

Research on the Disposal of Non-performing Assets of State-owned Enterprises

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Abstract: State-owned enterprises play a pivotal role in the national economy and social development. Based on the macro background of mixed ownership reform and the micro requirements of enterprise development, it is an inevitable trend for SOEs to further optimize their capital allocation structure and improve their asset management efficiency. The non-performing assets generated and left behind by SOEs in the past will not only restrict their normal internal operations and reduce their operational efficiency, but also significantly affect the development of their important business and the reform of the national economic system, therefore, it is of great practical significance to dispose of the non-performing assets of SOEs. This paper takes a state-owned clean energy enterprise, Company D, as the research object, and studies the current situation and disposal process analysis of its non-performing assets through research and analysis of several asset disposal projects of Company D. It also proposes targeted disposal suggestions for different types of non-performing assets of Company D. This paper hopes to solve the problem of choosing the disposal method of non-performing assets of Company D and improve the efficiency and effectiveness of non-performing assets disposal. At the same time, it provides reference for more scientific disposal of non-performing assets during the operation of domestic energy industry enterprises.

1. Introduction

On September 22, 2020, President Xi Jinping announced at the 75th session of the United Nations General Assembly that China will strive to reach peak CO₂ emissions by 2030 and strive to achieve carbon neutrality by 2060. The "double carbon" target requires China to accelerate the transformation of its energy structure, continuously strengthen energy conservation, especially industrial energy conservation, accelerate the development of non-fossil energy, especially clean energy, and take a green, low-carbon and efficient energy development path. At present, many domestic state-owned enterprises are actively responding to the important instructions of General

Secretary Xi Jinping, accelerating the adjustment of the layout of their energy industry structure and expanding the scale of the clean energy sector. In order to solve the problem of enterprise development funds, some enterprises have financed themselves by issuing shares, and in the process, some inefficient and ineffective assets need to be disposed of. However, due to the social environment, market system and other multiple reasons lead to the low efficiency and single way of disposal of non-performing assets of state-owned enterprises, therefore, how to diversify the disposal methods of non-performing assets according to different asset nature and then improve the efficiency of asset disposal is a concern of the government and other regulatory agencies. Based on this, this paper selects a specific case company, the state-owned clean energy enterprise D, to study the current situation and causes of its non-performing assets, and conducts an in-depth analysis of its non-performing assets formed under different circumstances, and proposes countermeasures and suggestions to improve the efficiency and effectiveness of asset disposal of D.

The proposal of the "dual carbon" goal requires China to accelerate the transformation of the energy structure, continue to strengthen energy conservation, especially industrial energy conservation, accelerate the development of nonpetrochemical energy, especially clean energy, and take the path of green, low-carbon and efficient energy development. In order to solve the problem of enterprise development funds, some enterprises issue stocks for financing. In this process, some inefficient and invalid assets need to be disposed. However, due to social environment, market system and other reasons, the disposal efficiency of non-performing assets of state-owned enterprises is relatively low and the disposal method is relatively single. Therefore, how to diversify the disposal methods of non-performing assets according to different asset properties, and then improve the efficiency of asset disposal is a concern of the government and other regulatory agencies. Based on this, this paper selects a specific case company, the state-owned clean energy company D, to study the current situation and causes of its non-performing assets, and deeply analyses the non-performing assets formed under different circumstances, so as to put forward countermeasures and suggestions for improving the efficiency and effect of the assets disposal of company D.

2. Literature Review

Definition of non-performing assets. Ouyang Hong (2019) [1] and Chen Runling (2022) [2] argue that non-performing assets need to be defined from the perspective of "non-performing". Non-performing means that the assets of an enterprise are in an abnormal state and cannot bring the desired benefits to the enterprise, or even cause economic losses to the enterprise. Non-performing assets of state-owned enterprises are assets that cannot bring in economic benefits to the enterprise, cannot maintain normal production and operation, and are worth much less than the normal market value or have no value after they are realized.

Causes of non-performing assets of state-owned enterprises. Nonperforming assets affect the development of enterprises at different levels in all industries; therefore, reducing as well as improving nonperforming assets is a problem that every enterprise needs to consider (M. Karunakar, Mrs. K Vasuki, Mr. S., 2008[3]; Zhe Zhang, 2022[4]; Yang Jian, 2008[5]; Fan Yanbo, 2020[6]). The causes of non-performing assets in state-owned enterprises can be divided into two aspects: internal and external. Regarding the internal causes of enterprises, Li Chong. (2021) [7] found that some enterprise asset managers make improper decisions for personal gain, thus creating many non-performing assets. Some state-owned enterprises lack a complete internal constraint system, do not establish the process of asset management, and do not clarify the management responsibilities, resulting in chaotic asset management and low asset yields (Yang Jian, 2018[5]; Sonia Chawla and Seema Rani., 2019[8]; Villisca, Giulio et al [9]; Liu T., Kang K., 2022[10]). As for the external

causes of enterprises, Ren Xiaoyan. (2019) believes that the main reasons leading to the generation of non-performing assets are unsound legal policies and the lack of effective supervision by society and regulatory authorities on the business behaviour of enterprises [11].

The way of disposal of non-performing assets of state-owned enterprises. Asset disposal is the act of transferring, changing, and writing off the ownership and use rights of all or part of the assets, as well as changing the nature or use of the assets by the enterprise. The ways of asset disposal mainly include asset transfer, asset replacement, asset securitization, entrusted disposal, gratuitous transfer, and asset liquidation (Uriel Rosenthal, 2001[12]; Carsten A. HOLZ., 2002[13]). In the context of the new crown epidemic, different industries have been hit by a large impact, and the issuance scale of securitization of non-performing assets has increased, becoming an important means to relieve the operating pressure of financial institutions and enterprises, especially small and micro enterprises, while the main difference between securitization of non-performing assets and general asset securitization is the greater uncertainty in cash flow recovery (Radovan Chalupka, Juraj Kopecsni., 2009[14]; Yang L, Hu J L and Liu Hsin-Wei., 2009[15]; Durant R. F., 2014[16]). Armando J. Garcia Pires. (2012) proposed that sale is one of the most applied ways in the disposal of non-performing assets, and for state-owned enterprises, these non-performing assets bring greater resistance to the development of enterprises, while for private enterprises, these assets have a certain degree of attractiveness, which to a certain extent achieves a win-win situation for both state-owned enterprises and private enterprises [17].

In summary, the existing studies mainly focus on the causes and disposal methods of non-performing assets, and less on the real disposal methods of non-performing assets of state-owned enterprises in the form of case studies. Based on this, this paper takes state-owned clean energy enterprise D as an example to study the current situation and causes of its non-performing assets, and conducts in-depth analysis of different non-performing assets to propose suitable non-performing asset disposal methods.

3. Case Background and Introduction

Company D is a medium-sized state-owned enterprise established in 2002 with a registered capital of 1.275 billion yuan, covering three major sectors of hydropower (including pumped storage), new energy and integrated smart energy (including local power grids). The subsidiary companies include 10 regional companies, 2 directly managed units, 4 branches and more than 200 project legal entities, with a total of more than 3,000 employees and total assets of 82.2 billion RMB, with assets in operation and under construction in 28 provinces, autonomous regions and municipalities directly under the Central Government. Therefore, Company D selected XJ as the hydropower listing platform and prioritized to start the asset integration of the hydropower segment. During the 20 years of development, most of the hydropower projects invested and operated by D Company are in good financial condition and profitable, while a few hydropower projects are in long-term loss due to various reasons, a few hydropower projects are not completed and put into operation due to local policies and other reasons, and individual hydropower projects cannot be loaded into the listed segment due to shareholder deadlock. In order to ensure the profitability index of the proposed listed hydropower segment meets the requirements as well as to avoid potential interbank competition, all the high-quality hydropower assets in Company D should be integrated into the listed company, and the non-performing hydropower assets such as long-term losses, not being able to be completed and put into operation, and not being able to be placed into the hydropower segment should be disposed of 0.333.

4. Analysis of the Current Situation of Non-performing Assets of Company D and Suggestions of Disposal Methods

4.1. Current Status of Non-performing Assets of Project C and Disposal Recommendations

4.1.1. Analysis of the Current Situation of Non-performing Assets of Project C

C project company is located in a county in Jiangxi province, was established in 2012, the registered capital of 20 million yuan, mainly responsible for the investment of electricity production and supply business. c project by D company subsidiary H company contributed 14 million yuan, holding 77.78%; another two private companies respectively contributed 2 million yuan, each holding 11.11%, has no registered personnel. The financial data for project C for the last three years is shown in table 1.

Table 1: Key financial indicators for Project C from 2019 to 2021

Unit: RMB Million			
Projects	2019	2020	2021
Total Assets	6,614.39	6,614.41	6,614.41
Internal liabilities	4,708.02	4,682.59	4,682.59
External liabilities	843.56	869.01	869.01
Total liabilities	5551.58	5551.6	5551.6
Net Assets	1,062.81	1,062.81	1,062.81
Operating revenue			
Operating profit			
Net cash flow from operating activities	-2.95		

According to the relevant financial indicators, it is known that Project C has been in a state of investment stagnation for the past three years. After interviewing and reviewing the information, we know that the construction of Project C started in 2013 and was managed by Company D. In 2013, construction problems occurred at the construction site of Project C, which was requested by the local government to stop work for rectification, and then after repeated negotiations with the local government, no permission was obtained to resume work, and subsequently, due to the tightening of local environmental protection policies, Project C has no possibility to be completed and put into operation. It is mainly used for exploration and design, access road construction, culvert construction, etc. The assets formed are mainly design materials, access roads and culverts, etc. Since the project is not likely to be completed and put into operation, these assets are also unlikely to generate benefits, so Project C must be disposed of. The asset evaluation is shown in Table 2.

Table 2: Appraisal results of asset-based method on July 31, 2021 for Project C

Unit: RMB Million				
Projects	Book value	Appraised value	Impairment	Impairment rate
Total Assets	6614.42	66.46	-6547.96	-99.00
Internal liabilities	4708.02	4682.59	-25.43	-0.54
External liabilities	843.56	869.01	25.45	3.02
Total liabilities	5551.6	5551.6	0	0.00
Net Assets	1062.81	-5485.14	-6547.95	-616.10

4.1.2. Liquidation of Non-Performing Assets C Project

According to the asset disposal needs of Company D and the project's own operation, Company

D can choose the following three ways for asset disposal.

① Self-liquidation cancellation. Company H will assume all the debts of Project C. After the debts are paid off, the company will go through tax cancellation and industrial and commercial cancellation. There are difficulties: firstly, Company H needs to bear the external debts of Project C of more than 8.68 million yuan in addition to the original internal borrowing of 46.8259 million yuan which cannot be recovered; secondly, according to the requirements of industrial and commercial cancellation, it needs to provide written documents to the Market Supervision Administration that all shareholders agree to the cancellation of the company; Company D, the shareholder of Company C, is now in the state of cancellation, but its shareholder status is still retained. A county market supervision bureau proposed to require the cancellation of the C company investors must sign the relevant documents, and the investor in foreign countries due to the epidemic reasons temporarily unable to return and according to the preliminary consultation, a county taxation bureau requires a county people's government to agree to be able to handle tax cancellation. In view of the negative attitude of a county government towards C project company, it is extremely difficult and uncontrollable to handle the cancellation on its own and does not meet the basic requirements of disposal efficiency.

② Filing a lawsuit to dissolve C Project Company. According to Article 182 of the Company Law and its related judicial interpretation, Company H can file a lawsuit to dissolve Project C with the People's Court of a county on the grounds that "Project C has stopped construction and cannot resume construction, the company's continued existence will cause significant losses to shareholders' interests, and it has been unable to convene a shareholders' meeting for more than two years and cannot be resolved through a shareholders' meeting or a shareholders' meeting". The company filed a lawsuit to dissolve Project C with a county people's court. There are difficulties: First, according to the normal procedure, after the court accepts the case, it can generally be concluded within 6 months, and after the court decides to dissolve the company, the company can organize its own liquidation or apply to the people's court to liquidate the company, and if the people's court organizes the liquidation, the liquidation should be completed within 6 months from the date of establishment. Liquidation team based on the liquidation plan to pay off debts, should apply to the people's court ruling to end the liquidation process. The dissolution of the company should be applied for cancellation of registration after the liquidation is completed in accordance with the law. The whole cycle time is too long to meet the assessment goal of completing the cancellation within the year and does not meet the requirements of disposal efficiency. Secondly, according to the way to sue for dissolution, it will increase the number of legal cases of the company and add unnecessary legal risks.

③ Apply for bankruptcy liquidation. According to Article 2 and Article 8 of the Enterprise Bankruptcy Law of the People's Republic of China, if an enterprise legal person cannot settle its debts as they fall due and its assets are insufficient to settle all its debts or it obviously lacks the ability to do so, the creditor may file a bankruptcy petition to the people's court. company H may file a petition for bankruptcy of project company C to a county people's court as the largest creditor. In this way, the court will decide whether to accept the bankruptcy petition within fifteen days from the date of receipt. There are special circumstances that can be extended by fifteen days upon approval. In accordance with the SASAC's criteria for closing a company by bankruptcy liquidation, the criteria are based on the time of acceptance by the court; if it is true that the court cannot accept the petition within a short period of time due to special reasons, the time of completing internal decision-making and submitting the bankruptcy petition to the court is used as the basis.

According to the analysis of the above three options, only filing bankruptcy petition to the court can best ensure the realization of the annual "three-year reform action of state-owned enterprises" assessment goal, and at the same time meet the requirements of disposal efficiency and legal risk,

therefore, we recommend the method of "filing bankruptcy petition for Project C Company with Company H as creditor to a county people's court. Therefore, it is proposed that Company H, as a creditor, file a bankruptcy petition for Project C with the county people's court, thereby cancelling.

4.2. Current Status of Non-performing Assets of W Project and Disposal Proposal

4.2.1. Analysis of the Current Situation of Non-performing Assets of W Project

W project company is located in the territory of a city in Jiangxi province, established in 2001, the registered capital is 11,000,000-yuan, D company contributed 48.4 million yuan, holding 44%; Beijing a science and technology limited company contributed 31.35 million yuan, holding 28.5%; Canada a company contributed 30.25 million yuan, holding 27.5%. W project by D company is responsible for the construction and production management. Personnel: There are 8 employees on the register, including 2 senior managers and 6 middle-level and below managers. The financial data of the last three years are shown in Table 3.

Table 3: Key financial indicators for Project W from 2019 to 2021

Unit: RMB Million

Projects	2019	2020	2021
Total Assets	39724.20	36977.40	34102.30
Internal liabilities	0	0	0
External liabilities	25521.10	22126.90	18676.70
Total liabilities	25521.10	22126.90	18676.70
Net Assets	14203.10	14850.60	15425.60
Operating Income	4375.90	5201.00	4976.80
Operating profit	-139.00	750.70	680.00
Net cash flow from operating activities	3271.70	3757.10	3384.90

From the above financial data, the W Project's gearing ratio is close to 84%, which is the normal level in the industry; the operating income in the past three years is stable between RMB 40 million and RMB 50 million, and the cash flow is stable between RMB 30 million and RMB 40 million; the loss in 2019 is RMB 1.39 million, and the net profit in 2020 and 2021 is RMB 7.5 million and RMB 6.8 million respectively. Considering the characteristics of the hydropower industry that the water inflow varies in different years and the operating income and profit will change accordingly, a small loss in 2019 should be normal, and in the long term, the W project is a high-quality asset with good profitability.

From the interviews, we understand that the W project is a high-quality small hydropower project with qualified engineering quality, stable equipment condition and good profitability level since it was put into operation, but there is a shareholder deadlock. The actual controllers of the shareholders of the two private companies are two brothers who, in addition to investing in the W project in cooperation with Company D, also cooperate in investing in another project. The other project was also constructed and managed on a day-to-day basis by Company D, but suffered long-term losses, became insolvent, and eventually went bankrupt. The two private shareholders demanded compensation from Company D, otherwise they would not give any cooperation in the disposal of W project assets and would probably not agree to place the W project into DTJ, a listed hydropower platform. From the perspective of the IPO requirements of the hydropower segment of Company D, the W project is an atypical non-performing asset and belongs to the scope of external disposal, and the asset evaluation is shown in Table 4.

Table 4: Appraisal results of asset-based method on July 31, 2021 for Project W

Unit: RMB Million

Projects	Book value	Appraised value	Impairment	Impairment rate
Total Assets	13411.16	17726.62	4315.46	32.18
Total liabilities	2194.06	2194.06	-	-
Net Assets	11217.10	15532.57	4315.46	38.47

4.2.2. Asset Transfer Type Disposal of Non-Performing Assets W Project

According to Company D's asset disposal needs and the project's own operation, Company D can choose the following three ways to dispose of its assets.

① Acquisition of the remaining 56% equity interest in Company W. Company W is currently in a state of shareholder deadlock and the company is unable to form an effective shareholders' meeting resolution, which will have a significant adverse impact on the future development of Company D. In order to resolve the status quo of the shareholders' deadlock, Company D may choose the right time to negotiate with the other two shareholders to acquire 56% of the equity interests in Company W held by the two shareholders to achieve 100% shareholding of Company W by Company D Power Generation, and then increase capital to DTJ afterwards to achieve the purpose of injecting Company W into the listed company. Difficulties: The private controlling party may refuse to sell the remaining equity to Company D due to interest issues, while easily facing the risk of paying too high a premium when acquiring the remaining equity, which does not meet the requirement of preserving the value of assets to the maximum extent.

② The option of injecting M. W, as the parent company, has no actual operating business and the hydropower assets are mainly operated by M. Given the existence of shareholder deadlock in W, M could be considered for injection into DTJ. Problems: First, the injection of M into DTJ requires a resolution of W's board of directors, but the deadlock of W's shareholders is expected to make it difficult to form an effective board resolution; second, if M is injected into DTJ using a capital increase, W becomes a shareholder of DTJ, resulting in a complex shareholding structure. Consideration can be given to the equity acquisition method, i.e., DTJ will acquire the equity of Company M held by Company W with the equity of new energy assets held by DTJ, but suitable wind power generation and photovoltaic power generation assets are needed to match with it, and there is difficulty in the concrete implementation.

③ Disposal of W project or M project to the outside world. If the deadlock of W shareholders cannot be effectively resolved, it will be difficult to inject either W or M into DTJ. Even if it can be injected into DTJ, there is a greater risk of equity disputes. In view of the weak profitability of M and its inability to significantly enhance the profitability of the listed entity after injection, the W or M can be disposed of externally in conjunction with the company's development strategy.

Combining with the actual situation of W project company, in order to realize the interest demand of asset disposal of D company, it is suggested to choose the way of external equity transfer to dispose of W project, specifically considering that W project company is now running well and all power companies are trying to collect high quality clean energy asset projects in the market, so it can adopt the way of auction sale to dispose and dispose of W project quickly and at high price through market-oriented way.

4.3. Status of Non-performing Assets of Project B and Disposal Recommendations

4.3.1. Analysis of the Current Situation of Non-performing Assets of Project B

Project B was established on August 22, 2006, registered in a county of Yiyang City, with a registered capital of RMB 80 million, mainly responsible for the production and operation of hydropower stations. 45,000 kilowatts of hydropower stations were installed in Project B, with a design annual power generation capacity of 20,000,000 kilowatt hours and a feed-in tariff of RMB 0.35/kWh. The first unit was put into operation in April 2010, and all units were connected to the grid in April 2011. DT's subsidiary company H contributes 72 million yuan, holding 90% of the shares; a natural person contributes 8 million yuan, holding 10% of the registered employees of 32 people, including 2 senior management, 9 middle-level and below management, and 21 operating personnel. The financial data of the last three years are shown in Table 5.

Table 5: Key financial indicators of Project B from 2019 to 2021

Unit: RMB Million

Projects	2019	2020	2021
Total Assets	80980.56	77571.98	75002.59
Internal liabilities	60708.38	56355.79	87045.85
External liabilities	29769.38	33006.99	671.6
Total liabilities	25521.10	22126.90	18676.70
Net Assets	-9497.20	-11790.80	-12714.92
Operating income	6606.61	6605.51	5758.97
Operating profit	-2293.60	-2293.60	-924.11
Net cash flow from operating activities	5961.14	5229.54	4180.87

Looking at the financial data, the project has the following characteristics: First, it is a continuous loss. From the statistics in, the profit of Project B in 2019, 2020 and 2021 are: -22.93 million, -22.93 million and -9.24 million RMB respectively. Secondly, it is insolvent. As of the end of 2020, the audited total assets of Project B are RMB779 million, total liabilities are RMB894 million, total net assets are RMB-115 million, and net assets are evaluated at RMB-119 million. Third, operating income can cover operating costs and interest on external liabilities. \$894 million of total liabilities of Project B, about \$560 million of internal borrowings; \$320 million of borrowings from financial institutions, all guaranteed by regional companies belonging to Company D. In 2019, 2020 and 2021, operating income of Project E will have a surplus in addition to covering operating and maintenance costs and interest on external borrowings.

Since Project B continues to lose money and is insolvent, it is not suitable to be placed on the listed platform; at the same time, since the operating income of the two projects has a surplus in addition to covering the operating costs and interest on bank debts, a reasonable treatment can be set to mitigate the loss for Company D. The asset evaluation is shown in Table 6.

Table 6: Appraisal results of asset-based method on December 31, 2020 for Project B

Unit: RMB Million

Projects	Carrying value	Appraised value	Impairment	Impairment ratio
Total Assets	77852.32	77348.66	-503.66	-0.65
Total Liabilities	89362.78		940	1.05
Net Assets	-11510.46	-11,954.12	-443.66	3.85

4.3.2. Reorganizational Disposal of Non-Performing Assets B Project

According to Company D's asset disposal needs and the project's own operation, Company D can choose the following four ways to dispose of assets.

① Partnership to build a joint venture company

After repeated communication with an asset management company, in the case of divesting assets as the main idea, it is proposed to set up a joint venture company in the form of market asset transfer and disposal through Company H and the asset management company. The joint venture company is a limited partnership with a total capital contribution of 90,100,000 Yuan. Among them, the asset management company contributes 60,000,000yuan, accounting for 66.7% of the shares, and Company H contributes 30,000,000yuan, accounting for 33.3%, and subscribes to the share of the inferior level. Difficulties: Difficulties in setting up the joint venture company. According to the preliminary proposal with the asset management company, the joint venture company is a limited partnership, and the group company is difficult to approve and the annual cost is high for this kind of enterprise management with reference to the fund implementation. After the establishment of the joint venture company, as it is necessary to pay the relevant fees to the asset management company, the annual payment amount is about 100 million yuan, which is unaffordable to H Company's financial capacity, and it is difficult to withdraw from the participating company, and the withdrawal after the expiration is required to implement the relevant regulations on the disposal of state-owned assets in accordance with the requirements of state-owned assets, and the transfer of equity, liquidation and cancellation are difficult to carry out, and there are big problems in the efficiency of disposal, legal risk and follow-up treatment .

② Debt and equity listed separately

With reference to the asset evaluation results, the equity, internal claims and external claims of Project B are divided into three subjects for listing on the Beijing Stock Exchange, and the interested party delists the equity and the interested party enters the market to delist the equity to realize the transfer of control of Project B. The interested party offloads the debts to form external receivables. This plan can realize the transfer of control by means of separate listing of equity, and internal debts as separate listing subjects can reach the ideal value range by reasonable price reduction. Difficulties: There are risks after the equity transfer. The value of the equity is \$1. If the equity is transferred separately and the debt is not delisted, there will be a borrowing to external companies. And if the interested party makes other dispositions to the company after the equity transfer, the company's rights and interests cannot be protected; there is difficulty in reducing the price of internal debts. After the internal debts are listed, although the price reduction can be made according to the listing regulations, there are difficulties in the company's internal financial account processing, which cannot be implemented in a practical way and cannot meet the requirements of asset preservation and are prone to legal risks.

③ 1 yuan listing equity transaction

This solution idea is the conventional way of transferring state-owned assets, according to the current asset evaluation result of project company B, the net assets are negative, then the equity value is listed at 1 yuan, and the delisting party takes over the assets and liabilities. Difficulties: Since the current B project company is insolvent and the scale of liabilities is large, the interested party has more requirements on the amount of liabilities undertaken and needs to reduce the price several times to meet the requirements, so this scheme is difficult to complete the disposal within the conventional time and does not meet the requirements of disposal efficiency.

④ Quality asset injection

The target of the SASAC supervisor in 2021 is to reverse the loss by 50% based on 2018. in 2018, the total profit of project company B was -27.92 million yuan and reversed the loss by 50%,

i.e. the total profit in 2021 was within -13.96 million yuan. company D currently directly holds the equity of ML Power New Energy Company. As of the end of 2020, ML Power's total audited assets were \$853 million, total liabilities were \$660 million, total net assets were \$193 million, and total profit was \$60,672,200. If ML Power Company can be injected into Project B at the end of August, it is able to realize a profit of more than \$30 million at the end of the year. As of the end of June 2021, the total profit of Project B was -3.03 million yuan, and the total profit for 2021 is forecasted to be -23.92 million yuan; just from the analysis of the data at the current statement level, the injection of high-quality assets can turn Project B into a 50% loss. The company can transfer ML Power Company to Project B through a non-public agreement transfer, making it a wholly-owned subsidiary of Project B. Through consolidation of statements, Project B can turn around its losses.

Option 4 is risk-controlled and feasible, and can simultaneously consider the needs of multiple parties. For the specific approval of the non-public agreement transfer. The priority of such asset disposal method can be verified through investment development model projections, while the influence of minority shareholders can be resolved through power of attorney and other means. Considering the efficiency of communication with the Group and the cooperation with the minority shareholders in the early stage, Program ④ meets the requirements of four dimensions of disposal efficiency, asset preservation, legal risk, and social stability, and is recommended to be adopted.

4.4. The Current Status of Non-performing Assets of the L Project and Disposal Proposals

4.4.1. Analysis of the Current Situation of Non-performing Assets of L Project

L Project Company was established on August 17, 2011, registered in a county in Yunnan, with a registered capital of RMB 75.75 million, and is a wholly-owned subsidiary of Y Regional Company, a subsidiary of D. The company's main business is to implement the development of hydropower resources, water services and water environment projects in a county. The company holds seven hydropower stations with a total installed capacity of 134,000 kilowatts. Up to now, the total number of registered personnel is 69, including a total of 19 people in the company's management (2 in the leadership team, 9 in the middle level and 8 in charge), 38 in the operation staff and 12 in the labour dispatch. The financial data of the last three years are shown in Table 7.

Table 7: Key financial indicators of L Project from 2019 to 2021

Unit: RMB million			
Projects	2019	2020	2021
Total Assets	156476.74	147990.05	98365.27
Internal liabilities	24309.25	63589.96	97442.48
External liabilities	132569.66	90651.96	105099.77
Total liabilities	156878.91	154241.92	202542.25
Net Assets	-402.17	-6251.87	-104176.98
Operating revenue	4796.70	6893.08	5386.71
Operating profit	-7616.94	-5849.78	-97925.11
Net cash flow from operating activities	4461.01	4512.24	3329.22

The L project and the B project have similar characteristics, both of which are characterized by insolvency and continuous losses. However, the L project differs from the B project in that the operating income of the L project cannot cover the operating costs and interest on external liabilities, and its liabilities are all guaranteed by the regional companies belonging to the D company. Therefore, the disposal method of high-quality asset injection is not applicable to the L project. The asset valuation is shown in Table 8.

Table 8: Appraisal results of asset-based method on December 31, 2021 for project L

Unit: RMB Million				
Projects	Carrying value	Appraised value	Impairment	Impairment ratio
Total Assets	98365.27	47946.29	-50418.98	-51.26
Total Liabilities	202542.25	148043	-54499.25	-26.91
Net Assets	-104176.98	-100096.71	4080.27	-3.92

4.4.2. Debt-Only Asset Transfer Disposal of Non-Performing Assets L Project

Considering the capital cost, disposal efficiency and feasibility of the plan, among the partnership to build a joint venture company, high-quality asset injection, separate listing and trading of debt equity, and \$1 listing and trading of equity, \$1 listing and trading of equity is in line with the interests of the company and meets the requirements of disposal efficiency, asset preservation, legal risk and social stability. Therefore, we choose the \$1 listed equity transaction, which is also called "debt-bearing equity transfer". According to the public listing of the equity of L Project Company on Shanghai United Property Exchange in the form of "debt-bearing equity transfer", the reserve price of this project is RMB 405,676,575,293,000, which is composed of the reserve price of 100% equity transfer of the subject enterprise of RMB 0.0001 million and the transferor's claim on the subject enterprise of RMB 405,676,575,193,000. If the final transaction price of this project forms a premium, the premium will be the equity premium.

Considering that the L project company is insolvent, continues to lose money and the cash flow cannot cover the interest and operation and maintenance expenses, the "debt-bearing equity transfer" method is adopted, which not only realizes the transfer of operation and management rights, but also ensures that the claims will not be extinguished and maximizes the value preservation of state-owned assets. By negotiating and signing agreements on key issues such as debts and employee placement, the requirements of social stability and legal risks are met.

From the above case, we can see that for the non-performing assets formed due to historical reasons, as a state-owned asset operator, under the premise of complying with relevant laws and regulations and protecting the value of state-owned assets, we should fully utilize market forces and make comprehensive use of market-based means to realize company restructuring, so that the business can be operated continuously and the potential of the stock assets can be realized. Only assets that are truly difficult to recover their value are suitable for bankruptcy liquidation, while high-quality projects affected by special circumstances such as shareholder deadlock can be designed for adjustment by asset injection or debt restructuring. In addition, SOEs should establish sound rules and regulations and an effective incentive and restraint mechanism to effectively reduce the accumulation of non-performing assets and accelerate the efficiency of non-performing asset disposal in order to achieve the goal of optimizing the liquidation efficiency and cost effectiveness of the company.

5. Conclusion

The non-performing assets generated and left behind within an enterprise for historical reasons will not only restrict its normal internal operation and reduce its operational efficiency, but also significantly affect the development of important business of the enterprise and the reform of the national economic system. Therefore, the disposal of non-performing assets of state-owned enterprises is not only a requirement for planning and improving the quality of assets during China's economic transition, but also a guarantee for the effective implementation of the reform of state-owned enterprises, which is important for promoting China's economic It is of practical

significance to promote the sustainable healthy and orderly development of China's economy. However, due to the social environment, market system and other reasons, the efficiency of disposal of non-performing assets of state-owned enterprises is low and the disposal method is single. Therefore, how to improve the disposal efficiency of non-performing assets and how to diversify the asset disposal methods according to different asset properties, and then enhance the value of enterprise assets is a concern of the government and other regulatory agencies, and is also an important problem that state-owned enterprises need to solve. Based on this, this paper selects a state-owned clean energy enterprise, Company D, as the research object, with the purpose of studying the existing non-performing assets disposal cases of Company D, summarizing the ways and concerns of non-performing assets disposal, summarizing the experience of non-performing assets disposal, achieving compliance and efficient disposal of state-owned non-performing assets, and realizing the goal of preserving and increasing the value of state-owned assets. Through the analysis of this paper, we hope to solve the problem of choosing the disposal method of non-performing assets of Company D, improve the efficiency and effect of disposal of non-performing assets of Company D, and at the same time, provide useful reference and reference for more scientific disposal of non-performing assets during the operation of domestic power and energy industry enterprises.

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