Research on the ESG Strategy of Overseas Investment by Chinese mining Enterprises

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Abstract: This article is to discuss the investment prospects of Chinese mining enterprises implementing ESG strategies and study the competitiveness of Chinese mining enterprises in the international market. The research method is to conduct a secondary analysis of statistical data from official sources, and to study the overall situation of the world's mining industry and the individual situation of China's mining industry from a global perspective. The research results provide suggestions for Chinese mining enterprises to improve their business strategies. The novelty of this work lies in the latest analysis of the current situation of China's mining industry and the forecast assessment of the overseas investment prospects of Chinese mining enterprises.

Keywords: ESG strategy, mining, Chinese enterprises, investment.

1. INTRODUCTION

Judging from the operation revenue of the mining enterprises with certain production scales, we can see that the development of China's mining industry has fluctuated significantly in recent years[1]. Since 2015, the production scale of China's mining industry has fluctuated and declined affected by China's domestic energy reform and other policies[2]. Along with the impact of CONVID-19 outbreak in early 2020, the revenue of mining enterprises with certain production scales in China was about RMB 3,162.1 billion in the whole year of 2020, a decrease of 31.5% compared to that in 2019. With the continuous and rapid growth of Chinese national economy and the surge in resource consumption, the reserve of China's domestic mineral resources is obviously insufficient, and it became more and more depending on foreign resources. From 2015 to 2019, the amount of fixed asset investment in China's mining industry declined at first, and then rising. In 2015, it was 1,297.1 billion yuan, the peak value in the period between 2015 and 2019; in 2019, China's fixed asset investment in the mining industry continued growing, at 981.8 billion yuan, with an increase of 24.10% over 2018. In 2019, investment in the mining industry was increased for 24.1%, and investment in fixed assets in China's mining industry was about 1.16 trillion yuan according to statistics from the National Bureau of Statistics of China. By 2020, new data from National Bureau of Statistics of China[3] showed that China's mining industry investment was 843.4 billion yuan in 2020, which fell about 14.1% comparatively and reached the lowest point since 2015.

Meanwhile, according to the statistics till the end of 2020, 173 kinds of minerals have been discovered in China, including 13 kinds of energy minerals, 59 kinds of metal minerals, 95

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kinds of non-metallic minerals, and 6 kinds of water and gas minerals. According to 2020 forecast of the National Development and Reform Commission of China, the availability of China's important metal and non-metallic mineral resource reserves has decreased significantly apart from the limited resources such as rare earths, which are 100% guaranteed. For others, the availability of iron ore is 35%, copper is 27.4%, bauxite is 27.1%, lead is 33.7%, zinc is 38.2%, and gold is 8.1%. The recoverable life of limestone is 30 years, phosphorus is 20 years, sulfur is less than 10 years, and potassium salt is now in much greater demand than supply[4].

This article is to discuss the overseas investment prospects of Chinese mining enterprises implementing ESG strategies.

2. BACKGROUND AND METHODOLOGY

ESG - the abbreviation of Environmental, Social and Governance in English, is an investment philosophy and corporate evaluation standard that focuses on corporate environment, social responsibility, and governance performance rather than financial performance[5]. It is an investment methodology that promotes responsible investment and sustainable development.

The concept of ESG investment can be traced back to the ethical and ethical investment originated in the investment made by religious churches in the 1920s. Since the United Nations Global Compact proposed the concept of ESG in 2004 firstly, ESG principles had drawn the attention of governments and regulatory authorities gradually, and ESG investment had taken the favor of mainstream asset management institutions gradually, from Europe and the United States to the world[6].

In the past decade, the growth rate of ESG investment has far exceeded the overall growth rate of the global asset management industry. In difference regions in the world, the US market accounts for 48% in 2020, surpassing the European market, which has always ranked first, and becoming the largest market for ESG investment. With the development of global financial markets and the increasing open of China's financial markets, many outstanding Chinese enterprises are attracted by ESG, and their attention to ESG is also increased year by year.

However, along with the attentions on the current issues related to climate changes and the broader ESG issues, the priorities to many business leaders are also being reshaped in environmental protection oriented global industry transformation, especially in China's mining industry. ESG development has become an important gripper for these enterprises to achieve industrial transformation and renovation.

As the rapid economic growth has caused more and more negative effects on society and the environment, the environmental awareness of the investors has been increased gradually with the influence of the environmental protection movement, environmental-related laws and regulations have been continuously improved, higher and higher attentions have been paid on the responsible investment and ESG concepts by the experts, governments, institutions and investors, and the scale of ESG investment management by Chinese mining enterprises in overseas investment is also being increased.

At present, the information disclosure standards and evaluation standards issued by international organizations, national regulatory authorities, and investment institutions have deepened and improved the ESG concept system, and ESG investment has become one of the mainstream strategies in the international market.

Undoubtedly, mineral resources play a vital role in the process of global energy transformation in the world. However, mining production always had an impact on the environment and society inevitably in a long period. The mining process may destroy the ecology of the mining area, produce pollution, and lead to immigration and relocation. These negative effects have been criticized by people. In global trend of green and low-carbon development, governments around the world have also introduced increasingly stringent regulatory policies. External pressures such as resistance from the community and doubts from non-governmental organizations have become the important factors restricting the stable operation of the mining enterprises[7].

Since 2021, ESG has become the main content in the operations of various mining enterprises around the world, and it has become the primary consideration of the company's senior management on investment and operation. This means that mining enterprises are investing more resources to deal with various ESG issues, including improving the reporting and disclosure of ESG indicators, changing mining operations, divesting or closing assets that do not meet ESG standards, etc. For enterprises which fail to meet such expectations, investment attractiveness may decline day by day, it will be difficult for them to obtain financing, and the tax burden may also be increased due to changes in tax laws. For the mining industry, the emergence of the ESG concept integrates the environmental and social issues faced by the industry into a more systematic issue structure, and provides mining enterprises with a set of non-financial risk management thinking.

ESG issues are not new to mining. Although mining is essential to our modern world, in terms of the nature, no matter which country it is in, mining always face very strict scrutiny in these aspects.

ESG investment is different from traditional investment. It is an investment strategy and practice that is not only limited to consider financial factors, but incorporate environmental, social and governance factors into investment decisions. At the same time, ESG investment does not mean sacrificing financial performance to pursue sustainability. From the perspective of the whole market, enterprises with excellent ESG performance often have better corporate management quality, sustainable profitability and cash flow. In other words, the ESG investment concept is conducive to revealing income and risk information other than financial information, reducing tail risks, and obtaining excess income.

According to the statistical analysis made by Global Sustainable Investment Alliance (GSIA), ESG investment strategies are mainly divided into seven categories: ESG integration, negative screening, positive screening, corporate participation and shareholder resolution, regulatory screening, ESG integration, thematic investment for sustainable development, and impact investing, which is the most recognized classification standard in the world currently. Among them, ESG integration strategies and negative screening strategies are widely used in the market, accounting for 43.03% and 25.67% of various strategies, respectively. Here is a key introduction.

§ **ESG integration strategy**

This is a comprehensive investment analysis method, using qualitative and quantitative methods, integrating ESG concepts with traditional financial information, etc., and conducting a comprehensive project evaluation to form an investment decision, that is, adding ESG factors to the original investment strategy. In early days of ESG integration, the amount of data was small and difficult to collect, and qualitative analysis methods were mainly used. With the increasing abundance of investment strategies and the popularity of quantitative analysis tools, more and more enterprises quantified and integrated ESG information into the framework of company analysis.

§ **Negative screening strategy**

This is one of the earliest ESG investment strategies. In early days of ESG investment, investors mainly made investment in negative screening method. The negative screening strategy mainly adopted the exclusion method to screen individual stocks and industries, and avoided industries and enterprises that may have a negative impact on society and the environment during the investment process, such as not investing in tobacco, military industry, or petrochemical industries. Some ESG indexes, such as the FTSE Social Index and China's Shanghai-Shenzhen 300ESG Index, are also compiled by using a market capitalization weighting method after excluding enterprises involved in fossil fuels, tobacco, alcohol and gaming. In addition, they may also be removed from time to time based on company announcements when using negative screening strategies. For example, enterprises may be punished by regulatory authorities for financial fraud. Once the announcement is made, they can be immediately removed from the investment portfolio.

§ **Positive screening strategy**

That is, in the form of a ”whitelist", investors only choose those industries and enterprises that have a positive contribution to society. For example, they only invest in enterprises valuable to labor relations and product safety and quality, or industries valuable to environmental protection and human rights. Investment in the selected industries, enterprises or projects has a positive ESG performance relative to industry peers and reaches a rating above the specified threshold.

§ **Corporate Participation and Shareholder Action Strategy**

Refers to holding shares and participating in proxy voting and shareholder action, and using shareholder rights to influence corporate behavior, including through direct corporate participation (communication with executives and/or the company's board of directors), submission or joint submission of stock proposals, to influence the ESG-related practices of the invested enterprises and improve the code of conduct, such as the implementation of environmental protection-related policies.

§ **Standardize the screening strategy**

According to the international criteria issued by the United Nations, the International Labor Organization, the Economic Cooperation Organization and non-governmental organizations, and according to the minimum standards of commercial or issuer practice, ESG factors are systematically integrated into the traditional financial and valuation analysis process, as well as the due diligence and analysis of investment, so as to fully reflect the value, risk and return potential of the investment.

§ **Sustainable development theme investment Strategy**

Invest in themes or assets that are particularly conducive to sustainable solutions, the environment and society, that is, specifically invest in sustainable agriculture, green buildings, low-carbon inclined investment portfolios, gender equality, diversity and other sustainable development theme-related assets.

§ **Influence/Community Investment Strategy**

While pursuing financial returns, it is also clear that it will produce positive and measurable social and environmental effects as the starting point. Generally, it will invest in specific areas, but the disclosure requirements for this investment strategy are very high.

In addition, the asset management scale of global ESG investment has increased from USD 113.20 trillion in 2012 to USD 335.30 trillion in 2020 according to the latest 2020 annual report[8] released by the Global Sustainable Investment Alliance (GSIA), with a compound annual growth rate of 13.02%, far more than that of the global asset management industry which is 6.01%. According to the statistics from China Securities Index Company, the global ESG investment scale is expected to reach USD 50 trillion by 2025 [9]. With the improvement of the ESG disclosure and evaluation system, as well as the continuous evolution of asset management institutions in the process of ESG investment practice, the scale of asset management adopting ESG integration strategies has surpassed negative screening strategies and become the ESG investment strategy with the highest share in the market. In 2020, the scale totaled USD 225.20 trillion, accounting for 43.03% of various strategies. In contrast, the scale of asset management using negative screening strategies has fallen from USD 119.77 trillion in 2018 to USD 15.03 trillion in 2020.

In February 2021, the "2021 Global Institutional Investor Survey"[10] released by MSCI showed that 52% of investors among the 200 institutional investors surveyed said they had adopted ESG investment strategies, and 73% of investors planned to increase ESG investment by the end of 2021. On the other hand, the concept of ESG investment has gradually gained popularity with the increasing public attention to issues such as the environment, social responsibility and sustainable development. The proportion of individual investors in ESG investment products has been increased year by year, from 11% in 2012 to 25% in 2020.

3. DISCUSSION AND RESULTS

The European region has always been a leader and promoter of global ESG investment. In 2012, the European market accounted for 66% of ESG investment management. However, with the continuous promotion of ESG concepts on a global scale, especially the vigorous development of ESG investment in the United States, its ESG investment scale surpassed Europe to become No.1 in 2020, accounting for 48%. Meanwhile, the proportion of ESG investment in Europe gradually declined to 34%, ranking second among the five major regions in the world. In addition, it is worth paying attention to the Japanese market, whose ESG investment scale has increased rapidly after 2014. It surpassed Canada and Oceania in early 2020 and ranked as the third in the world.

From the perspective of investment strategies, the proportion of various strategies in European ESG investment is relatively stable, and negative screening is still the most mainstream investment strategy, accounting for about 40%. In 2020, the statistics on the scale of ESG investment in Europe have declined significantly, mainly due to the tightening of investment Certification standards. In order to improve the transparency of the sustainability of financial products, the European Union issued the "Sustainable Financial Disclosure Regulations"[11] in 2019, which requires all financial market participants in the EU to disclose ESG information and put forward additional information disclosure requirements for financial products with sustainable investment characteristics. In July 2020, the EU's “Green Finance” program regulatory framework, the “EU Sustainable Finance Classification Law”, officially came into force, further clarifying the definition of "which economic activities are green and sustainable economies".

Unlike the orientation of strong European policies, ESG investment in the United States adopted the principle of voluntary selection and market-first development. The development of ESG products was also recognized by the market at first, and then, policies and regulations went with it. According to the GSIA survey, the most important motivation for U.S. investment managers to incorporate ESG standards into the investment process is to meet customers’ needs. Therefore, even though the U.S. government's policies on sustainable investment have changed drastically, the scale of ESG products in the United States still maintained steady growth in the past few years. In 2020, the total scale of ESG products in the United States was 17.08 trillion US dollars, accounting for 48% of the total scale of ESG products in the five major regions, surpassing Europe to become the first region in the scale of ESG products.

The large increase in the scale of ESG products in Japan happened after 2014. On one hand, it was due to the changes in statistical caliber. Before 2014, Japanese Sustainable Investment Alliance could only count the scale of sustainable investment products in Japan based on the public data. In 2015, the organization conducted a questionnaire survey to obtain the actual product scale of ESG investment strategies adopted by asset management institutions, which led to a surge in ESG investment in 2014; On the other hand, Japan's two major pension management institutions (government pension investment funds and pension associations) acted as the organization in charge of investment in the United Nations respectively in 2015 and 2016. They practiced the six principles of responsible investment and followed the ESG investment strategy. The participation of the pensions has further promoted the increase in the scale of ESG products. In addition, Japanese regulators encourage institutional investors to participate in the governance of the enterprises they invested in, and issued the first edition of the "Management Code" in February 2014, prompting Japan to adopt corporate participation and shareholder action strategies. The scale of ESG products has soared, accounting for 32% of the total scale of ESG products of various strategies.

As China's domestic mineral resources were highly dependent on imported minerals, Chinese government began to propose a “developing business globally” policy in the 1980s. Various domestic resource enterprises in China accelerated the pace of “developing business globally”, and they made more and more investment in overseas mining. The scale of the investment was also bigger and bigger. From the perspective of investment capital, the first batch of enterprises to develop business globally are some Chinese state-owned enterprises[12]. These enterprises made overseas investment in mining earlier, but most of them were acquired under the promotion of inter-governmental cooperation, such as Chana iron ore mine in Australia by Sinosteel Group, Marcona iron ore mine in Peru by Shougang Group, Shandak copper-glod mine in Pakistan by MCC Group, and Ramu nickel-cobalt mine in Papua New Guinea by MCC Group and Jien Nickel. In recent years, there were some changes on this situation. There're more and more Chinese private enterprises making overseas mining investment.

There's a big issue for the state-owned enterprises which developed their business globally. Although the quality of the overseas mines bought by many Chinese enterprises is very good, much better than those in China, most of the project failed finally. Even some reports showed that 95 percent of investment by these Chinese enterprises to develop their business globally was failed. For many such enterprises, they have rich experiences in mining development, but also enough people and construction teams. They still failed in overseas investment projects.

Analyzing the reasons on the failure of the investment made by these enterprises, we can find that there are mainly the following points：

(1) Cultural difference between China and western countries. For example, when the progress of a project falls behind the benchmark progress, it is almost possible to catch up by requiring workers to do overtime work in China. However, overtime work is almost impossible in foreign countries. First of all, foreign employees are not willing to do overtime work (especially for senior technical personnel), and secondly, the cost of overtime is very high. Fundamentally, Chinese concept is not understandable to foreign employees. For example, the realization of a phased milestone in a mine, Chinese personnel want to reach certain phased milestones before arranging domestic government officials and executives from domestic headquarters to attend the ceremony and inspect the work so as to get more support from them. In the view of Chinese personnel, this achievement is very important, and cannot be measured by money at all. However, it is difficult for foreign people to understand such efforts. There are many such kind of examples. Ideological or ideological inconsistency is a very important factor resulting to failure. In addition, the power of trade unions abroad is very strong, and people cannot be fired casually. Whereas, Chinese domestic enterprises can rarely get a satisfactory result when communicating with foreign trade union.

(2) There are obstacles to communication. There's the language barrier, and the direct consequence of this barrier is that the communication is not smooth, and the work efficiency is low. At present, there are still less talents in China who have mining experience and are proficient in a foreign language. Although some enterprises assign translators to technical personnel for communication, the result is not very good.

(3) There are differences in standards and regulations. The main manifestation is that the design standards do not meet local specifications. Citic Pacific's project in Australia is regarded as a typical failure case for the mining industry to develop business globally. The designer is a domestic design institute, and it made serious under-estimated on the Australian design standards, local labor costs, etc. In fact, the wages of mining engineers or smelting engineers in Australia are very high, which is opposite to those domestic.

(4) The due diligence before the acquisition is not enough. The due diligence of the company before the acquisition of the project is not enough, or certain issues are ignored. Generally, professional third-party law firms and investment banks should be hired for financial and legal due diligence, while in technical aspects such as geology, mining, smelting, etc. some enterprises may entrust the third-party to make investigation on due diligence, and some others may do it independently. In fact, overseas M&A projects often have more or less pitfalls. If the enterprises haven’t sufficient time or they don’t assign experienced professionals to do this work, they can be confused easily.

(5) Political and environmental protection factors. Political factors are easy to understand. The political situation in some countries is unstable and war may occur. Once this happens, the employees of these enterprises shall be withdrawn. It is not yet known whether the new government will accept the contracts of the previous government or not after the war is over. Even if there is no war, some countries are facing political risks. For example, Mongolia is rich in resources, but its national mining policy is changeable (the "Mongolian Mining Law" was issued in 1997, revised in 2001, and the new "Mongolian Mining Law" was issued in 2006, and the latest revision is currently in the pipeline). Low due diligence has brought greater difficulties in mining development of foreign enterprises. Some governments are more corrupt and do not follow the rules at all. In some countries, it may be possible to solve the issues via bribery, but in some countries, bribery is not enough, whether the issues can be solved depends on the mood of the person-in-charge. Even international mining giants like BHP Billiton and Vale often suffered from such issues in Africa.

Regarding environmental factors, in early days, Chinese domestic enterprises often ignored the impact of environmental factors when they operated overseas business, and suffered a lot from environmental protection. In foreign countries, it is different from the domestic situations. In addition to the government, Chinese mining enterprises also need to deal with various NGO organizations. Many overseas mineral projects Chinese enterprises may be forced to stop production due to environmental protection issues.

In the past two decades, the various failures experienced by Chinese mining enterprises overseas are still fresh in people's memories. It is necessary to learn lessons from the past, choose ESG investment strategies carefully, and make overseas mining investment step by step. In the process of overseas investment, any company needs to jump out of the traditional, simple process of buying and selling, they should pay attention to what resources can be integrated effectively by investment, what added value can be brought to the other party, and what can be obtained from the investment, and choose an ESG investment strategy more suitable for the company.

According to statistics from the Global Sustainable Investment Association (GSIA), the asset size rankings of various sustainable investment strategies in global scope in 2020 are: ESG integration (US225.2 trillion), negative screening (US115.0 trillion), corporate participation and shareholder actions (US110.5 trillion), standard screening (US44.1 trillion), sustainable thematic investment (US11.9 trillion), positive screening (US11.3 trillion), impact investment (US3352 billion).

From 2016 to 2020, the application on thematic investment and ESG integration strategies has increased significantly. The global scale of asset management using sustainable thematic investment has increased by 605% in these four years, and the scale of asset management using ESG integration has increased by 143%. In contrast, the scale of assets using standard screening strategies has decreased by 33%.

If investors who adopt ESG strategies are classified, they can be roughly divided into three types: ESG risk mitigators, ESG Opportunity Seekers, and Impact Investors. When choosing an ESG strategy, an enterprise should analyze which category it belongs to firstly.

(1) For ESG risk mitigators, the reference standard for value when investing is based on traditional financial indicators, and ESG indicators may be added to consideration; the strategy adopted is based on negative screening and standard screening to divest assets with significantly poor ESG performance from the investment portfolio to prevent major risk events in the future; post-investment management has limited follow-up on ESG indicators.

(2) For ESG opportunity seekers, traditional financial indicators and ESG indicators will be considered comprehensively when they evaluate the investment value of enterprises. In addition to screening strategies, sustainable thematic investment strategies, corporate participation and shareholder actions are often adopted. On the one hand, we are looking for promising opportunities in the context of the era of ESG transformation, and on the other hand, the investors shall promote the invested company to deepen its ESG practice and closely track the company's ESG indicators actively after taking shares.

(3) Impact investors pay attention to the fact that their investment can make ESG benefits for the society. When making investment decisions, they may make comprehensive consideration on traditional financial indicators and ESG indicators, but ESG indicators should be taken as the lead. They only invest in sectors and enterprises that meet the concept of sustainable development. The investors may participate in company management and execute the shareholder rights actively. After the investors make the investment, they will measure the company's ESG performance continuously.

Therefore, when choosing an ESG investment strategy, you need to clarify your goals at first, that is, which of the above three ones is your identity. If it is only to avoid ESG risks, the negative screening strategy and standard screening strategy are more appropriate. Then, the operation is simple and risk aversion can be achieved effectively; ESG integration strategy can also achieve risk aversion, but the operation is more complicated. If it is to seek investment opportunities and obtain investment returns in the context of the ESG era, sustainable thematic investment strategies and ESG integration are better choices, and can be supplemented by screening strategies. If the goal is to promote the sustainable development of society and bring positive benefits on environmental protection, it is necessary to actively take impact investment strategy, corporate participation and shareholder actions.

Taking Citic Pacific's Western Australia iron ore project as an example, this project is one of the largest mining projects invested by Chinese enterprises till now, and it is also one of the few 100 percent projects held by Chinese investment in Australian resources field. On the other hand, it is also the most typical example of failure on overseas investment by Chinese enterprises [13]. Started in 2006 and with a planned investment of US44.2 billion, this project was completed and put into operation in 2009. After commencement of the project, the investment rose continuously, and it even caused the project to fall into standstill for several times. It was not until the end of 2013 that iron concentrate powder was firstly shipped for export, which has been four years later than the original plan, and it was overspent by US88 billion. This project gave us many lessons, which signed a warning for Chinese enterprises proposing to make investment in overseas mining projects.

In the project selection and investigation stage, Citic Pacific had no any experience in the development of large-scale overseas mines, and it didn’t make related preparation for the project according to the huge scale, technical bottlenecks and complicated investment environment. which buried the hidden dangers of the failure on this project. This project has obvious characteristics, including the large-scale, the long production process, demands on associated ports, roads, pipelines, desalination plants and power plants, low grade and high hardness of the ore. All the above-mentioned characteristics made it very difficult in milling technically. Unfortunately, Citic Pacific didn’t get a clear picture on the whole situation. It was not aware of its own advantages and disadvantages, didn’t conduct a comprehensive due diligence, and was not clear on choosing projects which match the company's personnel, technical reserves and management strength.

In selection of the EPC Contractor, MCC had no any experiences in contracting engineering projects in Australia, although it had done many projects overseas as the EPC Contractor. Furthermore, it had insufficient understanding on the legal environment, market conditions and other factors for the execution of the project in Australia, and encountered many obstacles in construction of this project. Shortage of prediction and the related precaution scheme caused by lack of experiences have caused serious delays in the construction period of the project and the cost of the project has risen sharply.

In terms of the management of EPC Contractor, as Citic Pacific did not have a project management team in early stage, it relied too much on the EPC Contractor, that is, MCC Group, for a long period. In the Western Australia iron ore project, the project progress has been delayed again and again, resulting in a significant increase on cost. The scheduled time for the first shipment of iron ore was delayed from the beginning of 2009 to the end of 2013.

In selection of trading partners, CITIC Pacific acquired the mining right for 2-billion-ton magnetite ores from Clive Palmer, which is a “difficult partner to deal with and like to raise lawsuits in the view of Australian miners. However, Citic Pacific did not make full understanding on it. When signing contract with Clive Palmer, the terms were not clear and many contents were ambiguous. Palmer just made use of such loopholes to raise lawsuit with Citic Pacific. This lawsuit and the subsequent disputes made Citic Pacific very uncomfortable.

When the project was first proposed in 2006, there was a large and urgent demands on iron ore for China to refine into steels. As a result, the price of iron ore was very high. At the same time, Chinese steel enterprises has blamed the world's three largest iron ore giants on raising iron ore prices too high. The project was an important attempt for China to get rid of the above-mentioned restraints. However, the demand on iron ore went down sharply, and the price of iron ore fell accordingly. Citic Pacific misjudged the development trend of the industry, causing a dilemma for enterprises.

In this case, Citic Pacific failed to correctly locate its own advantages and disadvantages, failed to choose a suitable ESG investment strategy, and blindly entered the market, which led to serious consequences. This project has proven to be a black hole. Citic Pacific has been swallowed by this black hole for at least 11 billion US dollars from 2006 to 2019, but the loss is far more than that, and it is still expanding [14].

We’d like to summarize several major issues in this project：

Firstly, the enterprise is easily attracted by the huge potential of mineral resources without paying enough attention to the risks of the investment environment, including political risks, social risks, and humanistic risks.

Secondly, the enterprise ignored the role of “soft power”. It just used the domestic concepts and culture to deal with the issues occurred locally. A large number of examples have proved that mistakes in soft power may cause greater loss than that caused by technical mistakes.

Thirdly, the enterprise ignored to select good partners. Whether contractors or trading partners, they should be carefully selected. Experiences and standard marketing operation are indispensable.

Chinese government encourages enterprises to make global development by overseas investment, but Chinese enterprises should conduct adequate research and analysis on local conditions and environment, choose investment strategies carefully to avoid blind on overseas investment [15]. Neglection on any aspect may cause the loss of national assets. The evaluation of the international mining investment environment should cover such aspects as the current situation and potential of resource development, international political and economic relations, domestic policies and regulations, humanistic and geographic environment, transportation conditions, and religious beliefs. The Fraser Institute of Canada releases the survey results on evaluation of the mining investment environment in major countries or regions in the world at the beginning of every year, which can be taken as an important reference for mining enterprises to make overseas investment.

Considering the overall situation, the United States, Canada, Mexico, Australia and some African countries rank relatively high in investment environment. These countries and regions, in which Chinese mining enterprises have advantages in both mining industry and local market, Chinese mining enterprises should give priority to make overseas investment. On the other hand, these Chinese mining enterprises should have extensive experiences in multinational operations. Currently, it’s better for these Chinese mining enterprises to make overseas investment in mining industry via equity participation or localization in the host country [16].

In terms of resources, Southeast Asia is extremely rich in mineral resources and has strong complementarity with China. Thus, more attention should be taken on it by Chinese mining enterprises. Moreover, Chinese mining enterprises have obvious advantages in these countries and regions. However, more consideration should be taken on risks when making investment in some countries that may be unfriendly to China. In Southeast Asia, the mining industry is very important to many countries in their economic development, but the mining laws in these countries are not complete and need to be further improved. At present, Philippines, Indonesia, Vietnam and Laos are very active in mining investment in Southeast Asia. Chinese mining enterprises have made investment in most of them, and obviously, more and more investment are being made in these countries in recent years. Although the mining investment environment in most countries in Southeast Asia has been improved in recent years, the overall policies in Asia-Pacific region are still far behind of Latin America and Africa.

Africa is rich in mineral resources and has great potential on investment and development. However, the development of mining in African countries is not balanced due to historical and other reasons. Mines in Southern Africa and West Africa has been highly surveyed and developed. Comparatively, those in other regions is relatively low. Apart to the abundant mineral resources, Africa has other favorable conditions for mining investment, such as rapid economic growth and the wishes on foreign investment. Africa has maintained good political relations with China for many years. However, the cultural traditions developed on basis of colonization, the law system and the great difference on political environment between different countries, as well as fact that many African countries are underdeveloped and have unstable political situations, Chinese mining enterprises should, depending on the support from motherland, keep commercialized operation in African countries to get better return if they want to make investment in mining industry in Africa.

4. CONCLUSIONS AND RECOMMENDATIONS

(1) Recognize the difference on the investment environment in different countries, and handle the relationship with the host country in correct manner.

The investment environment faced by mining enterprises varies greatly in different countries. Taking into account the international competitiveness of Chinese mining enterprises, Russia, Central Asia and Southeast Asia should be the first choice for their overseas investment. Secondly, it should be Australia and Canada, and then, South America and Africa. The biggest issue for multinational enterprises to make direct overseas investment is how to deal with the interest relationship with the host country. Thus, the mining enterprises should select the host countries carefully and send professional mining investigation agencies to conduct field visit to the areas to be invested and establish talent reserves in the host country to ensure the proactivity and farsightedness on decision-making.

(2) Strengthen the understanding on the host country's policies and mining characteristics and how to make flexible use of them.

In the development of mining, the host country always makes special focus on the limitability, non-renewability, high risk and complexity of the resources, as well as the relatively vulnerable safety and environmental protection. At present, many countries are conducting more strict policies on minerals as a result, the operation of foreign mining enterprises is impacted, and the competition on pricing and dominance in mineral market is being intensified. Even if some countries have to open up certain policies, there’re still many limits and adjustments on these policies as additional marks. Therefore, the mining policies in developed countries pay more attention to compliance under complete marketing conditions and emphasize on the protection of domestic resources and environment, the control and development of global resources, the strategic reserves and sustainability of mineral resources. The underdeveloped countries also pay more and more attention on national resource strategy, although they have great potential on mining development. They always take such methods as nationalization and increasing the local shares in multinational mining enterprises to protect their national mineral resources. In such a case, it’ll be highly risky for overseas investment to develop local mines, especially after the mines are developed.

(3) Increase the market concentration ratio of Chinese mining enterprises.

Due to the non-renewability and non-flexibility of mineral resources, monopoly competition and oligopoly are the major market structure modes in multinational mining industry. Compared with the monopoly mode of market structure in foreign countries, China's mining industry is highly decentralized, the concentration of industrial markets is rather low, its domestic competitiveness is not strong enough, and there’re a lot of small-scale mining enterprises which are almost in a state of completely unorder competition. In developing their business to the international market, they just work in their own ways without taking any valuable experiences from others. Finally, they suffered huge losses in this process. When making overseas investment, Chinese enterprises rarely make joint acquisitions, and the risk cannot be reduced effectively. Especially for private enterprises, the situation on overseas mining investment is even more chaotic. It has been urgent for Chinese mining industry to increase the industry concentration of mining enterprises further.

(4) Improve the comprehensive quality of enterprises and employees.

Compared with European and American enterprises, most employees of Chinese enterprises are quite unfamiliar with international accounting standards and related corporate regulations, which has been an absolute weakness technically in mergers and acquisitions by investment. Moreover, they’re short of sufficient understanding on Western culture and business regulations, and are not aware of the importance on investigation and strategic public relations activities. Chinese mining enterprises should formulate practical multinational business strategies and integration strategies, choose more reasonable investment strategies, work out stable, continuous and long-term plans to reduce arbitrariness and blindness, and avoid various risks. Aiming to the lack of overseas management talents, Chinese mining enterprises should not only train a group of high-quality multi-purpose talents to serve as the backbone in overseas operation according to their own demands, but also implement the localization strategy in overseas branches to solve the problem of information asymmetry effectively.

The above suggestions will help Chinese mining enterprises make better choice and implement ESG investment strategies more suitable for their own corporate conditions when making overseas investment, and help enterprises succeed in overseas investment.

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