

Financial Analysis of Industrial Metallurgy Industry based on Harvard Analysis Framework after RCEP Takes Effect

-- Take Beijing Shougang Group as an Example

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Abstract

On January 1, 2022, the Regional Comprehensive Economic Partnership (RCEP) was officially implemented, and the ten ASEAN countries and 15 member countries including China and Japan will fully enjoy the policy dividends. In recent years, with the transformation of my country's economy towards high-quality development, the concept of "sustainable development" has gradually penetrated into all walks of life, and the National Audit Office of my country is about to celebrate its 40th anniversary. Under the intertwined influence of many backgrounds, the author believes that the RCEP policy, the environmental protection expenditure of heavily polluting enterprises and the environmental audit policy will surely usher in a fierce collision. Under the framework of Harvard analysis, the author selects Beijing Shougang Group, an A-share listed company in the metallurgical industry, as an example for analysis, and conducts in-depth research from four aspects: strategic analysis, accounting analysis, financial analysis and prospect analysis. How to deal with environmental protection audits in the context of RCEP.

Keywords

RCEP; Harvard Analysis Framework; Beijing Shougang; SWOT Analysis.

1. Introduction to the Harvard Analytical Framework

With the rapid development of economic globalization, the traditional financial analysis framework is no longer sufficient to meet the precise assessment requirements of companies in various industries for the company's operating conditions and risks. Therefore, in the early 21st century, three top professors from Harvard conducted a study on the traditional financial analysis framework. After analyzing and summarizing, a new system based on strategic analysis, supported by accounting analysis and financial analysis, and summarized by prospect analysis was created, which is called "Harvard Analysis Framework". The analysis framework can not only directly reflect the capital flow and operating status of the enterprise, but also reflect the objective impact of the fluctuation of external factors on the future development trend of the enterprise. The enterprise can also formulate correct business strategies based on this analysis to better avoid risk.

2. Introduction to Beijing Shougang Group

Beijing Shougang Co., Ltd. is located at No. 99, Shijingshan Road, Shijingshan District, Beijing. It was formally established on October 15, 1999 after being reviewed by the Beijing Administration for Industry and Commerce. It was successfully listed on the Shenzhen Stock Exchange on December 16, with the stock code 000959. Shougang Co., Ltd. is mainly engaged in steel manufacturing, and at the same time, it also continuously achieves its own breakthrough development in combination with high-tech. According to the annual financial report of Beijing Shougang in 2021, it can be found that the company's main business is the production and production of steel products and metal soft magnetic materials (electrical steel). Sales.

3. The Combination of RCEP Policy and Beijing Shougang

The company focuses on the manufacturing of iron and steel products. As the supply-side structural reform requires enterprises to complete the five tasks of "three eliminations, one reduction and one supplement", coupled with the pressure of environmental protection policies such as the concept of "sustainable development", Beijing Shougang pays more attention to scientific and technological innovation, to achieve higher quality development at a lower cost, and thus can also turn the surplus to invest in environmental protection to further promote the company's sustainable development. Its production and manufacturing in the field of metal soft magnetic materials (electrical steel) in recent years is the most powerful illustration, which is also an example of the traditional heavy pollution manufacturing industry taking the initiative to make changes under the new situation, new policy and new background. Due to the official implementation of the RCEP policy, Beijing Shougang's customer base and business scope will soon be further expanded, and the overseas demand for its own products will rise to a certain extent. Will react to the rise in Beijing Shougang production. At the same time, combined with Beijing Shougang's accounting and financial analysis, after auditing its financial reports in recent years, the development trend of its environmental protection expenditure will be obtained.

4. Financial Analysis System of Beijing Shougang based on Harvard Analysis Framework

"Continue to improve the ecological environment and promote green and low-carbon development." Premier Li Keqiang said in his government work report at the Fifth Session of the Thirteenth National People's Congress on March 5, 2022. Ecological environmental protection involves the well-being of the people and the future of the nation. The RCEP policy that took effect in this context has a greater impact on heavily polluting enterprises. This paper takes Beijing Shougang as an example to analyze the metallurgical industry in the heavily polluting industry, and further understands the changing trend of environmental protection expenditures of heavily polluting enterprises under the background of RCEP and how relevant audit projects should be implemented in the future. This article will use the Harvard analysis framework proposed by American scholars to analyze Beijing Shougang.

4.1. Strategic Analysis

Strategic analysis focuses on exploring the internal and external pressures faced by the company from the perspective of data and information collection, while SWOT analysis is based on the analysis of the development situation under internal and external environment and competitive conditions, which can not only see the company's advantages and disadvantages,

but also predict the company's The threats and challenges that development will face can fully demonstrate the current situation of enterprises.

4.1.1. Advantage

(1) The company was established early, and Beijing Shougang is very famous. Beijing Shougang Co., Ltd. was registered and established at the end of the last century, and was successfully listed two months after its establishment. It was listed early, has a long operating time, and has a wide distribution of customer groups. It is a leading enterprise in China's metallurgical industry. The 2019 Fortune Global 500 list was announced, and Shougang Group ranked 402.

(2) Strategic location, close to the energy base. Coal is mostly used in steelmaking. Beijing Shougang Group is close to Shanxi Province, my country's high-quality coal source base, which reduces transportation and production costs. At the same time, relying on the original production base of the old industrial base in Northeast China, the development momentum is stronger.

(3) The "iron front" and "steel rear" systems keep pace with each other and develop in an integrated and coordinated manner. Beijing Shougang takes advantage of the integrated and collaborative production of the iron front system to achieve high-quality production and high-level operation. The average utilization coefficient of blast furnaces once reached 2.36, taking the lead in the entire metallurgical industry. The post-steel system used MCCR technology to achieve overfulfilled production tasks, and corporate profits hit a record high again.

(4) Emphasis on technological innovation, production technology is in a leading position in the industry. Shougang's MCCR-DUE endless rolling production line continuously refreshes the output record of the steel industry. On February 26, 2022, the single-roll rolling kilometers of the MCCR-DUE production line reached 232km, and on February 28, the 0.8mm "Cicada Wing Steel" was successfully realized. manufacture. Since then, the process and technical indicators of the MCCR-DUE production line have reached the best level in the history of steel manufacturing in all aspects, setting a new historical record and reaching the international leading level.

4.1.2. Disadvantage

(1) There are many competing enterprises, and the pressure of transformation is great. Shougang Group has strong competitors such as Baowu Iron and Steel and Anshan Iron and Steel, and there is also a certain gap in steelmaking technology and production equipment. Some high-end markets are monopolized by Baowu Iron and Steel and Anshan Iron and Steel. Beijing Shougang needs to seize the time to realize the technology Make breakthroughs, narrow the gap, and make up for shortcomings.

(2) Commodity production causes great pollution to the environment and lacks the ability of sustainable development. The metallurgical industry is already a heavy polluting industry. Due to the special geographical location of Beijing Shougang, environmental protection policies will put more pressure on its green production, and the manufacture of steel will inevitably cause irreversible damage to the ecological environment. Beijing Shougang has to Invest part of the profits in sustainable development and environmental protection.

4.1.3. Opportunity

(1) The state and the government have issued relevant policies to support. Since 2014, the National Development and Reform Commission has continuously increased its support for the transformation and upgrading of the Beijing Shougang Industrial Park. The big platform in the recently concluded Beijing Winter Olympics is the central investment project of the National Development and Reform Commission's Industrial Transformation and Upgrading Demonstration Zone in 2020, which has received the central budget. financial support within.

(2) The RCEP policy came into effect, and the tariff reduction and exemption drove the company's development. The biggest dividend of the RCEP policy is that the trade barriers among member countries are broken, and tariffs are reduced to 90% or even zero. This is undoubtedly an unmissable development opportunity for the large heavy industry. The direct impact on Beijing Shougang is Profits have skyrocketed, and the company's management will make investment decisions in other areas of sustainable development.

4.1.4. Threaten

(1) Environmental protection policies continue to be under pressure. my country's current industrial policy is accelerating the transformation, and the economy has also transformed from the previous high-speed growth to high-quality development. It is foreseeable that in the past 5 to 10 years, the heavily polluting industries, especially the metallurgical industry, will usher in a great update of production technology and materials. , to develop steel smelting technology with lower energy consumption, then Beijing Shougang, as a leading enterprise in the metallurgical industry, must bear the brunt.

(2) The rapid development of information technology has a great impact on the steel industry. "Digitalization, networking and integration" will be the only way for the development of the enterprise. As a traditional heavy industry, Beijing Shougang will face many difficulties in the field of innovation by combining electronic information technology with its own industrial manufacturing.

4.2. Accounting Analysis

The accounting analysis for Beijing Shougang Group mainly starts from the balance sheet, income statement and cash flow statement. The data comes from the annual report of Beijing Shougang listed company.

4.2.1. Balance Sheet

Table 1. Main items of Shougang Group's balance sheet(2017-2021) Unit:100 million yuan

Balance Sheet Items	2017	2018	2019	2020	2021
Current assets	205.93	219.43	230.76	300.62	367.84
Non-current assets	1135.66	1131.64	1182.95	1143.05	1104.28
Total assets	1341.59	1351.06	1413.71	1443.67	1472.12
Current liabilities	605.93	690.89	729.06	772.40	785.65
Non-current liabilities	370.49	296.45	287.66	282.96	194.70
Total Liabilities	976.42	987.34	1016.72	1055.36	980.35
Owners' equity	365.17	363.73	396.99	388.31	491.76

The total assets of Shougang have shown an increasing trend in the past five years, and most of the asset items under the asset item have increased slightly. Current assets in 2020 increased by 23.24% from 2019, a relatively obvious increase, but non-current assets showed a slight downward trend. In the past five years, the proportion of current assets has changed slightly, from about 15% in earlier years to about 23% in recent years, indicating that the company's asset structure has changed. Shougang's total liabilities first rose and then fell in 2021. The ratio of current liabilities to total liabilities has been increasing year by year in the past five years, with more obvious increases in 2018 and 2020. Owner's equity has fluctuated and increased, and the increase will be more obvious in 2021.

4.2.2. Income Statement

Table 2. Main items of Shougang Group's 2017-2021 Income Statement Unit:100 million yuan

Income Statement Items	2017	2018	2019	2020	2021
Operating income	602.50	657.77	691.51	799.51	1340.34
Net profit	31.07	33.31	17.54	24.11	83.27

It can be seen from Table 2 that in the past five years from 2017 to 2021, the operating income of Beijing Shougang has shown an upward trend year by year. In 2021, the operating income has increased significantly compared with the previous four years, reaching 134.034 billion yuan, an increase of 67.65% compared with the same period of the previous year. The main reason is that in 2021, the healthy development of my country's electrical steel industry, the good operation situation and the implementation of the national "dual carbon policy" will bring unprecedented opportunities to enterprises. Operating income and net profit hit record highs. In the past five years, the overall net profit first rose slightly, then plummeted, and then showed an upward trend year by year. Among them, the decline in 2019 was the largest, reaching 1.754 billion yuan, and the peak increase in 2021 was 8.327 billion yuan. From the specific analysis of the income statement, it can be found that the operating profit in 2019 was about 2.024 billion yuan, the non-operating income decreased by 94.48% compared with the previous year, and the non-operating expenses increased by 208.65% compared with the previous year. In addition, Beijing Shougang's profit development is in good condition, with a steady rise.

4.2.3. Cash Flow Statement

Table 3. Main items of Shougang Group's 2017-2021 Cash flow Statement Unit:100 million yuan

Cash flow Statement items	2017	2018	2019	2020	2021	Q1 2022
Net cash flow from operating activities	9.33	12.46	3.42	10.27	15.07	0.19
Net cash flow from investing activities	-5.11	-9.64	-5.22	-2.76	-2.83	-0.13
Net cash flow from financing activities	-2.53	-2.40	1.85	-6.95	-8.63	-1.96

From the analysis of the net cash flow in the table, the net cash flow generated by Shougang's operating activities has shown a fluctuating trend in the past five years, and the decline point of the net cash flow is in 2019. It is understood that in 2019, the global economic growth slowed down, the domestic economy was stable and making progress, the overall operation of the steel industry was stable, the price of steel fell, the price of raw materials rose, and the profitability of the steel industry was affected. Net cash flows from investing activities were all negative, showing a steady upward trend from 2018. In 2018, the trough, cash inflows from investing activities decreased and investment income decreased. The increase in outflow from investing activities was mainly due to the increase in investment in fixed assets, and the decrease in the net increase in cash and cash equivalents was mainly due to the increase in investment in fixed assets. Only in 2018 was the net positive in terms of fundraising activities, the rest were negative.

4.3. Financial Analysis

4.3.1. Operating Capacity

The operating efficiency of an enterprise is closely related to the turnover speed of capital, inventory and assets, with high efficiency, fast operation and better operation.

Table 4. Shougang Group's 2017-2021 Operational Capability Analysis Table Unit:%

Operational Capability Index	2017	2018	2019	2020	2021
Accounts Receivable Turnover	7.22	5.54	20.12	5.13	9.70
Inventory Turnover	-2.82	13.30	4.89	7.47	10.42
Total Asset Turnover	2.85	2.86	1.19	0.07	1.03

The higher the accounts receivable turnover ratio and the higher inventory turnover ratio, the better the operation of the company. The two data of Beijing Shougang fluctuated and reached the highest values in 2019 and 2018 respectively. The accounts receivable turnover ratio increased from 7.22% in 2017 increased to 9.70% in 2021, and the inventory turnover rate increased steadily from 2019 to 2020, from -2.82% in 2017 to 10.42% in 2021, an increase of nearly six times.

The larger the value of the total asset turnover ratio, the stronger the profitability of the enterprise. The total asset turnover rate of Beijing Shougang in the past five years has shown a downward trend as a whole, but the decline is small, indicating that the asset management efficiency has decreased slightly and the operating capacity has weakened.

4.3.2. Profitability

The company's profitability plays a decisive role in the company's development. The profitability of Beijing Shougang is shown in Table 5.

Table 5. Shougang Group's 2017-2021 Profitability Analysis Table Unit: %

Profitability Metrics	2017	2018	2019	2020	2021	Q1 2022
ROE	8.37	9.48	4.63	6.17	16.77	
Return on Total assets	8.70	9.29	4.78	6.38	19.82	
Net interest Rate	3.67	3.65	1.81	2.23	5.23	3.31

The return on equity reflects the income level of the company, and the larger the value, the higher the return. Beijing Shougang's ROE rose steadily in 2017 and 2018, showing that Beijing Shougang has developed well in the past two years. However, the return on equity in 2019 was only 4.63%, and the income declined rapidly. In 2020, the return on equity slowly rose to 6.17%, gradually returning to the right track. Beijing Shougang will achieve a qualitative leap in revenue in 2021, reaching 16.77%, surpassing most companies in the same industry. The return on total assets reflects the profitability of the company's total assets. The larger the value, the stronger the profitability of assets. From the data in the table, it can be seen that the return on total assets is proportional to the return on equity, which fell to the bottom in 2019 and made a leap in 2021. Net profit margin is the ratio of net profit to main business income, which reflects the operating efficiency of an enterprise. The net interest rate, which is proportional to ROE and ROA, will decrease to 1.81% in 2019, and will also rise to a peak value of 5.23% in 2021.

4.3.3. Development Ability

The development capability focuses on the expected development status of the enterprise. This article uses the total asset growth rate, operating income growth rate and net profit growth rate of Beijing Shougang to show the specific values as shown in Table 6.

Table 6. Shougang Group's 2017-2021 Development Capability Analysis Table Unit: %

Developmental Capability Indicators	2017	2018	2019	2020	2021
Total asset growth rate	5.47	0.71	4.56	-1.71	1.97
Operating income growth gate	43.97	9.18	5.13	16.14	67.65
Net profit growth rate	558.86	7.21	-47.35	37.46	245.34

From the data shown in Table 6, it can be seen that the total asset growth rate of Beijing Shougang in 2020 is negative, with a growth rate of -1.71%, and all other years are positive. It shows that in the past five years, the total assets of Beijing Shougang have been increasing continuously. Operating income shows a trend of increasing year by year, and the growth rate will reach a five-year peak in 2021 at 67.65%. The large increase in 2017 and 2021 is mainly due to the fact that the iron and steel industry is in the critical period of supply-side structural reform in 2017, and the deep structural adjustment of the iron and steel industry has improved the utilization efficiency of high-quality production capacity. In 2021, with the implementation of the "dual carbon" policy and the implementation of "dual control", Beijing Shougang seized the opportunity and saw a significant increase in operating income. The growth rate of net profit shows the same fluctuation trend as the growth rate of operating income. Although the growth rate of net profit dropped by 47.35% in 2019, it will increase by 245.34% in 2021. In 2017, in order to meet the increasing demands of supply quality, service quality and ecological environment quality, enterprises deeply adjusted the industrial structure, and the net profit increased by 558.86%.

4.4. Prospect Analysis

From the perspective of the domestic environment, in the first year of the "14th Five-Year Plan", "Shougang Green Energy" was successfully listed as one of the first nine publicly offered REITs in the country, fully serving the "three meetings and two guarantees", and achieved a historic breakthrough; From the perspective of the international environment, the formal implementation of RCEP will have a significant impact on the distribution pattern of the global iron and steel industry, and is of great significance to the development of my country's iron and steel industry. From the perspective of the electrical steel industry, the market demand gap still exists, and with the development of the new energy automobile industry, the market demand for electrical steel has been greatly released, and there is an urgent need to expand production. For Beijing Shougang Group, it is a great opportunity not to be missed. Beijing Shougang Group also focuses on and develops high-end sheet metal business, aiming to differentiate the production capacity of high-quality products. The complex pattern of automobile brands has led to the characteristics of individuality and diversification in the standards, specifications and varieties of automobile sheets, which has also increased the difficulty of producing automobile sheets to a certain extent, although Beijing Shougang is currently less than Beijing Shougang in terms of the market share of automobile sheets. Baowu Iron and Steel, but Beijing Shougang continues to increase investment in scientific and technological research and development, use new materials, and improve material production efficiency, thereby cooperating with the speed of automobile product replacement and optimizing the industrial structure. Phased results have been achieved so far, and there is likely to be significant growth in the future.

5. Conclusion

Through the above analysis process, the following conclusions can be drawn:

(1) From the perspective of Beijing Shougang, how to optimize the use of corporate funds and achieve technological breakthroughs is the top priority of development. Expanding the scope of capital use to achieve technological breakthroughs on a larger scale will be more conducive to Beijing Shougang's occupation of the market.

(2) From the perspective of the external environment, the formal implementation of the RCEP policy will bring development opportunities to Beijing Shougang, but at the same time, higher-quality development and higher-level exports will also bring pressure on Beijing Shougang in terms of environmental protection. The implementation of the "zero tariff" policy will bring a sharp increase in operating profits for heavy industry enterprises such as Beijing Shougang. At the same time, the National Audit Office will also pay more attention to the implementation of corporate environmental protection expenditure audit projects. For Beijing Shougang, the establishment of special environmental protection funds Accounts and the establishment of an environmental protection expenditure audit department are essential.

(3) From the perspective of accounting analysis, 2019 is a watershed in the development of Beijing Shougang in the past five years. Considering the impact of the new crown epidemic on the development of the enterprise, Beijing Shougang should explore the path of combining development with the Internet in the post-epidemic era and change the total net assets. Downward trend, to achieve year-on-year profit growth.

(4) From the perspective of financial analysis, the operating capacity of Beijing Shougang is relatively stable, and the operating capacity has maintained a stable and positive trend under the pressure of the epidemic and environmental protection; profitability has also increased year by year since the downturn in 2019. On the whole, Beijing Shougang has obvious development advantages under the background of RCEP policy.

To sum up, the author takes Beijing Shougang Group as an example to analyze the capital use of heavily polluting enterprises under the background of the RCEP policy, so as to provide data support for the development of environmental protection auditing of other heavily polluting enterprises.

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