ISSN: 1813-4890

# Comprehensive and Budgetary Management System of State-Owned Enterprises in the Era of Big Data--Taking Yunnan Copper Industry as an Example

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## Abstract

**With the development of market economy, state-owned enterprises have gradually become the backbone of the industry. And the comprehensive budget management is for the development of state-owned enterprises in the financial management provides a solid foundation and guarantee conditions. However, most scholars only only on the comprehensive budget programming research, ignoring the overall application of the comprehensive budget system. At present, China's state-owned enterprises have not formed a complete comprehensive budget management system, and at the same time, along with the influence of the big data era, the comprehensive budget work and the introduction of big data technology. Therefore, this paper is based on the perspective of big data to build a comprehensive budget management system for state-owned enterprises with budget preparation, budget execution and budget evaluation as a whole, and introduces the rolling budget method and fixed budget method for budget preparation, and the balanced scorecard method for evaluating the results of budget execution. At the same time, Yunnan Copper Industry is used as a case for specific application to analyze its budget implementation in 2021 and evaluate it, which provides new ideas for the preparation, implementation, control and evaluation of comprehensive budget of state-owned enterprises.**

## Keywords

**Big data; State-owned enterprises; Yunnan Copper Industry; Comprehensive budget system.**

## 1. Introduction

Under the advancement of the technological revolution, China's information technology is booming, big data, cloud computing and other high-tech in the social development of the demand for in-depth application of health care, retail and other fields. The advent of the big data era, the survival of the enterprise environment to bring new development opportunities at the same time will also bring corresponding risks to the enterprise (Wang Yuanzhang, 2022)[1]. With the advancement of the big data era, China's market competition is becoming increasingly fierce, and the development of enterprises is facing serious challenges. In order to expand the survival space of enterprises and promote the development of market economy, the construction of management accounting construction system in China has entered a new development stage (Liuyan, 2022)[2].

Comprehensive budget management has the characteristics of comprehensive control, which is based on the long-term development of the enterprise as the goal, the enterprise development strategy, the prediction of the future market environment, the determination of the operating objectives of the budget management period, the implementation of various departments of the enterprise, throughout the enterprise's entire production and operation

activities and financial management activities, to provide short-term planning for the enterprise, and to strengthen the management of the enterprise (Wang Shuang, et al., 2021) [3]. Comprehensive budget management, as an important part of the comprehensive management of enterprises, guides enterprises to make effective and accurate management decisions to achieve the fundamental business objectives of maximizing the interests of enterprises (Lai Jinyu, 2022) [4].

State-owned enterprises have the role of regulating the development of the national economy and occupy an important position in China's economic market (Luo Fang, 2022)[5]. In recent years, with the reform of enterprise management, comprehensive budget management, as a new management model, has been initially applied to the management process of state-owned enterprises, and gradually become an important part of the management work of state-owned enterprises (Chuni Yue, 2021)[6]. State-owned enterprises carry out budget cost preparation, implementation, evaluation and other management activities by taking measures to introduce comprehensive budget management model in the management process (Du Sussheng, 2021)[7]. The construction and application of comprehensive budget management system in state-owned enterprises help enterprises to reduce production costs, realize the optimal allocation of enterprise resources, improve the economic efficiency and strategic management ability of state-owned enterprises, and enhance the competitive advantage of enterprises in the market (Zhang Yi, 2021)[8].

From the study of comprehensive budget management system in the cost management of state-owned enterprises in the application of less literature can be found, at present, most of the scholars in our country in the study of comprehensive budget management, only only the preparation of the budget program, often ignore the application of the comprehensive budget management system, and this aspect of the study of the state-owned enterprises in China is very important for the development of the operation of the state-owned enterprises. Therefore, this paper is based on the perspective of big data to analyze the application of comprehensive budget management system in the cost management of state-owned enterprises, and to improve the cost management ability of state-owned enterprises.

## 2. Status of comprehensive budgets in State-owned enterprises

### 2.1. Full budget implications

Budget management in a narrow sense mainly determines the financial situation in the future period in monetary and quantitative form and then adjusts and controls it, and in a broader sense it covers the standard of internal management of the enterprise, the tool of coordination and the basis of performance appraisal, so as to achieve the purpose of improving the overall management level of the enterprise. Comprehensive budget management is mainly oriented to the development strategy, through the calculation in advance, to formulate the enterprise's income and expenditure plan in the future period. Effectively configure the enterprise's financial and non-financial resources, scientific management comprehensively penetrate into the enterprise's production, operation, management and other aspects of the process, to minimize the input costs, maximize the benefits of the enterprise, and lay a solid foundation for the overall development of the enterprise. It is a systematic project that requires the participation of all staff, comprehensive coverage of business, and full tracking of management.

### 2.2. Problems with budget management in State-owned enterprises

State-owned enterprises as the main body of China's socialist market economy, is the representative of advanced productive forces, budget management as an important means of modern corporate governance, has been generally incorporated into the operation and management activities of large and medium-sized state-owned enterprises. China's

comprehensive national strength continues to strengthen, rapid social and economic, state-owned enterprises, although the budget management has been effective, but there are still questions.

### 2.2.1. Inadequate organizational system for budget management

The construction of the budget management organization system of some state-owned enterprises is usually undertaken only by the finance department, with no special budget management organization in charge. In some state-owned enterprises of group nature, the budget organization structure stays at the group level and the management of the first-level subsidiaries, while the second and third-level companies mainly rely on the finance department to promote the budget work, and the communication efficiency is low. At the same time, the budget target is not combined with each unit and operation link, and it is only a simple upper and lower level distribution relationship.

### 2.2.2. Lack of scientific approach to budgeting

There is a lack of in-depth practical investigation, research and scientific argumentation in the preparation of the budget, a failure to choose the most appropriate budgeting method, the existence of "haggling" in the determination of budgetary indicators, and a lack of a reasonable and standardized preparation process, leading to a lack of accuracy in the preparation of the budget and a derailment of the actual situation. Many business units decide on the budget for the following year only on the basis of budget data from previous years, which is highly subjective. For example, directly based on the current year's receivables and the next year's expected to achieve the profit target to prepare the income and expenditure budget, and did not fully consider the enterprise's own business characteristics, industry market trends and other factors. If the overall size of the enterprise budget or the business involved in the case of change, it is very easy to cause the preparation of the budget and the goal of a large difference in the situation, may result in budgetary slack and waste of resources. Budgeting methods include fixed budget, flexible budget, rolling budget, etc., which should be selected according to the actual situation of the enterprise. Most state-owned enterprises in China usually take a fiscal year as a budget cycle, but with the rapidly changing market can not match, choose with the passage of time and changes in market conditions and the extension of their own and synchronized adjustment of the rolling budget may be more appropriate.

### 2.2.3. Insufficient integration of business and finance

At present, the state-owned enterprise organization budgeting work usually focuses on whether the final budget data meets the budget standards, lack of neglect of the process of budgeting work, without highlighting the coordination between the budget departments, financial management and business work is not integrated enough. Each budget department focuses on different points, the budget data compiled with the financial sector accounting caliber deviation. In addition, the budget department in the budgeting process, and the financial department did not carry out good communication, the income budget and the cost of expenditure budget is not synchronized phenomenon that occurs from time to time, will affect the subsequent budget management. For example, the business sector is a performance-oriented departments, the achievement of performance objectives directly related to the performance appraisal incentives, the business sector in the preparation of the budget according to the next year's budget performance objectives and forecast conditions to determine the budget revenue and the corresponding costs and expenses, generally to the expected contract amount as the budget revenue. At the same time, in order to achieve a better incentive effect, the management of the enterprise in the issuance of business sector performance appraisal incentives, most of them choose to calculate the business contract amount as the base. And at present, the financial department of state-owned enterprises only summarizes and integrates the budget program of each budget department, and can not force

the budget departments to unify the caliber, and in the actual accounting, the financial department determines the current income and expenses according to the accrual system, in which the business income needs to be divided according to the income corresponding to the time period, which leads to the obvious deviation between the actual income and the budgeted income, and the actual profit and the budgeted profit [9]. In summary, the budget management of state-owned enterprises has the problems of running too slowly, low efficiency and slow updating, which does not match the development of the enterprise and has not yet reached the ideal state. In order to make the comprehensive budget management of state-owned enterprises give full play to its role, it is necessary to establish a more perfect comprehensive budget management system.

## 3. Establishment of a comprehensive budgeting system

### 3.1. Full budget target setting

The budget target is directly related to the rationality of the direction of budget management, so it is the first task to set up the budgeting system to determine the enterprise's budget target. Combined with the needs of the enterprise's own development, the budget target and the enterprise's development strategy goal to maintain a high degree of convergence, for the whole process of more refined cost management, and its implementation to each department, production and operation of each specific link. Utilizing the integrated data and other functions of big data technology, we analyze the external market and internal development of the enterprise in combination with the strategic objectives of enterprise development and medium- and long-term development planning, and set more reasonable budget management objectives. Quantitatively or qualitatively analyze the situation of each production and operation link of the enterprise, including production and supply, customer level, sales channel, market level, technology level, management, staff, resources and financial aspects.

### 3.2. Preparation of the full budget program

The rational preparation of the budget program requires the joint participation of management and budget-using departments, and emphasizes the systematic cooperation between departments and functional lines. When choosing the budgeting method, we should take into account the stability and continuity of the budget, and comprehensively consider our own business characteristics, industry environment and other factors while keeping the same caliber as the previous year. The art of integrating and optimizing the existing resources of the enterprise, decomposing the budget target set by the enterprise to each key link, so that the goal of enterprise cost control can be fully implemented. State-owned enterprises tend to diversify their operations, and the needs of different businesses for budgeting content and processes are also different. Based on big data and cloud accounting environment can be more flexible, personalized budgeting, to achieve different business modules, different needs of budgeting and dynamic improvement. The closed-loop management process can be efficiently completed through the cloud accounting platform, fully taking into account the characteristics of the needs of different departments, specific objectives and collocations, and then optimize the budgeting from the perspective of the enterprise departments and the whole, respectively, so as to make the budgeting results as reasonable as possible and reduce the redundancy of the budgeting process. The financial and budgetary objectives are issued to each main department, and each main department will modify the departmental budget according to the actual situation of its own department and submit it to the budget management department for collection and coordination, and then it will be issued for implementation after the management approves and passes it.

## 3.3. Full budget programming methodology

The preparation of the budget program requires a certain method, according to the preparation of the basis for the division of the budget can be divided into zero-based budget and incremental budget. According to the state of the budget, the budget can be divided into fixed budget and flexible budget. According to the time attributes of the budget, the budget can be divided into regular budget and rolling budget. In fact, these budget methods are not all applicable to enterprise budgeting, generally speaking, most of the enterprises in practice generally use the fixed budget method, flexible budget method and rolling budget method for preparation.

### 3.3.1. Fixed budget method

Fixed budget method, also known as static budget method, is a fixed period of normal, realizable level of a fixed amount of business (such as product production, sales) as the only basis for determining the corresponding budget indicators of the budgeting method. When the fixed budget method is used, budgeted profit = budgeted fixed sales volume x (budgeted unit sales price - budgeted unit variable cost) - total budgeted fixed cost. Budget performance results: actual profit - budgeted profit = [actual sales volume x (actual unit selling price - actual unit variable cost) - total actual fixed cost] - [budgeted fixed sales volume x (budgeted unit selling price - budgeted unit variable cost) -Total budgeted fixed costs.

### 3.3.2. Flexible budgeting method

Flexible budgeting scheme is a budgeting method that establishes a baseline budget for a specific level of business volume based on the analysis of cost behavior, the linkage relationship between business volume, cost, and profit, and the budget cycle. With the flexible budgeting method, a baseline sales level is created at the beginning of the budget, but the budget is adjusted at the end of the period based on actual sales. Budgeted profit at the beginning of the budget = benchmark sales x (budgeted unit sales price - budgeted unit variable cost) - total budgeted fixed costs. Budgeted profit at the end of the period when the budget is adjusted = actual sales × (budgeted unit sales price - budgeted unit variable cost) - total budgeted fixed cost. Budget Performance Effect: Actual Profit - Budget Profit = [Actual Sales × (Actual Unit Sales Price - Actual Unit Variable Cost) - Actual Total Fixed Costs] - [Actual Sales × (Budget Unit Sales Price - Budget Unit (variable cost of budgeted units) - total budgeted fixed costs] [10].

### 3.3.3. Rolling Budget Method

Rolling budget, also known as continuous budget or perpetual budget, means that enterprises no longer link the budget period to the fiscal year when preparing the budget. Instead, according to the implementation of the enterprise's last rolling budget period and the results of new forecasts in the rapidly changing market environment, in accordance with the established budget cycle and rolling frequency, with the continuous implementation of the budget and the continuous extension of the budget period to the next budget period, so that the budget period for a fixed period of time for a method of preparation. The rolling budget method is essentially a dynamic flexible budget that is continuously updated and adjusted. It overcomes the disadvantage of a long flexible budget period, which prevents the implementation process from adjusting to market changes. In terms of preparation, it is necessary to follow the principle of importance and the principle of cost-effectiveness, to take the value added of the enterprise as the budget objective, to take into account the requirements of the operating business, to combine the budget with the business process, and to pay continuous attention to the changes in the market environment of the enterprise, so as to ensure the reasonableness and the implementability of the budget program [11].

# 4. Establishment of a comprehensive budget implementation system

## 4.1. Full budget approval

The cloud accounting platform for budget approval can realize the standardization of the approval process, node control of the risks that may arise in the approval process, reduce the errors generated by manual approval, reduce the lagging effect of approval caused by time and geographical differences due to special circumstances such as the travel of the approver, avoid the approval process of the oversteps and duplications, and realize the transparency of the approval process.

## 4.2. Control and analysis of the full budget

The control and analysis of the comprehensive budget determines the effect and quality of budget execution, and the use of big data technology to carry out the whole process of budget control work before, during and after the event, to achieve the goal of comprehensive budget management and control, and to effectively improve the quality of enterprise budget control and analysis work.

Under the guidance of risk theory, risk identification and assessment of the nodes existing in the control process is carried out, the risk is graded, and the key nodes are analyzed and controlled. Compare and analyze the budget data calculated by budget controllers with the business data uploaded by business personnel on the cloud accounting platform, make comprehensive statistics on the flow of funds, the amount of money used and the use of funds in the process of budget execution, and set up early warning boundaries, provide timely feedback when problems occur, and then guarantee the smooth implementation of the budget and real-time control.

In the process of budget control, it guarantees the dynamic connection between business content and budget control, and carries out real-time monitoring of data to discover problems in time, and also provides data for the dynamic adjustment of the budget.

## 4.3. Dynamic adjustment of the budget

Based on big data and cloud accounting platform, it can improve the accuracy of comprehensive budget in the preparation process, but it is still subjective, which makes the theory of budgeting deviate from the actual. Therefore, in the process of budget preparation, the differences between theory and reality should be collected, analyzed and timely feedback, and corresponding measures should be formulated in the dynamic adjustment process of the budget.

# 5. Establishment of a comprehensive budget evaluation system

Budget evaluation is the evaluation of budget preparation and budget implementation, and is one of the important components of the budget management system of state-owned enterprises. The evaluation of the comprehensive budget management system can reflect the initiative of each part of the comprehensive budget in the implementation process, and enhance the accuracy of budget management and promote the realization of budget objectives. For the evaluation of the budget, it is necessary to formulate a reasonable evaluation system, evaluate the results of the budget and the budget process at the end of the budget cycle, and finally issue a comprehensive budget evaluation report.

## 5.1. Results-based evaluation system

It is to compare the results of budget execution with the budget targets, find out where the differences lie, clarify the reasons for the differences, and ensure the reasonableness of the budget. The specific process is to firstly introduce the balanced scorecard from the three

indicators of operation, growth and finance, and then compare the budget execution results of the above three indicators with the corresponding budget targets to find out where the differences lie, and compare the difference data with the average data of the industry in which the state-owned enterprise is located and the relevant data of the main competitors to make clear whether the differences are within the acceptable range, if so, then organize an evaluation report of the budget execution results. If it is within the acceptable range, the evaluation report of the budget execution results will be organized; if it is not within the acceptable range, the report of the budget execution results will be organized after reflecting and correcting to the relevant responsible persons.

The balanced scorecard is actually an appraisal management method proposed by Kaplan and Norton [12]-[13], which is a way of evaluating the implementation of corporate budget objectives by transforming corporate strategic objectives into operable evaluation indexes from four fixed dimensions, namely, finance, customers, internal processes, and learning and growth. The benefits of introducing the balanced scorecard for the assessment and evaluation of the implementation of budgetary objectives lies in the increase of non-financial indicators of the assessment, overcoming the short-term behavior of the financial assessment method, linking the company's strategic objectives with the performance assessment indicators at all levels, which is conducive to the implementation of the corporate strategy objectives.

### 5.2. Process evaluation system

It is the dynamic evaluation of the budgeting and implementation process, and ultimately determines the error-free nature of the budget results. First of all, according to the budget data generated in the process of budget execution, it is classified from three aspects of implementation, adjustment and emergencies, and after that, these three aspects are respectively analyzed qualitatively, and the dynamic evaluation is carried out from the efficiency of budget execution and the effect of budget execution, and the budget execution is obtained, so as to feed back to the budgeting process, and finally control the overall budget and arrive at the evaluation report of the budget execution process.

In addition, state-owned enterprises should make full use of big data technology in the whole process of carrying out budget work, use big data technology to seek the best budgeting value in the budgeting process, and in the budget execution process, use big data management, cloud platform and other whole process to supervise the budget execution work, and collect all kinds of data generated in the process of carrying out economic activities of state-owned enterprises. At the same time, in the process of collecting data, it is necessary to pay attention to some emergencies in a timely manner, and collect and analyze data on emergencies, so as to help enterprises improve the budget management system, provide a reliable basis for the evaluation of the budget implementation, and complete the final evaluation.

## 6. Case Study-Yunnan Copper

In order to better show the application of comprehensive budget management system in state-owned enterprises, this paper selects Yunnan Copper Industry, a state-owned enterprise, to analyze the application of comprehensive budget management system to it in 2021.

### 6.1. Introduction to Yunnan Copper

Yunnan Copper Industry Group Limited (hereinafter referred to as "Yunnan Copper", stock code 000878) is a state-controlled enterprise mainly engaged in copper mining, smelting, extraction and processing of precious and rare metals, sulfur chemistry and trading. It is also an important production base for copper, gold, silver and sulfur chemicals in China. It was founded in 1998 and listed on the Shenzhen Stock Exchange in the same year. As of December 31, 2021, Yunnan Copper achieved a total revenue of 4.103 billion yuan, a year-on-year increase

of 20.3%, with total assets reaching 44.5 billion yuan. After more than 20 years of development, Yunnan Copper now employs more than 20,000 people, ranks first in the country in terms of silver production, ninth in terms of gold production, and has a domestic market share of 12% in terms of high-purity copper cathode.

## 6.2. Financial analysis

Finance is the core basis of enterprise budget, an enterprise only through the financial analysis can formulate the target of the next budget cycle, and evaluate the implementation of the budget target of the current period. Therefore, this paper analyzes the financial data of Yunnan Copper Industry in the past three years to analyze whether the budget target setting of Yunnan Copper Industry is reasonable and evaluate the implementation of the budget.

### 6.2.1. Balance sheet

The purpose of analyzing the company's balance sheet is mainly to confirm whether the company's asset and liability structure is reasonable, and the company's financial status and short-term solvency can be analyzed by each asset and liability item therein. Yunnan Copper's balance sheet for the three years 2019-2021 is shown in Table

Table 1 Balance Sheet Unit: ￥million

| | 2021 Annual Report | 2020 Annual Report | 2019 Annual Report |
|---|---|---|---|
| Report Format | General enterprise | General enterprise | General enterprise |
| Statement Type | incorporation | incorporation | incorporation |
| Original Currency | CNY | CNY | CNY |
| Total Current Assets | 207423.03 | 192536.86 | 196622.24 |
| Total non-current assets | 183814.89 | 205840.24 | 227016.92 |
| Total Assets | 391237.92 | 398377.10 | 423639.16 |
| Total Current Liabilities | 126582.46 | 165974.81 | 200853.89 |
| Total non-current liabilities | 131999.60 | 114640.21 | 101519.41 |
| Total Liabilities | 258582.06 | 280615.02 | 302373.30 |
| Total Owners' Equity | 132655.86 | 117762.08 | 121265.86 |
| Total Liabilities and Owners' Equity | 391237.92 | 398377.10 | 423639.16 |

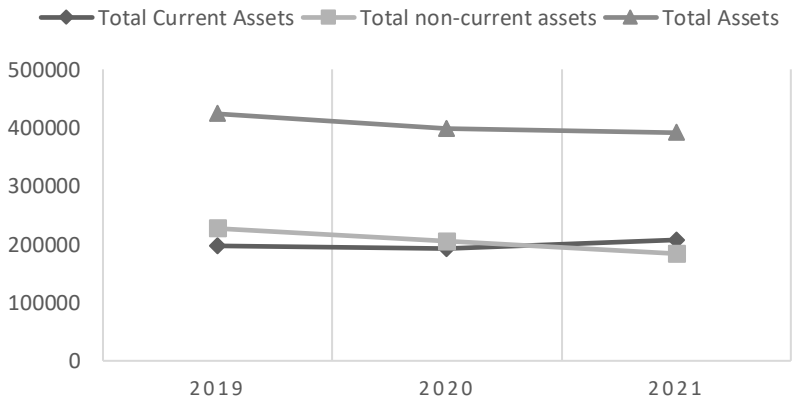


Figure 1 Changes in assets over the last three years

The amount of asset changes of Yunnan Copper in the three years from 2010 to 2021 is shown in Figure 1. Total assets and total non-current assets have decreased for three consecutive years, and although current assets show an upward trend in 2021, the overall corporate assets are decreasing.

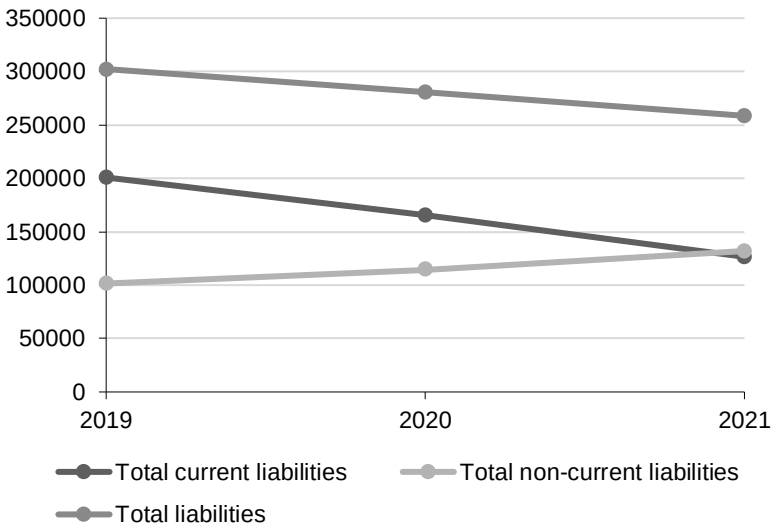


Figure 2 Changes in liabilities over the last three years

Figure 2 shows the changes in the three indicators of Yunnan Copper's total liabilities, total current liabilities and total non-current liabilities for the three years 2019-2021. It can be seen that the company's current liabilities and total liabilities show a downward trend, indicating that Yunnan Copper's current liabilities and total liabilities are decreasing in 2021. Although non-current liabilities are increasing year by year, the overall trend is decreasing, and the company faces less pressure to repay debts.

### 6.2.2. Income statement

The income statement can visually reflect the company's operating results in the operating year, and analyzing each of the revenue items and cost and expense items, the company's profitability and cost control ability can be derived. Yunnan Copper's income statement for the three years 2019-2021 is shown in Table 2.

Table 2 Income Statement Unit:￥million

| | 2021 Annual Report | 2020 Annual Report | 2019 Annual Report |
|---|---|---|---|
| Report Format | General enterprise | General enterprise | General enterprise |
| Statement Type | incorporation | incorporation | incorporation |
| Original Currency | CNY | CNY | CNY |
| Total Revenue<br>Total Operating Costs | 1270577.55<br>1252032.09 | 882385.13<br>864145.19 | 632899.95<br>620372.16 |
| Operating Profit | 16881.85 | 10716.22 | 12038.01 |
| Add: Non-Operating Income<br>Less: Non-operating costs | 133.81<br>465.65 | 181.80<br>180.97 | 122.93<br>552.05 |
| Total profit | 16550.01 | 10717.05 | 1,1608.90 |
| Less: Income tax expense | 3592.82 | 2583.38 | 1861.30 |
| Net profit | 12957.18 | 8133.67 | 9747.59 |

As can be seen from the income statement, Yunnan Copper Company's operating profit and total profit declined in 2020 compared to 2019, but then began to grow in 2021. However, in the middle of 2020, affected by the global new crown epidemic, most of the companies' net profit declined to a greater or lesser extent, and even some companies suffered losses, so overall Yunnan Copper's net profit declined within the normal range. And the growth of net profit in 2021 shows that Yunnan Copper Industry has better development momentum.

ISSN: 1813-4890

### 6.2.3. Cash flow statement

The cash flow statement can reflect the impact of the company's various assets and liabilities items on cash flow, which is used to understand the company's ability to obtain cash and cash repayment, and to predict the company's ability to generate net cash flow in the future. Yunnan Copper's cash flow statement for the three years 2019-2021 is shown in Table 3.

Statement 3 Statement of cash flows Unit: ￥ million

| | 2021 Annual Report | 2020 Annual Report | 2019 Annual Report |
|---|---|---|---|
| Report Format | General enterprise | General enterprise | General enterprise |
| Statement Type | incorporation | incorporation | incorporation |
| Original Currency | CNY | CNY | CNY |
| Net cash flows from operating activities | 50664.49 | 48838.26 | 10710.82 |
| Net cash flows from investing activities | 5935.93 | -23710.31 | -23602.40 |
| Net cash flows from financing activities | -35620.49 | -27649.64 | 13854.19 |
| Effect of exchange rate changes on cash and cash equivalents | -106.87 | -337.27 | 119.46 |
| Net increase in cash and cash equivalents | 20873.05 | -2858.96 | 1082.09 |
| Add: Cash and cash equivalents balance at the beginning of the period | 18226.58 | 21085.55 | 20003.46 |
| Balance of cash and cash equivalents at end of period | 39099.64 | 18226.58 | 21085.55 |

Among them, the trends of net cash flows from operating activities, net cash flows from investing activities and net cash flows from financing activities are shown in the figure:

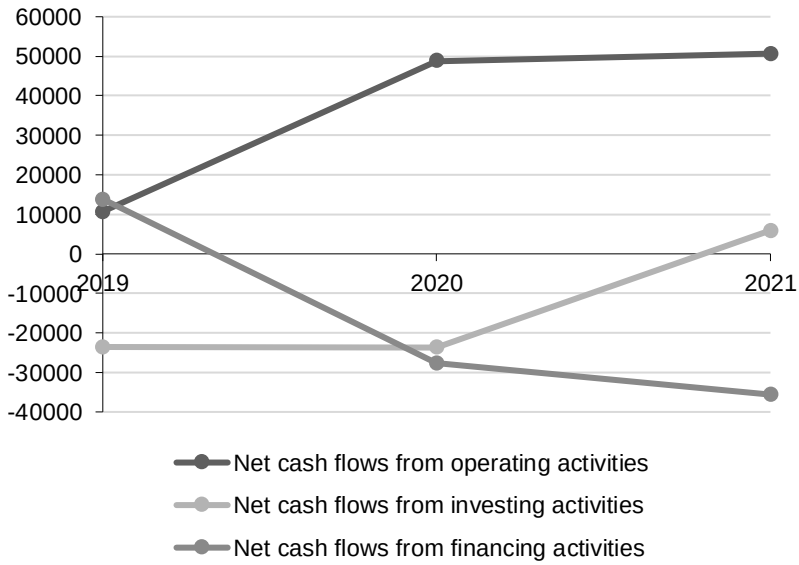


Figure 3 Trends in net cash flows from three types of activities over the last three years

As can be seen from the trend of the above chart, Yunnan Copper's net cash flow from operating activities has been growing, indicating that in the past three years, Yunnan Copper's operating activities have been frequent, and its operating business has been better. In terms of financing, in 2020, due to the impact of the epidemic, the amount of funds received by the fund-raising was reduced, resulting in 2020 financing costs are greater than the amount of funds raised, which needs to be made up with the enterprise's own earnings, but in 2021 not only increased

the funds invested in foreign investment activities, the net cash flow of fund-raising has also turned from negative to positive, which indicates that Yunnan Copper's ability to obtain cash is better. In terms of investment, Yunnan Copper's investment income has turned from negative to positive, indicating that the company's investment situation is improving.

### 6.3. Yunnan Copper's application of comprehensive budget management system

Table 4 Budget programming table

| Production plan of the Company's main products in 2021 |
|---|
| Mining copper metal production 93,000 tons, 1.28 million tons of copper cathode, 12.7 tons of gold, 605 tons of silver and 4.83 million tons of sulfuric acid. |
| Company's investment plan in 2021 |
| Investment of RMB 102,645,000, including fixed assets, investment in information technology projects, geological exploration and maintenance of mining rights and investment in science and technology projects. |

Data source: Juchao Information Network

For state-owned enterprises, its social responsibility is to promote the stable development of the industry, as for the profitability is not the pursuit of profit, but more importantly, the production output to ensure that the country to go to the full range of development, so the budget program in the preparation of more inclined to the production and investment.

Table 5 Status of implementation

| Project | Annual actual | Annual budget | Implementation rate |
|---|---|---|---|
| Copper metal production from mines | 7.57 tons | 9.3 tons | 81.4% |
| Copper cathode production | 134.73 tons | 128 tons | 105.26% |
| Gold Production | 18.12 ton | 12.7 ton | 142.77% |
| Silver production | 675.62 ton | 605 ton | 111.67% |
| Sulfuric acid production | 463.38 tons | 483 tons | 96.92% |
| Investment | 33463.80 ten thousand | 102645 ten thousand | 32.6% |

Among the production output of main products of Yunnan Copper, copper cathode, gold and silver have exceeded the budget, while mining copper and sulfuric acid have not reached the budget target but are not much different from the budget standard, which indicates that Yunnan Copper's budget implementation of main product production in 2021 is better. As for the investment plan, the actual investment amount is less than 50% of the budgeted investment amount, which indicates that Yunnan Copper still needs to improve the process of formulating the investment plan and change the formulation strategy when formulating the budgeted target, so as to achieve a more accurate budgeted target.

## 7. Conclusion

In summary, comprehensive budget management, as a new type of enterprise management in recent years, has an important impact on the cost management of state-owned enterprises. State-owned enterprises through the reform of the traditional management mode, construction, improve the internal comprehensive budget management system, the reasonable use of big data, cloud computing and other high-tech, improve the timeliness of enterprise information management, scientific, enhance the enterprise's ability to cope with the risk, to achieve the

enterprise profit maximization, sustainable development of the business objectives. Of course, at this stage, there are still some defects in the application of China's comprehensive budget management system in the cost management of state-owned enterprises. Therefore, in order to improve the market competitiveness of enterprises and seize the market share, state-owned enterprises need to optimize the organizational structure of enterprise comprehensive budget management, improve the budget cost preparation, implementation and evaluation system, introduce and cultivate high-quality technical talents, and promote the high-quality development of the enterprise, under the premise of guaranteeing the development of technology.

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