounting matters, such as change of accounting firm, type of CPA's audit opinion, etc. These matters can also reflect the authenticity of the company's earnings situation to some extent.

As can be seen from Table 8, the proportion of virtual assets (long-term amortized expenses) of CNFC Overseas Fisheries in 2019 is 19.25%, which is more than 10%, higher compared to other years, and there is the possibility of using virtual assets to manipulate profits; in addition, by reviewing the audit report of CNFC Overseas Fisheries, the company changed the accountant providing annual audit services in 2020 due to the company's business development and the need for future audit Firm, from Mazars CPAs (special general partnership) to China Audit Asia Pacific Certified Public Accountants LLP (special general partnership) as the annual financial auditor, the two firms for five consecutive years firms issued a standard unqualified audit opinion, and the company's payment of the audit fee is not abnormal, which indicates that the accounting firms fully recognized the quality of the company's financial reports. On the whole, the truthfulness and reliability of the relevant data and information disclosed in the financial statements of Company A is fair, and the overall earnings have a high degree of authenticity.

**Table 8.** Earnings Realism in CNFC Overseas Fisheries 2018-2022

	Particular year	Long-term amortized expenses (\$)	Long-term amortized expenses as a percentage of net profit (%)	Audit opinion
CNFC Overseas Fisheries	2018	57215.52	0.11	Standard unqualified opinion
	2019	3917637.93	19.25	Standard unqualified opinion
	2020	3165542.76	-2.02	Standard unqualified opinion
	2021	2017677.84	-2.27	Standard unqualified opinion
	2022	869812.92	12.20	Standard unqualified opinion

### 3.3. Qualitative Analysis of Earnings Quality based on the PESTEL Model

Qualitative and quantitative analysis of earnings quality from both financial and non-financial perspectives can make the relevant research more comprehensive, unlike the quantitative analysis using financial indicators above, the non-financial perspective mainly qualitatively analyzes those factors that are difficult to quantify, due to the fact that the operation mode of CNFC Overseas Fisheries is mainly based on the fishing business, its operation is greatly affected by the political, technological, ecological and other factors in the macro-environment, and in addition, the 2020 epidemic outbreak, the macroeconomic environment also has a large negative impact on its operation, therefore, this paper mainly chooses the PESTEL model as the basis of non-financial analysis to analyze the political, legal, economic, social, technological as well as environmental factors in which CNFC Overseas Fisheries is located.

### 3.3.1. Political and Legal Factors

Offshore fishing is a strategic industry, which is of great significance to safeguarding national maritime rights and interests, building a deep blue industry chain, constructing an overseas blue granary and expanding the Maritime Silk Road. In the 14th Five-Year Plan and the 2035 Vision, the State has clearly stated that it is necessary to "synergize the protection of marine ecology, the development of marine economy and the maintenance of marine rights and interests, accelerate the construction of a strong marine country, and develop a sustainable pelagic fishery". In recent years, in order to realize this goal, the state has provided a series of policy support for offshore fisheries, encouraging relevant enterprises to further increase resource exploration and fishing, fishing vessel upgrading and reconstruction, product research and development, and market development, and all of these have brought opportunities for the sustained and healthy development of CNFC Overseas Fisheries. In addition, in the face of the epidemic, the Ministry of Agriculture issued an emergency circular requiring fishery departments and offshore fishing enterprises around the world to attach great importance to the prevention and control of the new crown epidemic on offshore fishing vessels, and provided a series of government subsidies and tax incentives to the offshore fishery industry, which alleviated the difficulties of the enterprises to a certain extent. Therefore, driven by the policy environment, the development of CNFC Overseas Fisheries is promising, and the quality of its profitability is naturally worth looking forward to.

### 3.3.2. Economic Factors

The economic factors affecting the profitability of CNFC Overseas Fisheries mainly involve various risk issues. First, the risk of health and epidemic prevention, the occurrence of the new crown epidemic in 2019 has brought a huge impact on the pelagic industry in which CNFC Overseas Fisheries is located, on the one hand, it has increased the cost of epidemic prevention; on the other hand, it has caused an adverse impact on the market turnover of pelagic products, under the influence of the epidemic, the market of the exporting countries of pelagic products has been blocked, the demand of the international market is compressed, and product sales are obstructed, and sales of pelagic exports have been greatly affected, and the quality of profitability is even more worrying. At present, the spread of the new crown epidemic in the world into the normalization, but the virus may still continue to mutate, do not rule out the possibility of a local epidemic or even another global outbreak, so ocean fishing enterprises are still facing the risk of health and epidemic prevention. Another is the risk of rising energy prices, after the outbreak of the Russian-Ukrainian war, global commodity prices continue to rise, the international fuel prices are higher, affected by the bait and freight and other difficult to fall, which will undoubtedly increase production and operating costs, which in turn affects the quality of profitability. Overall, both the sanitary epidemic risk and the risk of rising energy prices have not only affected the quality of earnings in the last five years, but may also have a negative impact on their future profitability.

### 3.3.3. Social Factors

Fish caught by pelagic fisheries come from the deep sea, which is an important source of protein for human beings because of its excellent varieties and delicate taste, and is also healthier, safer and more beneficial to the human body. The forecast of the Food and Agriculture Organization of the United Nations (FAO) for the period from now to 2030 shows that the global consumption of aquatic products is further increasing, and the contradiction between supply and demand will continue to exist. For the domestic, seawater products are also in recent years on the people's tables one after another, but with the deep processing level of pelagic fisheries and consumer market transformation and upgrading, such as tuna, such as high-end deep-sea fish into the table of the general public will not be too far away, at that time, the deep-sea fish market will be further expanded, and the quality of its profitability is naturally worthy of anticipation.

### 3.3.4. Technical Factors

Pelagic fishery is a technology-intensive industry with a high degree of scientific and technological dependence. China's pelagic fishery technology started late, and its investment in pelagic scientific and technological innovation and transformation of achievements is relatively small; although it has developed in recent years, there is still a large technological gap compared with countries that have invested more in scientific and technological research and development, such as the United States and Japan. As far as CNFC Overseas Fisheries is concerned, the scale of its tuna longline fleet ranks the forefront in China, and it is one of the largest tuna longline fishing enterprises in the western and central Pacific Ocean and Atlantic Ocean regions of China, and it is in the leading position in the scale of the fleet, production capacity, professional talent reserve and market discourse, etc., and it has become the leader in the field of domestic tuna longline fishing, with a certain degree of leading advantage. Therefore, in comparison with the domestic market, its operation has a certain degree of competitiveness, but in order to realize greater development, there is still more room for progress in its technology in the future.

### 3.3.5. Environmental Factors

In recent years, overfishing of marine resources has led to the degradation of the ecological environment, and the fundamental ecological dilemma faced by the pelagic fishery industry is the difficulty of sustainable development as a result of overfishing of fishery resources. Since the United Nations Convention on the Law of the Sea formally came into force and the establishment of the International Organization for the Conservation of Resources (IOCR), countries have one after another shifted the resources of their own countries and waters under their jurisdiction from "fishing" to "conservation", and the conservation of ecological resources has meant that the fishing quota has been restricted, and the scope of permitted operations has continued to be narrowed. The scope of permitted operations will continue to shrink. In addition, under the influence of climate, big and small years and other factors, fishery resources often have ups and downs between different years, and sometimes the fluctuation range is larger, which has a greater impact on the company's benefits, including ultra-low temperature tuna in recent years to maintain basic stability, but the South Pacific low-temperature tuna resources have declined in recent years, and the average yield of a single vessel in 2020 reached a historical low point, the situation is not optimistic. Profitability and fishery resources are closely linked to CNFC Overseas Fisheries, short-term perspective, in the last five years, along with the fluctuation of fishery resources in CNFC Overseas Fisheries profitability has been affected, and in the long run, in the state of overfishing in the over-oceanic resources and oceanic resources, the resources are bound to be cut down, and if we continue to use tuna and other products as the main profitability of the resource, the profitability of the space in the future will be backlogged, and the quality of profitability will be affected. The quality of earnings will also be affected.

In addition, the nuclear contaminated water discharge plan announced by the Japanese Government in August this year has aroused worldwide concern, and this act will undoubtedly have a serious impact on our distant-water fishing industry. The Pacific Ocean is Japan's nuclear sewage discharged into the sea after the impact of the hardest-hit areas, and in CNFC Overseas Fisheries since the listing has been centered around offshore fishing to carry out, fishing area is mainly for the Atlantic Ocean, the Pacific Ocean and the Indian Ocean, there is no way to completely with the Pacific Ocean, although the company did not clearly indicate that the nuclear contaminated water discharge program will have an impact on the company. But taking into account the CNFC Overseas Fisheries in the Pacific Ocean has a deep layout, is one of China's largest tuna longline fishing enterprises in the central and western Pacific Ocean, so it is difficult to say that the operation of the CNFC Overseas Fisheries will not be affected.

## 4. Conclusion and Recommendations

### 4.1. Conclusion

From the evaluation results of entropy value method, affected by the epidemic, the profit quality of CNFC Overseas Fisheries as a whole shows a trend of decreasing and then increasing, and after 2020, the profit quality begins to improve continuously. From the financial analysis of each dimension, in terms of profitability, the company's asset utilization efficiency is relatively low, and the profitability of asset use needs to be improved. In terms of cashability, earnings lack sufficient cash flow security, and the cash flow inflow and cash recovery ability behind operating business income is insufficient. Structurally, the core development power is insufficient in the previous period, product sales are not optimistic, there is room for progress in cost and expense management, and the operating situation has improved in recent years, and the core development power is increasing. In terms of security, the debt-servicing ability is relatively unstable in the early stage, but the degree of security of profitability for repayment of maturing debts has been gradually increasing in recent years. In terms of continuity, except for the fluctuating growth of cash flow, all other indicators have been in a stable growth trend in recent years, and the continuity is good; in terms of authenticity, the audit opinions are all standard unqualified, and the proportion of virtual assets is generally low, reflecting that the quality of profitability is generally real and reliable.<sup>[15]</sup>

Overall, during the period of 2018-2022, most of the earnings quality indicator data of CNFC Overseas Fisheries in the early period of poor performance, showing a downward trend, which is mainly due to the impact of the situation, the later period along with the improvement of the epidemic, the product market supply and demand further repair, the company's main business operating conditions have improved, the performance of various profitability indicators continue to improve, the quality of profitability has been improved, so this paper argues that China's Therefore, this paper believes that the development of the profitability of CNFC Overseas Fisheries is still worth looking forward to.

### 4.2. Recommendations

#### 4.2.1. Increased Efficiency in the Utilization of Assets

The asset utilization efficiency of the CNFC Overseas Fisheries is not high, and the profit generating capacity of the profitability is relatively weak, so it is necessary to speed up the asset turnover speed and improve the asset utilization efficiency.<sup>[16]</sup> Therefore, it is necessary to speed up the turnover of assets and improve the efficiency of asset utilization. The fixed assets of CNFC Overseas Fisheries account for the largest proportion of the company's assets, so it is important to strengthen the management and operation of its own fixed assets to improve the quality of the company's profitability, and should be adjusted according to the status of the company's operators of the turnover of fixed assets, operations, repairs, and disposal, to achieve a reasonable allocation, and to improve the efficiency of the use of assets.

#### 4.2.2. Increased Cash Security of Earnings

CNFC Overseas Fisheries has relatively obvious cash flow problems, among which the more obvious cash flow from operating activities is not abundant and unstable. To improve this situation, the most direct way is to improve the sales of fish, increase sales revenue, and at the same time to strengthen the awareness of cash flow management, strengthen the management of accounts receivable, formulate safe and effective accounts receivable management policy, improve the speed of cash recovery, and enhance the cash security of profits. degree, and thus improve the quality of profitability.

#### 4.2.3. Expanding Sales Channels and Increasing the Market Share of the Main Business

In recent years, due to the impact of the epidemic, inventory turnover increased, inventory stagnation led to an increase in asset impairment losses, making the company's main products poor sales conditions, which in turn affected the quality of earnings for the period. To this end, the company should actively adjust the production and sales ratio, take the initiative to broaden sales channels, improve the effectiveness and efficiency of inventory turnover, improve sales gross margins, and only fundamentally improve the company's sales to better improve the profitability, for example, you can use the Internet technology for the fusion of on-line and off-line, to grasp the mode of the new media operation, to increase the impact of the product through the network, and thus improve economic efficiency<sup>[17]</sup> The company's core competitiveness is the key to the core competitiveness of the listed company. In addition, the key to the core competitiveness of listed companies lies in their main business. Due to the proprietary and limited nature of resources, companies with strong core competitiveness are taking the road of specialization and focusing on fist products, so vigorously developing the main business is the most important thing to improve the quality of earnings<sup>[18]</sup> Therefore, vigorously developing the main business is the most important thing to improve the quality of earnings. As the only company in China that owns the quota of North Atlantic bluefin tuna, CNFC Overseas Fisheries has almost no competitors in the domestic market of top tuna, so it is all the more important to speed up the pace to seize the market, increase the market share, and give full play to its unique competitiveness to enhance the profitability of its main business.

#### 4.2.4. Transforming Business Strategies and Accelerating Transformation and Upgrading

In the long run, under the general trend of declining global fishery resources, if the company continues to rely only on tuna and other products as its main profitable resources, its future profitability is bound to be backlogged, and it needs to change its management strategy to create higher income in a limited resource environment. On the one hand, in order to better alleviate the pressure on the ecological cycle of pelagic fishery resources, it is necessary to change the "fishing-oriented" production thinking, and gradually move closer to the "conservation-oriented" marine fisheries, and it is recommended that the medium-water fishery industry expand the industrial chain, develop more fish resource projects, and decentralize the industrial product structure, and through the adjustment of the industrial structure, improve the profitability of the industry. It is recommended that CNFC Overseas Fisheries industry expand its industrial chain, develop more fish resource projects, decentralize the industrial product structure, and improve the competitiveness of the product market by adjusting the industrial structure. On the other hand, we should strengthen the research and development of product processing technology and artificial culture technology of fishery resources. At present, the domestic distance from the artificial culture technology of tuna is relatively backward, the wild tuna stocks are facing extinction, in order to the sustainable development of the enterprise, it should increase the investment in the artificial culture technology of tuna, and promote the transformation and upgrading of the industry.<sup>[18]</sup> For the sustainable development of the enterprise, it should increase investment in tuna artificial culture technology and promote industrial transformation and upgrading. In addition, the current main products of CNFC Overseas Fisheries are not characterized by high profit and high value-addedness, and the development of processing technology can help the enterprise to improve the value-addedness of its products, which in turn can increase the profit and improve the quality of profitability. Moreover, if it can strengthen cooperation with downstream factories and intensify its product processing business, and then utilize its own characteristics of a larger overall volume of assets, it can still create a higher operating income.



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