THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION

If you are in any doubt as to any aspect of this circular or as to the action to be taken, you should consult your stockbroker or other securities dealer licensed as a licensed person under the Securities and Futures Ordinance, bank manager, solicitor, professional accountant or other professional adviser.

If you have sold or transferred all your shares in **China Aluminum International Engineering Corporation Limited**, you should at once hand this circular and the form of proxy to the purchaser or the transferee or to the bank, stockbroker or other agent through whom the sale or transfer was effected for transmission to the purchaser or the transferee.

CHALIECO
中铝国际

中 鋁 國 際 工 程 股 份 有 限 公 司
China Aluminum International Engineering Corporation Limited

(A joint stock limited company incorporated in the People's Republic of China with limited liability)

(Stock Code: 2068)

DISCLOSEABLE TRANSACTION AND CONNECTED TRANSACTION DEEMED DISPOSAL IN RELATION TO CAPITAL INCREASE OF WHOLLY-OWNED SUBSIDIARIES; AND NOTICE OF THE FIRST EXTRAORDINARY GENERAL MEETING IN 2024

Independent Financial Adviser to the Independent Board Committee and the Independent Shareholders

金聯資本
Goldlink Capital

A letter from the Board is set out on pages 6 to 35 of this circular. A letter from the Independent Board Committee containing its recommendation to the Independent Shareholders in relation to the Deemed Disposal is set out on pages 36 to 37 of this circular. A letter from the Independent Financial Adviser issued by Goldlink Capital (Corporate Finance) Limited containing its recommendation to the Independent Board Committee and the Independent Shareholders in relation to the Disposal is set out on pages 38 to 68 of this circular. A summary of the valuation report is set out on pages II-1 to II-205 of this circular. The letter from the auditor regarding the profit forecast is set out on pages III-1 to III-3 of this circular. The letter from the Board regarding the profit forecast is set out on pages IV-1 to IV-2 of this circular.

An extraordinary general meeting (the "**EGM**") of the Company will be held at Conference Room 312 of China Aluminum International Engineering Corporation Limited, Building C, No. 99 Xingshikou Road, Haidian District, Beijing, the PRC, at 9:30 a.m. on Friday, 13 December 2024. The notice of EGM is set out on pages N-1 to N-2 of this circular.

If you wish to appoint proxies to attend the EGM, you are requested to complete and return the enclosed proxy form in accordance with the instructions printed thereon. The form of proxy must be signed by you or by an attorney duly authorized in writing by you or, in the case of a corporation, either under its common seal or under the hand of one of its directors or other duly authorized attorney(s). If the proxy form is signed by an attorney of the principal, the power of attorney authorizing that attorney to sign or other authorization document must be notarized.

For the joint holders of any share(s), any one of such joint holders may vote at the EGM, either personally or by proxy, in respect of such share(s), as if such person is solely entitled thereto. However, if more than one of such joint holders are present at the EGM, either in person or by proxy, the vote of the joint holder whose name stands first in the register of members (whether in person or by proxy) in respect of any resolution shall be adopted by the Company, and the other joint holders shall not be entitled to voting rights anymore.

For holders of H Shares, please return the proxy form together with any documents of authority to the H Share registrar of the Company, Computershare Hong Kong Investor Services Limited at 17M Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong as soon as possible, and in any event not later than 24 hours before the time appointed for holding the EGM. Completion and return of the proxy form will not preclude you from attending and voting at the EGM or any adjournment thereof should you so wish.

22 November 2024

CONTENTS

In this circular, unless the context otherwise requires, the following expressions have the following meanings:

"A Share(s)"	the ordinary share(s) of the Company with a par value of RMB1.00 each, which were issued in the PRC and subscribed in RMB and are listed on SSE
"AFHT Phase II"	Phase II (Hubei) Debt-to-Equity Swap Investment in Agriculture, Finance and High Technology Fund Partnership (Limited Partnership)* (農金高投二期(湖北)債轉股投資基金合夥企業(有限合夥)), a limited partnership incorporated under the laws of the PRC and an Independent Third Party
"Appraisal Institution"	Beijing Guo Rong Xing Hua Asset Appraisal Co., Ltd.
"associate(s)"	has the meaning ascribed to it under the Hong Kong Listing Rules
"Board"	the board of Directors of the Company
"BOCOM Investment"	BOCOM Financial Asset Investment Co., Ltd., a company incorporated under the laws of the PRC with limited liability and an Independent Third Party
"Capital Increase"	the introduction of strategic investors to implement capital increase with a sum of RMB2.29 billion for the Target Companies through public tender on GuangDong United Assets and Equity Exchange
"Capital Increase Agreement"	the three capital increase agreements entered into between the Company, Investors, the Target Companies and Chinalco Suihe, respectively, in relation to the transaction of introducing investors to implement capital increase through public tender on GuangDong United Assets and Equity Exchange by CINF, Kunming Survey and Design Institute and SAMI, which was considered and approved by the Board on 21 November 2024
"CCB Investment"	CCB Financial Asset Investment Co., Ltd., a company incorporated under the laws of the PRC with limited liability and an Independent Third Party
"China" or the "PRC"	the People's Republic of China

"Chinalco"	Aluminum Corporation of China (中國鋁業集團有限公司), a state-owned enterprise incorporated under the laws of the PRC and the controlling Shareholder of the Company
"Chinalco Capital"	Chinalco Capital Holdings Co., Ltd.* (中鋁資本控股有限公司), a company incorporated under the laws of the PRC with limited liability and a subsidiary controlled by Chinalco
"Chinalco Innovation Investment"	Chinalco Innovation Development Equity Investment Fund Management (Beijing) Co., Ltd. (中鋁創新發展股權投資基金管理(北京)股份有限公司), a company incorporated under the laws of the PRC with limited liability and a wholly-owned subsidiary of Chinalco Capital
"Chinalco Suihe"	Chinalco Suihe Nonferrous Metals Green and Low-carbon Innovation Development Fund (Beijing) Partnership (Limited Partnership)* (中鋁穗禾有色金屬綠色低碳創新發展基金(北京)合夥企業(有限合夥)), a partnership established under the laws of the PRC and a connected person of the Company
"CINF"	Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy (長沙有色冶金設計研究院有限公司), a subsidiary of the Company
"Company"	China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司), a joint stock limited company incorporated in the PRC with limited liability, and its A Shares are listed on the SSE and H Shares are listed on the Hong Kong Stock Exchange
"Completion Date"	the date on which the parties to the Capital Increase Agreement pay the Capital Increase amount to the capital verification account of the Target Companies, being the fifth working day from the effective date of the Capital Increase Agreement
"connected person(s)"	has the meaning ascribed to it under the Hong Kong Listing Rules
"Controlling Shareholder(s)"	has the meaning ascribed to it under the Hong Kong Listing Rules

"Deemed Disposal"	the transaction effecting the Capital Increase by way of introduction of investors through public tender on GuangDong United Assets and Equity Exchange by CINF, Kunming Survey and Design Institute and SAMI
"Director(s)"	the director(s) of the Company
"EGM" or the "First Extraordinary General Meeting in 2024"	the first extraordinary general meeting of 2024, or any adjournment thereof, to be convened by the Company to be held at Conference Room 312 of China Aluminum International Engineering Corporation Limited, Building C, No. 99 Xingshikou Road, Haidian District, Beijing, the PRC at 9:30 a.m. on Friday, 13 December 2024, for the consideration and approval of the Deemed Disposal and the Connected Transaction contemplated thereunder
"Group"	the Company and its subsidiaries
"H Share(s)"	the overseas listed foreign shares of RMB1.00 each in the ordinary share capital of the Company, which are subscribed and traded in Hong Kong dollars and listed on the Hong Kong Stock Exchange
"H Shareholder(s)"	holder(s) of H Share(s) of the Company
"Hong Kong"	the Hong Kong Special Administrative Region of the PRC
"Hong Kong Listing Rules"	the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, as amended from time to time
"Hong Kong Stock Exchange"	The Stock Exchange of Hong Kong Limited
"Independent Board Committee"	the independent board committee appointed pursuant to the Hong Kong Listing Rules and comprising all independent non-executive Directors to advise the Independent Shareholders in respect of the Deemed Disposal

"Independent Financial Adviser" or "Goldlink Capital"	Goldlink Capital (Corporate Finance) Limited, a licensed corporation to carry out Type 6 (advising on corporate finance) regulated activities under the SFO, and being appointed as the independent financial adviser to advise the Independent Board Committee and the Independent Shareholders in respect of the Deemed Disposal
"Independent Shareholder(s)"	Shareholder(s) not required to abstain from voting on the approval of the Deemed Disposal
"Independent Third Party(ies)"	third party(ies) independent of the Company and its connected persons
"Investors"	BOCOM Investment, CCB Investment, and AFHT Phase II, each being an Independent Third Party
"Kunming Survey and Design Institute"	Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (中國有色金屬工業昆明勘察設計研究院有限公司), a subsidiary of the Company
"Latest Practicable Date"	14 November 2024, being the latest practicable date prior to the printing of this circular for containing certain information herein
"RMB"	Renminbi, the lawful currency of the PRC
"SAMI"	Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. (瀋陽鋁鎂設計研究院有限公司), a subsidiary of the Company
"SFO"	the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (as amended, supplemented or otherwise modified from time to time)
"Share(s)"	the share(s) in the share capital of the Company at par value RMB1.00 per share, including A Share(s) and H Share(s)
"Shareholder(s)"	the holder(s) of Share(s) of the Company
"subsidiary(ies)"	has the meaning ascribed to it under the Hong Kong Listing Rules
"Substantial Shareholder(s)"	has the meaning ascribed to it under the SFO

"Supervisor(s)"	the supervisor(s) of the Company
"Target Companies"	CINF, SAMI and Kunming Survey and Design Institute, all of which are subsidiaries of the Company
"Valuation Benchmark Date"	31 December 2023, the valuation benchmark date as stated in the Valuation Reports prepared by the Appraisal Institution
"Valuation Reports"	the three asset valuation reports dated 15 August 2024 issued by the Appraisal Institution in respect of the market value of the respective total shareholders' equity of the Target Companies as at the Valuation Benchmark Date, a summary of which is set out in Appendix II to this circular
"%"	per cent

中鋁國際工程股份有限公司
China Aluminum International Engineering Corporation Limited
(A joint stock limited company incorporated in the People's Republic of China with limited liability)
(Stock Code: 2068)

Executive Directors:
Mr. LI Yihua
Mr. LIU Jing
Mr. LIU Dongjun
Ms. ZHAO Hongmei

Non-executive Directors:
Mr. ZHANG Decheng
Mr. YANG Xu

Independent Non-executive Directors:
Mr. ZHANG Tingan
Mr. SIU Chi Hung
Mr. TONG Pengfang

Registered Office and Head Office in the PRC:
Building C
No. 99 Xingshikou Road
Haidian District
Beijing
PRC

Principal Place of Business in Hong Kong:
Room 4501
Far East Finance Centre
No. 16 Harcourt Road
Admiralty
Hong Kong

To the Shareholders

Dear Sir or Madam,

**DISCLOSEABLE TRANSACTION AND CONNECTED TRANSACTION DEEMED DISPOSAL IN RELATION TO CAPITAL INCREASE OF WHOLLY-OWNED SUBSIDIARIES;
AND
NOTICE OF THE FIRST EXTRAORDINARY GENERAL MEETING IN 2024**

INTRODUCTION

Reference is made to the Company's inside information announcement dated 26 August 2024 and the discloseable and connected transaction announcement dated 21 November 2024.

On 21 November 2024, the Company (as the original shareholder of the Target Companies), the Investors (as qualified investors), Chinalco Suihe (as a qualified investor) and each of the three Target Companies entered into Capital Increase Agreement, pursuant to which, the Target Companies have conditionally agreed to allocate and issue shares of the Target Companies to the Investors and Chinalco Suihe, respectively, and the Investors and Chinalco Suihe have conditionally agreed to subscribe for the shares of each of the Target Companies.

The purpose of this circular is to provide you with information regarding, among others, (i) further details of the Capital Increase Agreement and the Deemed Disposal contemplated thereunder; (ii) the letter from the Independent Board Committee to the Independent Shareholders in relation to the Deemed Disposal; (iii) the letter of advice from the Independent Financial Adviser to the Independent Board Committee and the Independent Shareholders in relation to the Deemed Disposal and the transactions contemplated thereunder; (iv) notice of the EGM; and (v) such other information as may be required to be contained in this circular under the Hong Kong Listing Rules.

BACKGROUND

According to the resolution of the Board dated 26 August 2024, the Board agreed that CINF, Kunming Survey and Design Institute and SAMI, wholly-owned subsidiaries of the Company, would introduce investors to implement capital increase through public tendering on GuangDong United Assets and Equity Exchange. The capital contributors are external investors to be determined through public solicitation by GuangDong United Assets and Equity Exchange in accordance with the trading rules for public tendering.

Chinalco Suihe, an associate of Chinalco, the controlling shareholder of the Company, participated in the Capital Increase for CINF, Kunming Survey and Design Institute and SAMI. As the highest applicable percentage ratio of the Deemed Disposal exceeds 5%, given that Chinalco Suihe became the successful bidder of the Deemed Disposal and a party to the Capital Increase Agreement, the Deemed Disposal constitutes a connected transaction of the Company and is subject to the reporting, announcement, circular, appointment of independent financial advisers and independent shareholders' approval requirements under Chapter 14A of the Hong Kong Listing Rules.

On 21 November 2024, upon consideration and approval by the Board, the Company has agreed to enter into the Capital Increase Agreement with each of the three Target Companies, Chinalco Suihe and the Investors, respectively. Pursuant to the Capital Increase Agreement, the Target Companies will introduce the Investors and Chinalco Suihe as qualified investors by way of the Capital Increase through admission to GuangDong United Assets and Equity Exchange, Inc, and implementation of the Capital Increase to the Target Companies, respectively, for a consideration of RMB2.29 billion in aggregate, payable by cash. As at the Completion Date, the Company will continue to hold not less than 60% of each of the Target Companies, which will continue to be subsidiaries of the Company and will be included in the consolidated statements of the Company.

The Independent Board Committee comprising all independent non-executive Directors has been established to consider the Deemed Disposal and to advise the Independent Shareholders as to whether the Capital Increase Agreement and the terms of the transactions contemplated thereunder are on normal commercial terms or better, are fair and reasonable and are in the interests of the Company and the Shareholders as a whole. A letter containing the advice and recommendation of the Independent Board Committee to the Independent Shareholders in respect of the Deemed Disposal is set out on pages 35 to 36 of this circular.

Goldlink Capital (Corporate Finance) Limited has been appointed as the Independent Financial Advisor to advise the Independent Board Committee and the Independent Shareholders on the Capital Increase Agreement and the Deemed Disposal contemplated thereunder. A letter from the Independent Financial Advisor to the Independent Board Committee and the Independent Shareholders is set out on pages 38 to 68 of this circular.

CORE TRANSACTION TERMS OF THE CAPITAL INCREASE AGREEMENT

Date	:	21 November 2024
Parties	:	As regards the Capital Increase Agreement in respect of CINF, the parties include (1) CINF; (2) the Company; (3) Chinalco Suihe; (4) BOCOM Investment; and (5) CCB Investment. As regards the Capital Increase Agreement in respect of Kunming Survey and Design Institute, the parties include (1) Kunming Survey and Design Institute; (2) the Company; (3) Chinalco Suihe; (4) BOCOM Investment; and (5) CCB Investment. As regards the Capital Increase Agreement in respect of SAMI, the parties include (1) SAMI; (2) the Company; (3) Chinalco Suihe; (4) CCB Investment; and (5) AFHT Phase II.
Subject matter	:	Pursuant to the terms and conditions of the Capital Increase Agreement, the Target Companies have conditionally agreed to enlarge their registered capital, and each of the Investors and Chinalco Suihe has conditionally agreed to subscribe for the corresponding shareholdings to the respective additional registered capital of the three Target Companies, and pay up the entire investment consideration (including the deposit) to the Target Companies.

1. Consideration for the Deemed Disposal

The price of Capital Increase is based on the value of the entire shareholders' equity of CINF, Kunming Survey and Design Institute and SAMI as of the Valuation Benchmark Date of RMB1,997,243,300, RMB850,724,700 and RMB984,155,200, respectively, as shown in the record filed with the state-owned assets supervision and administration authority, and has been finalized based on the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange. The price of RMB1 registered capital of CINF, Kunming Survey and Design Institute and SAMI to be subscribed by the qualified investors in the Capital Increase shall not be lower than the existing appraised value of 100% equity interest in CINF, Kunming Survey and Design Institute and SAMI/the registered capital of CINF, Kunming Survey and Design Institute and SAMI.

Based on the appraised value of the three Target Companies, the Company has made the following estimates of the consideration, provided that the Company's shareholding in the three Target Companies is maintained at not less than 60% after the Capital Increase:

	Appraised value *(RMB0'000)*	**Maximum financing size** *(RMB0'000)*
Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd.	98,415.52	65,610.35
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	199,724.33	133,149.55
Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry	85,072.47	56,714.98
Total	**383,212.32**	**255,474.88**

The calculation formula for the maximum financing size is "Appraised Value/(1 – Post-investment shareholding ratio of investors) – Appraised Value". Accordingly, the maximum consideration for the Deemed Disposal is proposed to be RMB2.555 billion.

1. CINF

In accordance with the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange, the Investors will invest RMB1,080,000,000 to subscribe for the corresponding increase in registered capital, of which RMB398,419,271 shall be credited to the registered capital and the remaining RMB681,580,729 shall be credited to the capital reserve of CINF. The capital contribution of each investor is set out below:

Unit: RMB0'000

No.	**The investor**	**Capital increase price payable** *(RMB0'000)*	**Credited to registered capital** *(RMB0'000)*	**Credited to capital reserve** *(RMB0'000)*
1	Chinalco Suihe	50,000	18,445.3366	31,554.6634
2	BOCOM Investment	28,000	10,329.3885	17,670.6115
3	CCB Investment	30,000	11,067.2020	18,932.7980
	Total	**108,000**	**39,841.9271**	**68,158.0729**

2. Kunming Survey and Design Institute

In accordance with the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange, the Investors will invest RMB560,000,000 to subscribe for the corresponding increase in registered capital, of which RMB137,247,690 shall be credited to the registered capital and the remaining RMB422,752,310 shall be credited to the capital reserve of Kunming Survey and Design Institute. The capital contribution of each investor is set out below:

Unit: RMB0'000

No.	The investor	Capital increase price payable *(RMB0'000)*	Credited to registered capital *(RMB0'000)*	Credited to capital reserve *(RMB0'000)*
1	Chinalco Suihe	23,000	5,636.9587	17,363.0413
2	BOCOM Investment	22,000	5,391.8735	16,608.1265
3	CCB Investment	11,000	2,695.9368	8,304.0632
	Total	**56,000**	**13,724.7690**	**42,275.2310**

3. SAMI

In accordance with the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange, the Investors will invest RMB650,000,000 to subscribe for the corresponding increase in registered capital, of which RMB337,327,985 shall be credited to the registered capital and the remaining RMB312,672,015 shall be credited to the capital reserve of SAMI. The capital contribution of each investor is set out below:

Unit: RMB0'000

No.	The investor	Capital increase price payable *(RMB0'000)*	Credited to registered capital *(RMB0'000)*	Credited to capital reserve *(RMB0'000)*
1	Chinalco Suihe	30,000	15,568.9839	14,431.0161
2	CCB Investment	30,000	15,568.9839	14,431.0161
3	AFHT Phase II	5,000	2,594.8307	2,405.1693
	Total	**65,000**	**33,732.7985**	**31,267.2015**

As a result, the consideration of the Capital Increase is RMB2.29 billion in aggregate. Taking into account the tendering results on the GuangDong United Assets and Equity Exchange, it is finally determined that the price for the Capital Increase shall be RMB2.7107 per registered capital for CINF, RMB4.0802 per registered capital for Kunming Survey and Design Institute and RMB1.9269 per registered capital for SAMI.

The Directors (excluding independent non-executive Directors who express their opinions after receiving the advice of the independent financial adviser) consider that the consideration is fair and reasonable.

2. Payment arrangements

The funds for Capital Increase consists of the deposit and the remaining funds for Capital Increase and share expansion. The deposit refers to the deposit paid by the qualified investors to GuangDong United Assets and Equity Exchange for the Capital Increase in accordance with the relevant regulations of GuangDong United Assets and Equity Exchange. The remaining funds for Capital Increase and share expansion refer to the remaining funds for Capital Increase and share expansion under the Capital Increase Agreement after deduction of the deposit paid by each of the qualified investors. The qualified investors shall pay the remaining funds for Capital Increase and share expansion to the designated accounts of CINF, Kunming Survey and Design Institute and SAMI in one lump sum prior to the 5th working day from the effective date of the Capital Increase Agreement (i.e. the Completion Date).

3. Conditions precedent

(1) The Board of the Company has considered and approved the Capital Increase; and

(2) Where the Capital Increase involves the Company's related party transactions, the shareholders' general meeting of the Company has approved the Capital Increase.

The effective date of the Capital Increase Agreement shall be the date on which all of the above conditions are met.

If the terms and conditions agreed upon in the Capital Increase Agreement are not fully met at the end of 31 December 2024, either party to the Capital Increase Agreement shall have the right to terminate the Capital Increase Agreement without any liability for the breach of agreement, unless otherwise agreed upon by the parties.

4. Shareholding structure and corporate governance structure arrangement after the Capital Increase

Upon completion of the Capital Increase, the shareholding structure of CINF is as follows:

No.	Name	Subscribed registered capital *(RMB0'000)*	Shareholding percentage
1	The Company	73,679.6500	64.90%
2	Chinalco Suihe	18,445.3366	16.25%
3	BOCOM Investment	10,329.3885	9.10%
4	CCB Investment	11,067.2020	9.75%
		113,521.5771	**100%**

Upon completion of the Capital Increase, the shareholding structure of Kunming Survey and Design Institute is as follows:

No.	Name	Subscribed registered capital *(RMB0'000)*	Shareholding percentage
1	The Company	20,850.0000	60.30%
2	Chinalco Suihe	5,636.9587	16.30%
3	BOCOM Investment	5,391.8735	15.60%
4	CCB Investment	2,695.9368	7.80%
		34,574.7690	**100%**

Upon completion of the Capital Increase, the shareholding structure of SAMI is as follows:

No.	Name	Subscribed registered capital *(RMB0'000)*	Shareholding percentage
1	The Company	51,074.3216	60.22%
2	Chinalco Suihe	15,568.9839	18.36%
3	CCB Investment	15,568.9839	18.36%
4	AFHT Phase II	2,594.8307	3.06%
		84,807.1201	**100%**

The respective boards of directors of CINF, Kunming Survey and Design Institute and SAMI are composed of seven directors, of which one is staff representative and among the rest, the Company has the right to nominate four directors and the qualified investors have the right to nominate two directors, of which one shall be nominated by the qualified investor with the largest percentage of shareholding as at the Completion Date, and the other shall be nominated by consensus of the remaining qualified investors.

5. Transitional arrangement

Upon the Completion Date where the parties become shareholders of the Target Companies, the parties shall enjoy all shareholders' rights and bear the corresponding shareholders' obligations in accordance with the provisions of laws, the Capital Increase Agreement and the articles of association. The profits and losses of the Target Companies during the period from the benchmark date to the Completion Date and the date (inclusive) on which the subsequent industrial and commercial change to the Target Companies' capital increase is completed shall be borne and enjoyed by all shareholders in accordance with the equity ratio after the Capital Increase.

6. Projected earnings and profit distribution

In view of the fact that the Capital Increase was priced on the basis of the appraised value of the net assets of CINF, Kunming Survey and Design Institute and SAMI as at 31 December 2023 determined by the income approach, and with reference to the operating conditions of the Target Companies in previous three financial years (i.e. 2021-2023) and various factors such as the future operating conditions, the projected earnings of CINF, Kunming Survey and Design Institute and SAMI for the next five years ("**Projected Earnings**") are therefore derived and the net profit of CINF, Kunming Survey and Design Institute and SAMI on a consolidated basis are the following amounts, respectively:

Unit: RMB0'000

Year / Target Company	2024	2025	2026	2027	2028
CINF	11,119.91	12,105.82	13,709.79	15,138.78	16,689.72
Kunming Survey and Design Institute	5,018.48	5,775.85	6,237.69	6,519.36	6,819.08
SAMI	5,376.16	5,810.81	6,241.26	6,630.95	6,892.17

The aforesaid net profit of CINF, Kunming Survey and Design Institute and SAMI on a consolidated basis is determined based on the annual audit reports issued by the accounting firms auditing the annual reports of CINF, Kunming Survey and Design Institute and SAMI at the respective year in the future.

Shareholders of CINF, Kunming Survey and Design Institute and SAMI shall share profits and losses in proportion to their paid-up shareholdings. Without prejudice to the relevant accounting policies, during the period when the Investors hold the equity interest in the Target Companies, all profits of CINF, Kunming Survey and Design Institute, SAMI and their controlled subsidiaries after making up for accumulated losses (if any) and withdrawing statutory provident fund from the after-tax profits of the year will be used for distribution and payment in the form of cash to the designated accounts of qualified investors.

Pursuant to the Capital Increase Agreement, the Company has no profit guarantee obligations with respect to the projected earnings to be achieved under the Deemed Disposal.

7. Capital operation and exit arrangements

Within 60 months after the Completion Date, the Company undertakes to make its best efforts to acquire the equity interests in CINF, Kunming Survey and Design Institute and SAMI (hereinafter referred to as "**Upturn Acquisition**") acquired by qualified investors through the Capital Increase by issuing shares, so as to create conditions for the qualified investors to realize their investments through market-oriented means. The Upturn Acquisition is subject to compliance with the Company's internal review and external approval procedures, laws and regulations pertaining to the acquisition of assets by way of share issuance and other relevant rules. The consideration of the Upturn Acquisition shall be determined in accordance with the then appraised value.

In the event of any of the following circumstances, the Company or its designated third party shall have the right (but not obliged) to pay in cash to acquire all or part of the qualified investors' shareholdings in CINF, Kunming Survey and Design Institute and SAMI:

(1) the failure to initiate the issuance of shares in pursuit of the acquisition within 60 months from the Completion Date, or where such issuance is initiated, but the investors fail to implement the share offer or the issuance fails to obtain approval from regulatory bodies;

(2) CINF, Kunming Survey and Design Institute and SAMI fail to achieve 80% of the Projected Earnings in any year from 2024 to 2028, except where the cumulative dividend amount received by qualified investors has reached the amount that should be distributed if the Projected Earning has been achieved;

(3) CINF, Kunming Survey and Design Institute and SAMI are subject to the risk of bankruptcy or liquidation events;

(4) a change of the actual controller of CINF, Kunming Survey and Design Institute and SAMI, the occurrence of major risks, major illegal acts, or any situation that seriously affects the acceptance of the equity interests of CINF, Kunming Survey and Design Institute and SAMI by the controlling shareholder;

(5) CINF, Kunming Survey and Design Institute and SAMI violate the profit distribution policy stipulated in the Capital Increase Agreement and do not distribute profits;

(6) the asset-liability ratio of CINF, Kunming Survey and Design Institute and SAMI or their controlling shareholders (if proceeds from the Capital Increase are used to repay financial liabilities of the controlling shareholders) at the end of any year from the Completion Date (including the year in which the Completion Date occurs) as shown on the audited annual consolidated statements exceeds 65.99% (for CINF), 65.14% (for Kunming Survey and Design Institute) and 60.74% for SAMI, respectively (at the Target Companies level) and 93.6% (at the controlling shareholder level), and the parties failed to address properly in a manner acceptable to the qualified investors within the grace period then provided by the qualified investors, unless exempted in writing by the qualified investors; or

(7) the Target Companies and/or the Company fail to comply with the provisions of the relevant transaction documents and address properly within the grace period then provided by the qualified investors in a manner acceptable to the qualified investors, unless exempted in writing by the qualified investors.

The specified percentage ratios referred to in item (2) above for falling short of projected earnings are the Company's targets based on forecasts of the future financial and operating performance of the Target Companies and agreed upon in the course of commercial negotiations with the potential investors, and the asset-liability ratios referred to in item (6) above are unaudited financial data of the Company and the respective Target Companies as of 30 June 2024 (CINF's have been subject to accounting adjustment following the consolidation of Changkan Institute).

8. Sale-on-demand rights

In the event that the Company sells its equity interest in CINF, Kunming Survey and Design Institute and SAMI, the qualified investors shall have the right to require that the Company shall arrange for the sale of the equity interest in CINF, Kunming Survey and Design Institute and SAMI held by the qualified investors together on the same terms and conditions, except for the transfer of the Company's equity interest in CINF, Kunming Survey and Design Institute and SAMI held by the Company to the subsidiaries of the Company in the consolidated statements.

9. Anti-dilution rights

After the completion of the Capital Increase and before (a) the date of acquisition of equity interests in CINF, Kunming Survey and Design Institute and SAMI held by the qualified investors by the Company by issuing shares for the purchase of assets as stipulated in the Capital Increase Agreement; (b) the expiry of 60 months from the Completion Date of the Capital Increase (whichever shall occur earlier), CINF, Kunming Survey and Design Institute and SAMI shall not issue new shares and increase their registered capital at a price lower than the price of the equity participation by the qualified investors under the Capital Increase (such lower price shall be referred to as the "**New Lower Price**") without the prior written consent of the qualified investors. At the same time, the Company shall not dispose of the equity interests held by the Company to a third party and its other related parties at the New Lower Price, otherwise the Company shall be obligated to compensate the qualified investors by way of cash payment or equity payment to the effect that the price of the qualified investors' investment in the current round of equity participation shall not be higher than the New Lower Price.

10. Most favourable terms

If CINF, Kunming Survey and Design Institute and SAMI grant subsequent financing qualified investors in subsequent financing after the completion of the Capital Increase any rights, terms and conditions that are more favourable than those enjoyed by the qualified investors under the Capital Increase Agreement, then the qualified investors shall have the right to demand to enjoy such conditions, that is, the qualified investors may enjoy the same rights or treatment under such conditions and require CINF, Kunming Survey and Design Institute and SAMI and/or the Company to perform the same obligations to the qualified investors under such conditions.

11. Restrictions on share transfers

Within 60 months from the date of completion, unless otherwise agreed upon by the Company and the qualified investors, the qualified investors shall not sell, gift, pledge, encumber or otherwise dispose of, directly or indirectly, all or any part of the equity interests in CINF, Kunming Survey and Design Institute and SAMI held by the qualified investors.

After expiry of 60 months from the Completion Date, if the qualified investors fail to exit by way of upturn acquisition or other means, and the Company or a third party designated by the Company has not elected to be assigned the equity interests in CINF, Kunming Survey and Design Institute and SAMI held by the qualified investors in accordance with the Capital Increase Agreement, the qualified investors may transfer all or part of its equity interests in CINF, Kunming Survey and Design Institute and SAMI, provided that it shall not, directly or indirectly, sell, gift, pledge, encumber or otherwise dispose of the same to any entity that is in competition or otherwise has a conflict of interest with CINF, Kunming Survey and Design Institute and SAMI or the Company.

12. Liability on default

1. All defaulting parties shall be liable for breach of contract.

2. If the qualified investors fail to pay the consideration of the Capital Increase agreed in the Capital Increase Agreement in a timely manner, it shall be liable for such breach of contract to the Target Companies and the Company, and shall reimburse all the resulting losses suffered by the Target Companies and the Company. In such case, the Target Companies and the Company shall have the right to directly deduct from the deposit for the Capital Increase paid by the qualified investors.

3. The defaulting party shall compensate the other party for the losses caused by such breach, including but not limited to actual losses, loss of available benefits, third-party claims, litigation costs, security costs, attorney's fees, travel expenses, and board and lodging expenses, etc.

13. Termination of agreement

(1) the parties have agreed to terminate the Capital Increase Agreement; or

(2) a force majeure event has lasted for six months and is not expected to be eliminated, rendering the Capital Increase Agreement impossible to perform; or

(3) if one party delays in performing, fails to perform or defectively performs its principal obligations, and the defaulting party still fails to perform upon the expiration of the notice period after being reminded by the party in compliance with the contract, the party in compliance with the contract shall have the right to terminate the Capital Increase Agreement.

The tendering process of the Deemed Disposal

CINF, Kunming Survey and Design Institute and SAMI have submitted an official tender announcement to GuangDong United Assets and Equity Exchange on 12 October 2024. The information disclosure period will be a minimum of 20 working days from the date of the official tender announcement. Based on the actual status of the project, the tendering of capital increase project was removed on 14 November 2024. During the tender period, intended investors can express their purchase intentions and register as intended investors. GuangDong United Assets and Equity Exchange will assist CINF, Kunming Survey and Design Institute and SAMI in reviewing the qualifications of intended investors, and CINF, Kunming Survey and Design Institute and SAMI will ultimately review and determine the qualified investors. After the qualified investor is determined to be the successful bidder (the final qualified investor), it should sign the Capital Increase Agreement with CINF, Kunming Survey and Design Institute and SAMI in accordance with the requirements of the information announcement and the notice of GuangDong United Assets and Equity Exchange.

CINF, Kunming Survey and Design Institute and SAMI have the right to decide whether to require the successful bidder (being the final qualified investor) to adjust the investment amount to be subscribed for and the proposed shareholding ratio based on the total amount of funds planned to be invested by the successful bidder (being the final qualified investor) and the corresponding shareholding ratio, and based on the final results to decide to directly sign the Capital Increase Agreement or enter into competitive negotiations with the successful bidder (being the final qualified investor).

Taking into account that there are no specific restrictions preventing willing and qualified purchasers from participating in the public tender process, the Board considers that the Deemed Disposal through the public tender process on GuangDong United Assets and Equity Exchange should allow the Group to complete the Capital Increase at the highest price obtainable in the open market.

The information disclosure period of the Capital Increase project has expired on 14 November 2024.

Conditions precedent to the entering into and completion of the Deemed Disposal

The conditions for the Capital Increase to be effective include: (1) upon the expiry of the tender period, qualified intended investors have been solicited; (2) the qualified investors have executed a capital increase agreement with the Target Companies and the original shareholder of the Target Companies; and (3) the Capital Increase being approved by the board of directors/general meeting of the Company, i.e., the original shareholder of the Target Companies.

As at the date of this circular, conditions (1) and (2) have been satisfied, while conditions precedent (3) has not been fulfilled. Pursuant to the Capital Increase Agreement, none of the conditions precedent can be waived.

Appraisal of the Target Companies

Based on the three Valuation Reports issued by the Appraisal Institution, the respective total shareholders' equity of the Target Companies was appraised with 31 December 2023 as the Valuation Benchmark Date using the discounted cash flow method of the income approach. As a result, such valuation constitute a profit forecast under Rule 14.61 of the Hong Kong Listing Rules.

1. Selection of appraisal methods

The appraisal methods applied by the Appraisal Institution in the three Valuation Reports were the asset-based approach and the income approach, and the result from the income method was finally selected. The main reasons are:

The market approach has not been adopted for the current appraisal because of the limited access to transaction information in the domestic asset trading market and the relatively large differences in the business structure of similar enterprises, which made it extremely difficult to select market references of the same type.

The Target Companies are operating on a going concern basis and the selection of the economic and technical parameters involved in the application of the asset-based approach is based on sufficient data and information. Taking into account the subject of the asset appraisal, the type of value, the purpose of the appraisal and the information collected by the Appraisal Institution, it has been determined that the asset-based approach will be adopted for the current appraisal.

The asset-based approach, i.e. the cost-plus approach, is based on the amount of investment required to reconstruct a business or independent profit-making entity identical to the subject of appraisal as at the valuation date, and specifically refers to the method of arriving at the value of the enterprise by adding up the appraised value of the various elemental assets constituting the business and subtracting the appraised value of the liabilities. The scope of appraisal of current assets includes monetary funds, accounts receivable, accounts receivable financing, prepayments, other receivables, inventories, contract assets and other current assets. The scope of appraisal of non-current assets includes long-term receivables, long-term equity investments, investment in other equity instruments, properties with investment nature, fixed assets, construction in progress, intangible assets and deferred income tax assets. The appraisal of corporate liabilities is mainly a review and verification process, whereby the appraisal personnel verifies the relevant documents, account books and relevant certificates to confirm their authenticity, and then determines the appraised value on the basis of the verified book value or on the basis of the actual liabilities to be assumed.

As regards the income approach, the Appraisal Institution adopts the discounted cash flow method under the present value of income ("**PVI**") income approach to appraise the overall value of the enterprise in order to indirectly obtain the value of the entire shareholders' equity, which consists of the value of operating assets arising from normal business activities and the value of non-operating assets not related to normal business activities. For the determination of the value of operating assets, the discounted free cash flow model is applied, which is based on the free cash flow of the enterprise in the next few years, discounted at an appropriate discount rate and then summed up to arrive at the value of operating assets.

The PVI approach evaluates an asset from the perspective of its expected profitability, and can fully reflect the overall value of an enterprise, i.e., the value of an enterprise to an investor lies in the expected future income that the enterprise may generate. Although the PVI approach does not directly utilize references in the real market to illustrate the current fair market value of the subject of appraisal, it evaluates the assets from the perspective of the expected profitability of the assets, which is the fundamental basis for determining the current fair market value of the assets, and can fully reflect the overall value of the enterprise, and its appraisal conclusions are more reliable and persuasive. After interviewing the management of the enterprise and conducting research and analysis, the appraisal personnel considers that the conditions for valuation under the PVI approach are met.

The two appraisal methods consider different perspectives. The asset-based approach considers the re-acquisition of assets and reflects the replacement value of the existing assets of the enterprise whereas the income approach considers the enterprise's future profitability and reflects the comprehensive profitability of the assets of the enterprise. The income approach not only considers the value of all tangible assets, intangible assets and liabilities presented on the balance sheet of the enterprise, but also covers the value of intangible assets such as customer resources, human resources, technical and business capabilities, etc. The Target Companies are light-asset enterprises, and the sources of future income are the existing stable customer base, the service capacity of the business, the industry status, the reputation among customers for new customers and new business development, etc. The results of the income approach could better reflect the overall enterprise value of the Target Companies.

Based on the above analysis, the income approach is more reflective of the enterprise value of the Target Companies and the Appraisal Institution has therefore adopted the income approach in concluding the appraisal results in the three valuation reports.

2. *Conclusion of the appraisal*

(i) CINF

As appraised under the asset-based approach, the carrying amount of the total assets of CINF as at the Valuation Benchmark Date was RMB2,412,171,100 and the appraised value was RMB2,978,904,900, with an appreciation of RMB566,733,900, representing an appraisal value appreciation rate of 23.49%. The book value of total liabilities was RMB1,077,863,600 and the appraised value was RMB1,077,863,600, with no change in appraisal value. The book value of the entire shareholders' equity was RMB1,334,307,500 and the appraised value was RMB1,901,041,300, with an appreciation of RMB566,733,900, representing an appraisal value appreciation rate of 42.47%.

As appraised under the income approach, as at the Valuation Benchmark Date, the value of the entire shareholders' equity of CINF was RMB1,997,243,300 under the premise of going concern. An appreciation of RMB662,935,800 was recorded, representing an appreciation rate of 49.68%.

Upon comparison of the appraisal results of the asset-based approach and the income approach, the difference in valuation between the income approach and the asset-based approach amounted to RMB96,202,000, representing a difference of 4.82% based on the conclusion of the income-based approach.

(ii) SAMI

As appraised under the asset-based approach, the carrying amount of the total assets of SAMI as at the Valuation Benchmark Date was RMB1,270,286,400 and the appraised value was RMB1,749,275,600, with an appreciation of RMB478,989,200, representing an appraisal value appreciation rate of 37.71%. The book value of total liabilities was RMB800,139,300 and the appraised value was RMB791,602,600, with an appraised impairment of RMB8,536,700 and an appraisal value impairment rate of 1.07%. The book value of the entire shareholders' equity was RMB470,147,100 and the appraised value of the entire shareholders' equity was RMB957,673,000, with an appraised appreciation of RMB487,525,900, representing an appraisal value appreciation rate of 103.70%.

As appraised under the income approach, as at the Valuation Benchmark Date, the value of the entire shareholders' equity of SAMI was RMB984,155,200 under the premise of going concern. An appreciation of RMB514,008,100 was recorded, representing an appreciation rate of 109.33%.

Upon comparison of the appraisal results of the asset-based approach and the income approach, the difference in valuation between the income approach and the asset-based approach amounted to RMB26,482,200, representing a difference of 2.69% based on the conclusion of the income-based approach.

(iii) Kunming Survey and Design Institute

As appraised under the asset-based approach, the carrying amount of the total assets of Kunming Survey and Design Institute as at the Valuation Benchmark Date was RMB1,317,663,900 and the appraised value was RMB1,451,802,100, with an appreciation of RMB134,138,200, representing an appraisal value appreciation rate of 10.18%. The book value of total liabilities was RMB874,637,200 and the appraised value was RMB874,637,200, with no change in appraisal value. The book value of the entire shareholders' equity was RMB443,026,700 and the appraised value was RMB577,164,900, with an appreciation of RMB134,138,200, representing an appraisal value appreciation rate of 30.28%.

As appraised under the income approach, as at the Valuation Benchmark Date, the value of the entire shareholders' equity of Kunming Survey and Design Institute was RMB850,724,700 under the premise of going concern, with an appreciation of RMB407,698,000, representing an appreciation rate of 92.03%.

Upon comparison of the appraisal results of the asset-based approach and the income approach, the difference in valuation between the income approach and the asset-based approach amounted to RMB273,559,800, representing a difference of 32.16% based on the conclusion of the income-based approach.

According to the Hong Kong Listing Rules, the relevant valuation of the Target Companies constitutes a profit forecast. Pursuant to Rule 14.60(A) of the Hong Kong Listing Rules, the principal assumptions underlying the preparation of the valuation report are set out below:

1. General assumptions

    1. It is assumed that there are no material changes in the relevant prevailing laws, regulations and policies, and the macroeconomic situation of the country, and that there are no material changes in the political, economic and social environment of the regions where the parties to the transaction are located;

2. It is assumed that the business continues as a going concern in view of the actual status of assets as at the Valuation Benchmark Date;

3. It is assumed that there are no substantial changes in such indicators as interest rates, exchange rates, tax bases, tax rates and policy based levies related to the appraised entity after the Valuation Benchmark Date;

4. It is assumed that the management of the appraised entity after the Valuation Benchmark Date is responsible, stable and capable of performing their duties;

5. Unless otherwise specified, it is assumed that the Company is in full compliance with all relevant laws and regulations;

6. It is assumed that the values of various parameters estimated in this valuation are determined in accordance with the current price system, without taking into account the impact of inflation factors after the date of valuation;

7. It is assumed that there will be no force majeure and unforeseeable factors having a material adverse impact on the appraised entity after the Valuation Benchmark Date.

2. Special assumptions

1. It is assumed that the accounting policies to be adopted by the Target Companies after the Valuation Benchmark Date and the accounting policies adopted at the time of preparing the valuation reports are consistent in material aspects;

2. It is assumed that the Target Companies' scope and mode of operation after the Valuation Benchmark Date are consistent with current orientation on the basis of the existing management method and management standard;

3. It is assumed that the cash inflow and cash outflow of the Target Companies after the Valuation Benchmark Date are uniform;

4. It is assumed that the principal businesses of the Target Companies remain unchanged;

5. The companies are able to continue to use the existing self-owned real estate and purchased equipment, and will not bear any costs caused by changes in asset ownership in the future;

6. It is assumed that the Target Companies' existing qualification certificates and high-tech enterprise qualification can be extended upon expiration;

7. It is assumed that the R&D expenses of the Target Companies are collected accurately, and can be super deducted in accordance with relevant policies in the upcoming forecast years;

8. It is assumed that the high-tech certificates of the Target Companies can continue to be extended upon expiration, and the enterprises can continue to enjoy the preferential income tax rate of 15%;

9. It is assumed that the future technical teams of the Target Companies remain stable and their R&D capability continues to improve.

Grant Thornton Zhitong Certified Public Accountants LLP, the auditor of the Company, has reported on the accounting policy/discounted future cash flow calculation methodology used in the Valuation Reports and, in respect of such calculation methodology, the accounting policy/discounted cash flows have been properly compiled in all material respects in accordance with the adopted bases and assumptions.

Having reviewed the Valuation Reports and having considered that (i) the Valuation Reports has been prepared by the Appraisal Institution in accordance with the valuation procedures, standards, laws and regulations of the PRC; (ii) the Appraisal Institution has reviewed the financial data, operating data and other relevant data in relation to the Target Companies to fully understand the Target Companies; and (iii) the reasons for adopting the income approach in the appraisal, the methodology and assumptions adopted by the Appraisal Institution, the scope of the appraisal and the results of the appraisal, the Directors are of the view that such appraisal result could reflect the value of the Target Companies and are fair and reasonable.

Grant Thornton Zhitong Certified Public Accountants LLP, the auditor of the Company, has reviewed the accounting policies/discounted future cash flow calculations used in the valuation reports of the Target Companies. The Board has confirmed that the profit forecasts (including assumptions) contained in the valuation reports of the Target Companies have been made after due and careful enquiry.

The letter from Grant Thornton Zhitong Certified Public Accountants LLP, the auditor of the Company, and the letter from the Board regarding the profit forecast are set out in Appendix III and Appendix IV to this circular respectively.

Pricing policy and basis

The price of capital increase was determined using the income approach based on the value of the entire shareholders' equity of CINF, Kunming Survey and Design Institute and SAMI as of the Valuation Benchmark Date of RMB1,997,243,300, RMB850,724,700 and RMB984,155,200 as shown in the record filed with the state-owned assets supervision and administration authority, and the fact the price for every RMB1 in the registered capital of the Target Companies shall not be lower than 100% of the appraised equity value/ registered capital of the Target Companies, together with the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange. Based on the above, the price for the Capital Increase was determined to be RMB2.7107 per registered capital for CINF, RMB4.0802 per registered capital for Kunming Survey and Design Institute, and RMB1.9269 per registered capital for SAMI. They are calculated as the appraised value as stated above of each of the Target Companies divided by their respective registered capital prior to the Capital Increase.

Financial effects of the Deemed Disposal and use of proceeds

In accordance with the Capital Increase Agreement, the auditor of the Company confirms that the Target Companies will continue to be subsidiaries of the Company as well as the accounting treatment of being included in the consolidated financial statements of the Company. As CINF, Kunming Survey and Design Institute and SAMI will continue to be subsidiaries of the Company upon completion of the Capital Increase, therefore, the operating results and financial position of CINF, Kunming Survey and Design Institute and SAMI will continue to be recorded in the Group's consolidated financial statements. As the reduction of the Company's interest in CINF, Kunming Survey and Design Institute and SAMI will not result in a loss of control over these entities, the Company will not record a gain or loss on the Capital Increase in accordance with generally accepted accounting principles in the PRC.

The Capital Increase will increase the size of the Company's equity, and the proceeds are expected to be used to optimize the capital structure, including repayment of interest-bearing liabilities, which will directly reduce interest expenses and will help improve the Company's profitability and indirectly achieve a decrease in the Group's asset-liability ratio.

It is expected that the Deemed Disposal will not adversely affect the Company's financial position, results of operations, future principal business and ability to continue as a going concern, and will not be detrimental to the interests of the Company and all Shareholders.

Reasons for and benefits of the Deemed Disposal

The Deemed Disposal is conducive to satisfying the long-term development strategies of the three Target Companies, enhancing the profitability of the Company, accelerating the transformation of the Company's business structure, strengthening the foundation of the Company's development and enhancing its core competitiveness, and is in the interests of all Shareholders.

Based on the above, the Directors (excluding independent non-executive Directors who will express their view upon receiving the advice from the Independent Financial Advisor) consider that, although the Deemed Disposal is not in the ordinary and usual course of business of the Company, the Deemed Disposal will be conducted on normal commercial terms, fair and reasonable and in the interests of the Company and the Shareholders as a whole.

Confirmation of Directors

The Directors (including independent non-executive Directors) are of the view that the pricing of the Deemed Disposal, which was determined by negotiation with reference to the appraisal value of the Target Companies' equity on the Valuation Benchmark Date, is fair and reasonable, and although the Deemed Disposal may not be carried out in the ordinary and usual course of business of the Company, the transactions contemplated under the Capital Increase Agreement are and will be on normal commercial terms and are in the interests of the Company and the Shareholders as a whole.

Information on the Company

The Company is a leading provider of technologies, services, equipment and integrated product solutions in the non-ferrous metals industry in China, and is capable of providing a full range of integrated technical and engineering design and construction services for various businesses throughout the non-ferrous metals industrial chain. The Company's business mainly includes engineering survey, design and consultation, engineering construction and contracting, and equipment manufacturing. The ultimate beneficial owner of the Company is the State-owned Assets Supervision and Administration Commission of the State Council.

Information on Chinalco

Chinalco is a state-owned enterprise incorporated under the laws of the PRC in 2001. Chinalco is a controlling shareholder of the Company and directly holds approximately 72.9% of the issued share capital of the Company. Chinalco is principally engaged in mineral resources development, smelting and processing of non-ferrous metal, relevant trading and engineering and technical services and so forth. The ultimate beneficial owner of Chinalco is the State-owned Assets Supervision and Administration Commission of the State Council.

Information on Chinalco Suihe

Chinalco Suihe is a limited partnership established under the laws of the PRC principally engaging in equity investment, investment management and asset management with private equity funds. The managing partners of Chinalco Suihe are Chinalco Innovation Investment and ABC Financial Asset Investment Co., Ltd. (an Independent Third Party). Chinalco Innovation Investment is a wholly-owned subsidiary of Chinalco Capital, which is a subsidiary controlled by Chinalco.

Information on BOCOM Investment

BOCOM Investment is a company incorporation in the PRC with limited liability. BOCOM Investment principally operates non-banking financial service business in the PRC. BOCOM Investment is a wholly-owned subsidiary of Bank of Communications Co., Ltd. Bank of Communications Co., Ltd. is listed on Shanghai Stock Exchange (stock code: 601328) and Hong Kong Stock Exchange (stock code: 3328).

Information on CCB Investment

CCB Investment is a company incorporated in the PRC with limited liability. CCB Investment principally operates debt-to-equity conversion and related ancillary businesses in the PRC. CCB Investment is a wholly-owned subsidiary of China Construction Bank Corporation, the shares of which are listed on the Shanghai Stock Exchange (stock code: 601939) and the Hong Kong Stock Exchange (stock code: 0939). China Construction Bank Corporation is listed on Shanghai Stock Exchange (stock code: 601939) and Hong Kong Stock Exchange (stock code: 0939).

Information on AFHT Phase II

AFHT Phase II is a limited partnership established under the laws of the PRC. The principal business of AFHT Phase II is to engage in equity investment, investment management and asset management by way of private equity funds. The managing partner of AFHT Phase II is Hubei Agricultural, Financial and High Technology Investment Management Company Limited* (湖北農金高投投資管理有限公司), the ultimate beneficial owner of which is Liu Yang. The other partners of AFHT Phase II include (1) ABC Financial Assets Investment Co., Ltd.* (農銀金融資產投資有限公司) (which accounts for 49% capital contribution) which is a wholly-owned subsidiary of Agricultural Bank of China Limited, the shares of which are listed on Shanghai Stock Exchange (stock code: 601288) and Hong Kong Stock Exchange (stock code: 1288); (2) Changjiang Venture Capital Fund Management Co., Ltd.* (長江創業投資基金有限公司) (which accounts for 25% capital contribution), the ultimate beneficial owner of which is the State-owned Assets Supervision and Administration Commission of Hubei Provincial Government; and (3) Enshi Longfeng Investment Development Co., Ltd.* (恩施龍鳳投資開發有限公司) (which accounts for 25% capital contribution), the ultimate beneficial owner of which is the State-owned Assets Supervision and Administration Commission of Hubei Provincial Government. Each of AFHT Phase II and its partners are Independent Third Parties.

Information on the Target Companies

The basic information of CINF is as follows:

Name:	Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy
Unified social credit code:	91430000183765064G
Legal representative:	Tan Ronghe
Type of company:	limited liability company (sole proprietorship of legal person not invested or controlled by natural persons)
Date of establishment:	18 November 1991
Registered capital:	RMB736,796,500
Registered address:	No. 299, Mulian East Road, Yuhua District, Changsha
Business scope:	consulting, design and general contracting within the qualification scope of metallurgical industry, coal industry, construction industry, municipal industry, machinery industry, commerce, supplies and food industry, building materials industry, electric power industry, chemical, petrochemical and pharmaceutical industry and environmental engineering; scientific research of the above engineering projects and sales of equipment and materials; engineering investigation within the qualification scope of geotechnical engineering, engineering survey and solid mineral exploration; urban and rural planning, environmental impact assessment of construction projects, engineering cost consulting; pressure vessel design and pressure pipeline design; to undertake the survey, consultation, design and supervision of foreign (overseas) projects within the scope of qualification and the export of equipment and materials required for the above-mentioned projects; to contract foreign engineering projects that are compatible with its capacity, scale and performance, and to dispatch labors necessary for the implementation of the above-mentioned overseas projects; lease of self-owned properties. (For items subject to approval according to law, business activities can only be carried out after being approved by relevant departments.)

CINF is not a dishonest person subject to enforcement actions. As at the Latest Practicable Date, the ownership of 100% equity interest in CINF is clear and complete, there is no mortgage, pledge and any other third party rights. Prior to the Completion Date, the Company held 100% equity interest in CINF.

In accordance with the PRC GAAP, the key financial information of CINF for the financial years ended 31 December 2021, 31 December 2022 and 31 December 2023 is set out below:

Item	**For the year ended 31 December 2023** *(RMB0'000)* (audited)	**For the year ended 31 December 2022** *(RMB0'000)* (unaudited)	**For the year ended 31 December 2021** *(RMB0'000)* (unaudited)
Total assets	372,346.94	377,592.71	372,765.57
Net assets	120,227.98	148,263.22	135,066.97
Operating income	216,431.20	244,807.74	255,214.58
Net profit/(loss) (before tax)	(25,397.26)	11,224.61	–
Net profit/(loss) (after tax)	(22,797.53)	10,606.73	(2,376.05)

Note: The 100% equity interest in China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. (hereinafter referred to as "**Changkan Institute**") has been transferred to CINF, and the above financial data are the data after the merger of Changkan Institute.

The basic information of Kunming Survey and Design Institute is as follows:

Name:	Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry
Unified social credit code:	91530000216525578C
Legal representative:	Zou Guofu
Type of company:	limited liability company (sole proprietorship of legal person not invested or controlled by natural persons)
Date of establishment:	28 October 1992
Registered capital/Paid-up capital:	RMB208,500,000
Registered address:	No. 1, Dongfeng Lane, Dongfeng East Road, Kunming, Yunnan Province

Business scope:	General items: basic geological exploration; engineering and technology research and experimental development project management services; satellite remote sensing application system integration; special equipment repair; instrument repair; computer and office equipment maintenance; business training (excluding education training, vocational skills training and other training that requires permission); engineering and technical services (except planning and management, survey, design and supervision); earthwork construction; mining machinery sales; mechanical and electrical equipment sales; geographic remote sensing information service; software development; information system integration services; soil and site restoration equipment manufacturing; mining machinery manufacturing; soil and site restoration equipment sales; municipal facilities management; urban greening management; landscaping engineering construction; planning and design management; road cargo transport of general trucks with a total mass of 4.5 tons and less (except network freight and dangerous goods); loading, unloading and handling; engineering cost consulting business; technical service, technology development, technology consultation, technology exchange, technology transfer, technology dissemination; metal ore sales; building materials sales; mining rights evaluation services; geological survey technical services; land consolidation services; sales of special instruments for geological survey and earthquake; general mechanical equipment installation services; machinery and equipment leasing (except for items subject to approval according to law, business activities are independently carried out according to law with the business license). Permitted items: construction engineering design; construction works; construction project survey; surveying and mapping services; mineral resources exploration; geological exploration of metallic and nonmetallic mineral resources; geological hazard risk assessment; geological disaster control engineering survey; geological disaster control engineering design; geological disaster control engineering construction; construction project supervision; road transport of goods (excluding dangerous goods); construction professional work. (For items subject to approval according to law, business activities can only be carried out after being approved by relevant departments, and the specific business items shall be subject to the approval documents or licenses of relevant departments.)

Kunming Survey and Design Institute is not a dishonest person subject to enforcement actions. As of the Latest Practicable Date, the ownership of 100% equity interest in Kunming Survey and Design Institute is clear and complete, there is no mortgage, pledge and any other third party rights. Prior to the Completion Date, the Company held 100% equity interest in Kunming Survey and Design Institute.

In accordance with the PRC GAAP, the key financial information of Kunming Survey and Design Institute for the financial years ended 31 December 2021, 31 December 2022 and 31 December 2023 is set out below:

Item	**For the year ended 31 December 2023** *(RMB0'000)* (audited)	**For the year ended 31 December 2022** *(RMB0'000)* (audited and restated)	**For the year ended 31 December 2021** *(RMB0'000)* (audited and restated)
Total assets	135,586.22	124,805.83	124,471.66
Net assets	45,516.70	42,226.11	40,323.58
Operating income	125,015.81	108,338.14	125,779.18
Net profit (before tax)	4,658.24	4,339.54	–
Net profit (after tax)	4,231.76	4,175.00	4,221.37

The basic information of SAMI is as follows:

Name:	Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd.
Unified social credit code:	912101021176814954
Legal representative:	Huang Fei
Type of company:	limited liability company (sole proprietorship of legal person)
Date of establishment:	17 January 1991
Registered capital:	RMB510,743,216
Registered address:	No. 184, Heping North Street, Heping District, Shenyang, Liaoning Province

Business scope:	external dispatch of labor required for projects; typing and photocopying; non-ferrous and nonmetallic mining; light metal smelting; non-ferrous metallurgy, construction engineering, metallurgy, municipal public utilities, chemical engineering, electric power, building materials engineering survey and design, consulting, supervision, project contracting and sales of equipment and materials; environmental assessment; automatic fire alarm, automatic fire extinguishing engineering design; computer hardware and software and complete sets of equipment, non-standard equipment, environmental protection, power supply and distribution, industrial automation system and building intelligent system technology development and sales, technical consulting, service, technology transfer and commissioning; survey, consultation, design and supervision of foreign and domestic foreign-funded projects; contracting of overseas projects and domestic international bidding projects and export of required equipment and materials; lease of properties; binding, printing; import and export of goods or technologies (except those prohibited by the State or involving administrative approval); design, production, release and agency of all kinds of advertisements at home and abroad; publication and distribution of Light Metals magazine; conference services. (For items subject to approval according to law, business activities can only be carried out after approval by relevant departments.)

SAMI is not a dishonest person subject to enforcement actions. As of the Latest Practicable Date, the ownership of 100% equity interest in SAMI is clear and complete, there is no mortgage, pledge and any other third party rights. Prior to the Completion Date, the Company held 100% equity interest in SAMI.

In accordance with the PRC GAAP, the key financial information of SAMI for the financial years ended 31 December 2021, 31 December 2022 and 31 December 2023 is set out below:

Item	For the year ended 31 December 2023 *(RMB0'000)* (audited)	For the year ended 31 December 2022 *(RMB0'000)* (audited)	For the year ended 31 December 2021 *(RMB0'000)* (audited)
Total assets	159,773.21	146,645.21	133,002.70
Net assets	61,495.40	64,322.81	61,993.71
Operating income	92,027.81	125,442.18	47,016.00
Net profit (before tax)	4,200.68	10,275.97	–
Net profit (after tax)	3,933.36	9,653.41	1,599.41

HONG KONG LISTING RULES IMPLICATIONS

Discloseable Transaction

Subsequent to the Completion Date, the Company's respective equity interests in CINF, Kunming Survey and Design Institute and SAMI will be reduced from 100% to no less than 60%. Therefore, the Capital Increase transaction constitutes a deemed disposal of the Company under Chapter 14 of the Hong Kong Listing Rules.

Based on the consideration of the Capital Increase of RMB2.29 billion in aggregate and the 2023 audited financial data of CINF, Kunming Survey and Design Institute and SAMI as the calculation basis, the highest applicable percentage ratio for calculation of proceeds from the Deemed Disposal exceeds 5% but is less than 25%. Therefore, the Deemed Disposal constitutes a discloseable transaction of the Company under Chapter 14 of the Hong Kong Listing Rules and is subject to the reporting and announcement requirements under Chapter 14 of the Hong Kong Listing Rules.

Connected Transaction

Chinalco Suihe is a partnership managed by Chinalco Innovation Investment (as managing partner), a wholly-owned subsidiary of Chinalco Capital, an indirect controlling subsidiary of Chinalco, which in turn is the controlling Shareholder and a connected person of the Company, and therefore is an associate of Chinalco and a connected person of the Company.

Chinalco Suihe's participation in the capital increase transactions of CINF, Kunming Survey and Design Institute and SAMI constitutes a connected transaction of the Company under the Hong Kong Listing Rules. Pursuant to the requirements of Chapter 14A of the Hong Kong Listing Rules, as the highest applicable percentage ratio of the Deemed Disposal exceeds 5%, given that Chinalco Suihe became the successful bidder of the Deemed Disposal and a party to the Capital Increase Agreement, the Capital Increase is subject to the reporting, announcement, circular, appointment of independent financial advisers and independent shareholders' approval requirements under Chapter 14A of the Hong Kong Listing Rules.

The Company will perform corresponding procedures in accordance with the provisions of the articles of association to convene an extraordinary general meeting to consider and approve the Deemed Disposal and Connected Transaction. In this regard, Chinalco and its associates (which in aggregate hold 2,283,179,000 Shares of the Company, representing approximately 76.47% of the Company's total issued share capital as at the Latest Practicable Date) will abstain from voting on resolutions related to the Deemed Disposal and the Connected Transaction at this extraordinary general meeting.

To the best knowledge, information and belief of the Directors, as each of ZHANG Decheng and YANG Xu, the Directors of the Company, holds different positions in Chinalco and/or certain of its subsidiaries, they are deemed to be materially interested in the Capital Increase Agreement and the transactions contemplated thereunder and therefore, they have abstained from voting on the resolution in relation to the Capital Increase Agreement and the transactions contemplated thereunder. Save as disclosed above, none of the other Directors is interested in the Capital Increase Agreement and the transactions contemplated thereunder.

Independent Board Committee and Independent Financial Advisor

The Independent Board Committee comprising all independent non-executive Directors has been established to consider the Capital Increase Agreement and the terms of the transactions contemplated thereunder and to advise the Independent Shareholders as to whether the Capital Increase Agreement and the terms of the transactions contemplated thereunder are on normal commercial terms or better, are fair and reasonable and are in the interests of the Company and the Shareholders as a whole.

Pursuant to Rule 13.39(6) of the Hong Kong Listing Rules, Goldlink Capital (Corporate Finance) Limited has been engaged as the independent financial adviser to advise the Independent Board Committee and the Independent Shareholders in respect of the Deemed Disposal. The letter of recommendation from the Independent Financial Adviser to the Independent Board Committee and the Independent Shareholders will be included in the circular.

VALUATION REPORTS

The summary of valuation reports of CINF, Kunming Survey and Design Institute and SAMI are set out in Appendix II of the circular, which are prepared in accordance with the relevant regulations of the State-owned Assets Supervision and Administration Commission of the State Council and relevant Chinese appraisal standards. Therefore, the summary of valuation reports set out in Appendix II are not prepared in accordance with Chapter 5 of the Hong Kong Listing Rules but are prepared solely to provide further information to shareholders.

NOTICE OF THE EGM

An EGM of the Company will be held at Conference Room 312 of China Aluminum International Engineering Corporation Limited, Building C, No. 99 Xingshikou Road, Haidian District, Beijing, the PRC, at 9:30 a.m. on Friday, 13 December 2024. The notice of EGM is set out on pages N-1 to N-2 of this circular.

Voting by poll at the EGM

Pursuant to Rule 13.39(4) of the Hong Kong Listing Rules, the resolution as set out in the notice of the EGM shall be voted on by way of a poll.

As at the Latest Practicable Date, Chinalco and its associates directly and indirectly held approximately 76.47% of the Shares in the Company and they are considered to be materially interested in the Deemed Disposal. Accordingly, they are required to abstain from voting on the resolution in respect of the Deemed Disposal at the EGM.

Save as disclosed above, to the best knowledge of the Directors, as at the Latest Practicable Date, no Shareholder was required to abstain from voting on the ordinary resolution at the EGM.

Proxy Form

Shareholders intending to appoint a proxy to attend the EGM are requested to complete and return the form of proxy in accordance with the instructions printed thereon as soon as possible and in any event not less than 24 hours before the time appointed for holding the EGM or any adjournment thereof. Completion and return of the form of proxy will not preclude you from attending and voting in person at such meetings or any adjournment thereof should you so wish.

For H Shareholders, the proxy form, and if the proxy form is signed by a person under a power of attorney or other authority on behalf of the appointer, a notarially certified copy of that power of attorney or other authority, must be delivered to the Company's H Share registrar, Computershare Hong Kong Investor Services Limited, at 17M Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong, not less than 24 hours before the time appointed for holding the EGM in order for such documents to be valid.

CLOSURE OF REGISTER OF MEMBERS OF H SHARES

In order to determine the right to attend and vote at the EGM, the register of members of H Shares of the Company will be closed from Tuesday, 10 December 2024 to Friday, 13 December 2024 (both days inclusive), during which no transfer of H Shares will be registered. Shareholders whose names appear on the register of members of H Shares at the close of business on Monday, 9 December 2024 are entitled to attend and vote at the EGM.

In order to determine the identity of Shareholders who are entitled to attend and vote at the EGM, all H Share transfer documents together with the relevant share certificates must be lodged with the Company's H Share registrar, Computershare Hong Kong Investor Services Limited at Shops 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong (for H Shareholders), not later than 4:30 p.m. on Monday, 9 December 2024.

Please complete and return the proxy form whether or not you intend to attend the EGM. Completion and return of the proxy form will not preclude you from attending and voting at the EGM (or any subsequent meeting immediately after its adjournment) should you so wish.

RECOMMENDATIONS

The Directors (including independent non-executive Directors) consider that the resolution for Shareholders' consideration and approval as set out in the notice of EGM is in the interests of the Company and the Shareholders as a whole. Accordingly, the Directors recommend the Shareholders to vote in favor of the relevant resolution to be proposed at the EGM.

OTHER INFORMATION

Your attention is drawn to the additional information set out in the appendices to this circular.

Yours faithfully,
By order of the Board
China Aluminum International Engineering Corporation Limited
Tao Fulun
Joint Company Secretary

Beijing, the PRC, 22 November 2024

The following is the full text of the letter from the Independent Board Committee, which sets out the recommendation of the Independent Board Committee to the Independent Shareholders in relation to the Deemed Disposal, for inclusion in this circular.

CHALIECO
中铝国际

中 鋁 國 際 工 程 股 份 有 限 公 司
China Aluminum International Engineering Corporation Limited

(A joint stock limited company incorporated in the People's Republic of China with limited liability)
(Stock Code: 2068)

22 November 2024

To the Independent Shareholders

Dear Sir or Madam,

DISCLOSEABLE TRANSACTION AND CONNECTED TRANSACTION DEEMED DISPOSAL IN RELATION TO CAPITAL INCREASE OF WHOLLY-OWNED SUBSIDIARIES

We refer to the circular dated 22 November 2024 issued by the Company to its Shareholders of which this letter forms part. Terms defined in this circular shall have the same meanings when used in this letter, unless the context otherwise requires.

We have been appointed to form an Independent Board Committee to consider and advise the Independent Shareholders as to whether the Deemed Disposal is in the interests of the Company and the Shareholders as a whole and whether the Capital Increase Agreement and the transactions contemplated thereunder are entered into on normal commercial terms and are fair and reasonable.

In addition, Goldlink Capital (Corporate Finance) Limited has been appointed as the Independent Financial Advisor to advise the Independent Board Committee and the Independent Shareholders in this regard. Your attention is drawn to (i) the letter from the Independent Financial Advisor set out on pages 38 to 68 of this circular; (ii) the "Letter from the Board" on pages 6 to 34 of this circular; (iii) the general information set out in Appendix I to this circular; (iv) the summary of the Valuation Reports set out in Appendix II to this circular; (v) the letter from the auditor regarding the profit forecast set out in Appendix III to this circular; and (vi) the letter from the Board regarding the profit forecast set out in Appendix IV to this circular.

Having considered, among other things, the information contained in the letter from the Board and the major factors, reasons and recommendations contained in the letter from the Independent Financial Advisor in this circular, we are of the view that the Deemed Disposal is in the interest of the Company and the Shareholders as a whole. Although the Deemed Disposal is not in the ordinary and usual course of business of the Company, the terms of the Capital Increase Agreement are entered into on normal commercial terms and are fair and reasonable.

Accordingly, we recommend that the Independent Shareholders vote in favor of the ordinary resolution to be proposed at the EGM to approve the resolution in relation to the Deemed Disposal.

Yours faithfully,
Independent Board Committee
China Aluminum International Engineering Corporation Limited

Mr. ZHANG Tingan **Mr. SIU Chi Hung** **Mr. TONG Pengfang**
Independent non-executive Directors

The following is the full text of a letter of advice from Goldlink Capital (Corporate Finance) Limited to the Independent Board Committee and the Independent Shareholders in respect of the Capital Increase Agreement and the terms of the transactions contemplated thereunder, which has been prepared for the purpose of inclusion in this circular.

金聯資本
Goldlink Capital

28/F
Bank of East Asia Harbour View Centre
56 Gloucester Road
Wanchai
Hong Kong

22 November 2024

To: *The Independent Board Committee and the Independent Shareholders of*
China Aluminum International Engineering Corporation Limited

Dear Sir or Madam,

DISCLOSEABLE TRANSACTION AND CONNECTED TRANSACTION DEEMED DISPOSAL IN RELATION TO CAPITAL INCREASE OF WHOLLY-OWNED SUBSIDIARIES

INTRODUCTION

We refer to our appointment as the Independent Financial Adviser to the Independent Board Committee and the Independent Shareholders in relation to the Capital Increase Agreement and the transactions contemplated thereunder, details of which are set out in the letter from the Board (the "**Letter from the Board**") contained in the circular of the Company to the Shareholders dated 22 November 2024 (the "**Circular**"), of which this letter forms part. Capitalised terms used in this letter shall have the same meanings as defined in the Circular unless the context otherwise requires.

Reference is made to the Company's inside information announcement dated 26 August 2024 and the announcement made by the Company dated 21 November 2024, the Company (as the original shareholder of the Target Companies), the Investors (as qualified investors), Chinalco Suihe (as a qualified investor) and each of the three Target Companies entered into Capital Increase Agreement, pursuant to which, the Target Companies have conditionally agreed to allocate and issue shares of the Target Companies to the Investors and Chinalco Suihe, respectively, and the Investors and Chinalco Suihe have conditionally agreed to subscribe for the shares of each of the Target Companies (hereinafter referred to as the "**Capital Increase**"). According to the resolution of the Board dated 26 August 2024, the Board agreed that CINF, Kunming Survey and Design Institute and SAMI, wholly-owned subsidiaries of the Company, would introduce investors to implement capital increase through public tendering on GuangDong United

Assets and Equity Exchange. The capital contributors are external investors to be determined through public solicitation by GuangDong United Assets and Equity Exchange in accordance with the trading rules for public tendering.

Subsequent to the Completion Date, the Company's respective equity interests in CINF, Kunming Survey and Design Institute and SAMI will be reduced from 100% to no less than 60%. Therefore, the Capital Increase transaction constitutes a deemed disposal of the Company under Chapter 14 of the Hong Kong Listing Rules.

Based on the consideration of Capital Increase of RMB2.29 billion in aggregate and the 2023 audited financial data of CINF, Kunming Survey and Design Institute and SAMI as the calculation basis, the highest applicable percentage ratio for calculation of proceeds from the Deemed Disposal exceeds 5% but is less than 25%. Therefore, the Deemed Disposal constitutes a discloseable transaction of the Company under Chapter 14 of the Hong Kong Listing Rules and is subject to the reporting and announcement requirements under Chapter 14 of the Hong Kong Listing Rules.

Chinalco Suihe is a partnership managed by Chinalco Innovation Investment (as managing partner), a wholly-owned subsidiary of Chinalco Capital, an indirect controlling subsidiary of Chinalco, which in turn is the controlling Shareholder and a connected person of the Company, and therefore is an associate of Chinalco and a connected person of the Company.

Chinalco's participation in the capital increase transactions of CINF, Kunming Survey and Design Institute and SAMI constitutes a connected transaction of the Company under the Hong Kong Listing Rules. Pursuant to the requirements of Chapter 14A of the Hong Kong Listing Rules, as the highest applicable percentage ratio of the Deemed Disposal exceeds 5%, given that Chinalco Suihe became the successful bidder of the Deemed Disposal and a party to the Capital Increase Agreement, the Capital Increase is subject to the reporting, announcement, circular, appointment of independent financial advisers and independent shareholders' approval requirements under Chapter 14A of the Hong Kong Listing Rules.

Chinalco and its associates (which in aggregate hold 2,283,179,000 Shares of the Company, representing approximately 76.47% of the Company's total issued share capital as at the Latest Practicable Date) will abstain from voting on resolutions related to the Deemed Disposal and the Connected Transaction at this extraordinary general meeting.

As each of ZHANG Decheng and YANG Xu, the Directors of the Company, holds different positions in Chinalco and/or certain of its subsidiaries, they are deemed to be materially interested in the Capital Increase Agreement and the transactions contemplated thereunder and therefore, they have abstained from voting on the resolution in relation to the Capital Increase Agreement and the transactions contemplated thereunder. Save as disclosed above, none of the other Directors is interested in the Capital Increase Agreement and the transactions contemplated thereunder.

The Independent Board Committee (comprising all independent non-executive Directors namely, Mr. Zhang Tingan, Mr. Siu Chi Hung, and Mr. Tong Pengfang) has been established to consider the Capital Increase Agreement and the terms of the transactions contemplated thereunder and to advise the Independent Shareholders as to whether the Capital Increase Agreement and the terms of the transactions contemplated thereunder are on normal commercial terms or better, are fair and reasonable and are in the interests of the Company and the Shareholders as a whole. We, Goldlink Capital (Corporate Finance) Limited, have been appointed as the Independent Financial Adviser to advise the Independent Board Committee and the Independent Shareholders in these regards.

As at the Latest Practicable Date, we did not have any relationship with or interest in the Company and any other parties that could reasonably be regarded as relevant to our independence. Apart from normal professional fees payable to us in connection with this appointment as the Independent Financial Adviser, no arrangement exists whereby we will receive any fees or benefits from the Company or any other parties that could reasonably be regarded as relevant to our independence. During the past two years, we did not have any engagement with the Company or the Directors, chief executives and substantial Shareholders of the Company or any of their associates. We therefore are independent of the Company pursuant to Rule 13.84 of the Listing Rules.

BASIS OF OUR OPINION

In arriving at our recommendations, we have relied on the statements, information and representations contained in the Circular and the information and representations provided to us by the Company, the Directors and the management of the Company. We have assumed that all information, representations and opinions contained or referred to in the Circular and all information and representations which have been provided by the Company, the Directors and the management of the Company for which they are solely and wholly responsible, are true and accurate at the time they were made and will continue to be accurate as at the Latest Practicable Date. We have no reason to doubt the truth, accuracy and completeness of the information and representations provided to us by the management of the Company.

The Circular, for which the Directors collectively and individually accept full responsibility, includes particulars given in compliance with the Listing Rules for the purpose of giving information with regard to the Company. The Directors having made all reasonable enquiries, confirm that to the best of their knowledge and belief the information contained in the Circular is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement therein or the document misleading.

We consider that we have been provided with sufficient information on which to form a reasonable basis for our opinion. We have no reason to suspect that any relevant information has been withheld, nor are we aware of any material facts or circumstances which would render the information provided and representations made to us untrue, inaccurate or misleading. We consider that we have performed all the necessary steps to enable us to reach an informed view and to justify our reliance on the information provided so as to provide a reasonable basis for our opinion. We have not, however, carried out any independent verification of the information provided by the Company, the Directors and the management of the Company, nor have we conducted an independent investigation into the business and affairs of the Group and any parties in relation to the Capital Increase Agreement and the transactions contemplated thereunder.

This letter is issued for the information of the Independent Board Committee and the Independent Shareholders solely in connection with their consideration of the Capital Increase Agreement and the transactions contemplated thereunder. Except for its inclusion in the Circular, this letter is not to be quoted or referred to, in whole or in part, nor shall this letter be used for any other purposes, without our prior written consent.

PRINCIPAL FACTORS AND REASONS CONSIDERED

In arriving at our opinions and recommendations, we have taken into consideration the following principal factors and reasons:

1. Background Information on the Group

1.1 Background information of the Group

The Company is a leading provider of technologies, services, equipment and integrated product solutions in the non-ferrous metals industry in China, and is capable of providing a full range of integrated technical and engineering design and construction services for various businesses throughout the nonferrous metals industry chain. The Company's business mainly includes engineering survey, design and consultancy, engineering and construction contracting, and equipment manufacturing. The ultimate beneficial owner of the Company is the State-owned Assets Supervision and Administration Commission of the State Council.

1.2 Financial performance of the Group

Set out below is a summary of the consolidated statements of profit or loss of the Group for each of the two years ended 31 December 2023 and 2024 and the six months ended 30 June 2024, which are extracted from the Company's (i) annual report for the year ended 31 December 2023 ("**2023 Annual Report**") and (ii) interim report for the six months ended 30 June 2024 ("**2024 Interim Report**").

	Six months ended 30 June		**Year ended 31 December**	
	2024	**2023**	**2023**	**2022**
	RMB'000	*RMB'000*	*RMB'000*	*RMB'000*
	(unaudited)	(unaudited)	(audited)	(audited)
Operating Revenue	10,710,476	9,622,056	22,337,171	23,697,329
Operating profit/(losses)	251,003	(942,210)	(2,950,348)	298,560
Net profit/(losses) for the year/period	199,094	(816,107)	(2,834,026)	204,833

*For the year ended 31 December 2023 ("**FY2023**")*

According to the 2023 Annual Report, the Group's operating revenue decreased by approximately 5.7% from approximately RMB23.7 billion for the year ended 31 December 2022 ("**FY2022**") to approximately RMB22.3 billion for the FY2023. Such decrease was mainly as a result of the decrease in operating revenue from engineering and construction contracting segment by approximately RMB1.7 billion as compared with that of FY2022 which mainly due to the Company's continuous promotion of business transformation, optimization of business structure, stopped securing new PPP investment-finance-build projects, and gradually reduced the scale of municipal, civil and other construction business during the FY2023, resulting in a drop in the overall revenue year-on-year.

The Group recorded a decrease in operating profit from approximately RMB298.6 million for the FY2022 to an operating loss of approximately RMB3.0 billion for the FY2023 and a decrease in net profit from approximately RMB204.8 million for the FY2022 to a net loss of approximately RMB2.8 billion for the FY2023. The negative change in financial performance for the FY2023 was mainly due to (i) the decrease in overall operating revenue as discussed above; (ii) the drop in overall gross profit margin by approximately 4.00 percentage points which was mainly derived from the decrease in gross profit margin of the engineering and construction segment by 5.6 percentage points for the FY2023; (iii) the increase in impairment of credit losses by approximately RMB155.3 million and impairment losses on assets (mostly on contract assets and inventories) by approximately RMB1,809.3 million for the FY2023. As set out in the announcement of the Company dated 28 January 2024, the increase in impairment of contract assets was mainly because on 1 May 2023, the Company made a change in accounting estimate for the provision for impairment of contract assets with reference to the expected credit loss method for financial assets.

*For the six months ended 30 June 2024 ("**6M2024**")*

According to the 2024 Interim Report, the Group's operating revenue increased by approximately 11.3% from approximately RMB9.6 billion for the six months ended 30 June 2023 ("**6M2023**") to approximately RMB10.7 billion for the 6M2024. Compared with the 6M2023, the revenue from engineering design and equipment manufacturing businesses, in which the Company has core competitiveness, increased; the structure of the engineering construction business improved; and the proportion of revenue from overseas industrial projects increased considerably, which further promoted the optimization and development of the Company's business structure, resulting in a year-on-year increase in operating revenue.

The Group recorded a turnaround from an operating loss of approximately RMB942.2 million for the 6M2023 to an operating profit of approximately RMB251.0 million for the 6M2024 and a turnaround from a net loss of approximately RMB816.1 million for the 6M2023 to a net profit of RMB199.1 million for the 6M2024. The improvement in financial performance was mainly due to (i) the increase in operating revenue as discussed above; (ii) the record of gain on reversal of asset impairment loss of approximately RMB24.7 million for the 6M2024 as compared with the loss of approximately RMB1.2 billion for the 6M2023, which was due to the fact that the Company changed the accounting estimates for impairment provisions of contract assets prospectively and the effect was fully recognized in the profit or loss of the 6M2023.

1.3 Financial position on the Group

	As at 30 June 2024	As at 31 December 2023	2022
	RMB'000	*RMB'000*	*RMB'000*
	(unaudited)	(audited)	(audited)
Non-current assets	8,729,627	8,827,823	9,209,939
Current assets	32,989,686	32,115,980	38,182,279
Total assets	**41,719,313**	**40,943,803**	**47,392,218**
Current liabilities	27,739,921	26,809,818	30,973,308
Non-current liabilities	7,550,487	6,879,485	5,962,922
Total liabilities	**35,290,408**	**33,689,303**	**36,936,230**
Equity attributable to owners of the Company	**6,144,309**	**7,016,541**	**7,530,428**

The total assets of the Group decreased from approximately RMB47.4 billion as at 31 December 2022 to approximately RMB40.9 billion as at 31 December 2023. The decrease was mainly due to the decrease in (i) cash and cash equivalent of approximately RMB3.6 billion; (ii) contract assets of approximately RMB1.1 billion and (iii) other receivables of approximately RMB1.1 billion. The total assets of the Group then increase to approximately RMB41.7 billion as at 30 June 2024 which was mainly due to the increase in (i) accounts receivables of approximately RMB961.0 million; and (ii) contract assets of approximately RMB822.0 million.

The total liabilities of the Group decreased from approximately RMB36.9 billion as at 31 December 2022 to approximately RMB33.7 billion as at 31 December 2023. The decrease was mainly due to the decrease in (i) short-term loans of approximately RMB2.8 billion; and (ii) non-current liabilities due within one year of approximately RMB1.7 billion. The total liabilities of the Group then increase to approximately RMB35.3 billion which mainly due to the increase in (i) short-term loans and long-term loans of approximately RMB1.5 billion; and (ii) non-current liabilities due within one year of approximately RMB994.6 million.

The equity attributable to owners of the Company decreased from approximately RMB7.5 billion as at 31 December 2022 to approximately RMB7.0 billion as at 31 December 2023, which was mainly due to the loss-making position of the Group for the FY2023 as discussed above. The equity attributable to the owners of the Company further reduced to approximately RMB6.1 billion as at 30 June 2024, which was mainly due to the repayment of perpetual bonds during the period.

1.4 Background information of Chinalco and Chinalco Suihe

Chinalco is a state-owned enterprise incorporated under the laws of the PRC in 2001. Chinalco is a controlling shareholder of the Company and directly holds approximately 72.9% of the issued share capital of the Company. Chinalco is principally engaged in mineral resources development, smelting and processing of non-ferrous metal, relevant trading and engineering and technical services and so forth. The ultimate beneficial owner of Chinalco is the State-owned Assets Supervision and Administration Commission of the State Council.

Chinalco Suihe is a limited partnership established under the laws of the PRC principally engaging in equity investment, investment management and asset management with private equity funds. The managing partners of Chinalco Suihe are Chinalco Innovation Investment and ABC Financial Asset Investment Co., Ltd. (an Independent Third Party). Chinalco Innovation Investment is a wholly-owned subsidiary of Chinalco Capital, which is a subsidiary controlled by Chinalco.

1.5 Background information on the Investor

Information on BOCOM Investment

BOCOM Investment is a company incorporation in the PRC with limited liability. BOCOM Investment principally operates non-banking financial service business in the PRC. BOCOM Investment is a wholly-owned subsidiary of Bank of Communications Co., Ltd. Bank of Communications Co., Ltd. is listed on Shanghai Stock Exchange (stock code: 601328) and Hong Kong Stock Exchange (stock code: 3328).

Information on CCB Investment

CCB Investment is a company incorporated in the PRC with limited liability. CCB Investment principally operates debt-toequity conversion and related ancillary businesses in the PRC. CCB Investment is a wholly-owned subsidiary of China Construction Bank Corporation, the shares of which are listed on the Shanghai Stock Exchange (stock code: 601939) and the Hong Kong Stock Exchange (stock code: 0939). China Construction Bank Corporation is listed on Shanghai Stock Exchange (stock code: 601939) and Hong Kong Stock Exchange (stock code: 0939).

Information on AFHT Phase II

AFHT Phase II is a limited partnership established under the laws of the PRC. The principal business of AFHT Phase II is to engage in equity investment, investment management and asset management by way of private equity funds. The managing partner of AFHT Phase II is Hubei Agricultural, Financial and High Technology Investment Management Company Limited* (湖北農金高投投資管理有限公司), the ultimate beneficial owner of which is Liu Yang. The other partners of AFHT Phase II include (1) ABC Financial Assets Investment Co., Ltd.* (農銀金融資產投資有限公司) (which accounts for 49% capital contribution), which is a wholly-owned subsidiary of Agricultural Bank of China Limited, the shares of which are listed on Shanghai Stock Exchange (stock code: 601288) and Hong Kong Stock Exchange (stock code: 1288); (2) Changjiang Venture Capital Fund Management Co., Ltd.* (長江創業投資基金有限公司) (which accounts for 25% capital contribution), the ultimate beneficial owner of which is State-owned Assets Supervision and Administration Commission of Hubei Provincial Government ("**Hubei SASAC**"); and (3) Enshi Longfeng Investment Development Co., Ltd.* (恩施龍鳳投資開發有限公司) (which accounts for 25% capital contribution), the ultimate beneficial owner of which is Hubei SASAC. Each of AFHT Phase II and its partners are Independent Third Parties.

1.6 Background information of the Target Companies

(1) Information on CINF

The basic information of CINF is as follows:

Name:	Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy
Unified social credit code:	91430000183765064G
Legal representative:	Tan Ronghe
Type of company:	limited liability company (sole proprietorship of legal person not invested or controlled by natural persons)
Date of establishment:	18 November 1991
Registered capital:	RMB736,796,500
Registered address:	No. 299, Mulian East Road, Yuhua District, Changsha

Business scope:	consulting, design and general contracting within the qualification scope of metallurgical industry, coal industry, construction industry, municipal industry, machinery industry, commerce, supplies and food industry, building materials industry, electric power industry, chemical, petrochemical and pharmaceutical industry and environmental engineering; scientific research of the above engineering projects and sales of equipment and materials; engineering investigation within the qualification scope of geotechnical engineering, engineering survey and solid mineral exploration; urban and rural planning, environmental impact assessment of construction projects, engineering cost consulting; pressure vessel design and pressure pipeline design; to undertake the survey, consultation, design and supervision of foreign (overseas) projects within the scope of qualification and the export of equipment and materials required for the above-mentioned projects; to contract foreign engineering projects that are compatible with its capacity, scale and performance, and to dispatch labors necessary for the implementation of the above-mentioned overseas projects; lease of self-owned properties. (For items subject to approval according to law, business activities can only be carried out after being approved by relevant departments.)

In accordance with the PRC GAAP, the key financial indicators of CINF are as below:

	As at/For the year ended 31 December		
	2023	**2022**	**2021**
	RMB0'000	*RMB0'000*	*RMB0'000*
	(audited)	(unaudited)	(unaudited)
Total assets	372,346.94	377,592.71	372,765.57
Net assets	120,227.98	148,263.22	135,066.97
Operating Income	216,431.20	244,807.74	255,214.58
Net profit/(loss) (before tax)	(25,397.26)	11,224.61	–
Net profit/(loss) (after tax)	(22,797.53)	10,606.73	(2,376.05)

Note: The 100% equity interest in China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. (hereinafter referred to as **Changkan Institute**) has been transferred to CINF, and the above financial data are the data after the merger of Changkan Institute.

(2) Information on Kunming Survey and Design Institute

The basic information of Kunming Survey and Design Institute is as follows:

Name:	Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry
Unified social credit code:	91530000216525578C
Legal representative:	Zou Guofu
Type of company:	limited liability company (sole proprietorship of legal person not invested or controlled by natural persons)
Date of establishment:	28 October 1992
Registered capital/ Paid-up capital:	RMB208,500,000
Registered address:	No. 1, Dongfeng Lane, Dongfeng East Road, Kunming, Yunnan Province

Business scope:	General items: basic geological exploration; engineering and technology research and experimental development project management services; satellite remote sensing application system integration; special equipment repair; instrument repair; computer and office equipment maintenance; business training (excluding education training, vocational skills training and other training that requires permission); engineering and technical services (except planning and management, survey, design and supervision); earthwork construction; mining machinery sales; mechanical and electrical equipment sales; geographic remote sensing information service; software development; information system integration services; soil and site restoration equipment manufacturing; mining machinery manufacturing; soil and site restoration equipment sales; municipal facilities management; urban greening management; landscaping engineering construction; planning and design management; road cargo transport of general trucks with a total mass of 4.5 tons and less (except network freight and dangerous goods); loading, unloading and handling; engineering cost consulting business; technical service, technology development, technology consultation, technology exchange, technology transfer, technology dissemination; metal ore sales; building materials sales; mining rights evaluation services; geological survey technical services; land consolidation services; sales of special instruments for geological survey and earthquake; general mechanical equipment installation services; machinery and equipment leasing (except for items subject to approval according to law, business activities are independently carried out according to law with the business license). Permitted items: construction engineering design; construction works; construction project survey; surveying and mapping services; mineral resources exploration; geological exploration of metallic and nonmetallic mineral resources; geological hazard risk assessment; geological disaster control engineering survey; geological disaster control engineering design; geological disaster control engineering construction; construction project supervision; road transport of goods (excluding dangerous goods); construction professional work. (For items subject to approval according to law, business activities can only be carried out after being approved by relevant departments, and the specific business items shall be subject to the approval documents or licenses of relevant departments.)

In accordance with the PRC GAAP, the key financial indicators of Kunming Survey and Design Institute are as below:

	As at/For the year ended 31 December		
	2023	**2022**	**2021**
	RMB0'000	*RMB0'000*	*RMB0'000*
	(audited)	(audited) (restated)	(audited) (restated)
Total assets	135,586.22	124,805.83	124,471.66
Net assets	45,516.70	42,226.11	40,323.58
Operating Income	125,015.81	108,338.14	125,779.18
Net profit (before tax)	4,658.24	4,339.54	–
Net profit (after tax)	4,231.76	4,175.00	4,221.37

(3) Information on SAMI

The basic information of SAMI is as follows:

Name:	Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd.
Unified social credit code:	912101021176814954
Legal representative:	Huang Fei
Type of company:	limited liability company (sole proprietorship of legal person)
Date of establishment:	17 January 1991
Registered capital:	RMB510,743,216
Registered address:	No. 184, Heping North Street, Heping District, Shenyang, Liaoning Province

Business scope:	external dispatch of labor required for projects; typing and photocopying; non-ferrous and nonmetallic mining; light metal smelting; non-ferrous metallurgy, construction engineering, metallurgy, municipal public utilities, chemical engineering, electric power, building materials engineering survey and design, consulting, supervision, project contracting and sales of equipment and materials; environmental assessment; automatic fire alarm, automatic fire extinguishing engineering design; computer hardware and software and complete sets of equipment, non-standard equipment, environmental protection, power supply and distribution, industrial automation system and building intelligent system technology development and sales, technical consulting, service, technology transfer and commissioning; survey, consultation, design and supervision of foreign and domestic foreign-funded projects; contracting of overseas projects and domestic international bidding projects and export of required equipment and materials; lease of properties; binding, printing; import and export of goods or technologies (except those prohibited by the State or involving administrative approval); design, production, release and agency of all kinds of advertisements at home and abroad; publication and distribution of Light Metals magazine; conference services. (For items subject to approval according to law, business activities can only be carried out after approval by relevant departments.)

In accordance with the PRC GAAP, the key financial indicators of SAMI are as below:

	As at/For the year ended 31 December		
	2023	**2022**	**2021**
	RMB0'000	*RMB0'000*	*RMB0'000*
	(audited)	(audited)	(audited)
Total assets	159,773.21	146,645.21	133,002.70
Net assets	61,495.40	64,322.81	61,993.71
Operating Income	92,027.81	125,442.18	47,016.00
Net profit (before tax)	4,200.68	10,275.97	–
Net profit (after tax)	3,933.36	9,653.41	1,599.41

2. The Capital Increase

2.1 Background of the Capital Increase Agreement

The Capital Increase Agreement is to introduce investors to implement capital increase through public tender on GuangDong United Assets and Equity Exchange by CINF, Kunming Survey and Design Institute and SAMI.

2.2 Reasons for and benefits of the Capital Increase

As stated in the Letter from the Board, the Board was of the view that the Deemed Disposal is conducive to satisfying the long-term development strategies of the three Target Companies, enhancing the profitability of the Company, accelerating the transformation of the Company's business structure, strengthening the foundation of the Company's development and enhancing its core competitiveness, and is in the interests of all Shareholders.

As set out in the 2024 Interim Report, the Company centered on the business objective of "high-quality Party building + strengthening operation, promoting transformation and deepening reform", and implemented the "5+4+N" implementation system in depth, with the "special action" as the key task, and made positive progress in the work, and the development of the Company showed an upward trend in a stable manner. The Directors considered that, through the Capital Increase, the Target Companies will have addition financial resources of up to RMB2.29 billion to support and implement their business developments and expansions in long run, with an aim to optimize their financial positions, enhance their profitability and core competitiveness in the market as a whole.

Upon the completion of the Capital Increase, the Company will continue to hold no less than 60% equity interests of each of the Target Companies, which will continue to be subsidiaries of the Company and the financial results of the Target Companies will be included in the consolidated financial statements of the Group. The Company will therefore continue to enjoy the contributions from the Target Companies following the Capital Increase.

After taking into consideration of the above, in particular (i) the Capital Increase would provide addition financial resources to the Target Companies to satisfy their long-term development strategies and expansions in long run; (ii) the Target Companies will continue to be subsidiaries of the Company upon the completion of the Capital Increase and the Company will continue to enjoy the contributions from the Target Companies; and (iii) our analysis on the principal terms of the Capital Increase Agreement as discussed below, we concur with the view of the Directors that although the Capital Increase is not conducted in the ordinary and usual course of business of the Group, it is in the interests of the Company and the Shareholders as a whole.

2.3 Key terms of the Capital Increase

Key terms of the Capital Increase Agreement are set out below:

Date: 21 November 2024

Parties: As regards the Capital Increase Agreement in respect of CINF, the parties include (1) CINF; (2) the Company; (3) Chinalco Suihe; (4) BOCOM Investment; and (5) CCB Investment.

As regards the Capital Increase Agreement in respect of Kunming Survey and Design Institute, the parties include (1) Kunming Survey and Design Institute; (2) the Company; (3) Chinalco Suihe; (4) BOCOM Investment; and (5) CCB Investment.

As regards the Capital Increase Agreement in respect of SAMI, the parties include (1) SAMI; (2) the Company; (3) Chinalco Suihe; (4) CCB Investment; and (5) AFHT Phase II

Subject matter: Pursuant to the terms and conditions of the Capital Increase Agreement, the Target Companies have conditionally agreed to enlarge their registered capital, and each of the Investors and Chinalco Suihe has conditionally agreed to subscribe for the corresponding shareholdings to the respective additional registered capital of the three Target Companies, and pay up the entire investment consideration (including the deposit) to the Target Companies.

2.3.1 Consideration of the Deem Disposal

As stated in the Letter from the Board, the price of the Capital Increase is based on the value of the entire shareholders' equity of CINF, Kunming Survey and Design Institute and SAMI as of the Valuation Benchmark Date of RMB1,997,243,300, RMB850,724,700 and RMB984,155,200, respectively (the "**Valuations**") as shown in the record filed with the state-owned assets supervision and administration authority, and has been finalized based on the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange. The price of RMB1 registered capital of CINF, Kunming Survey and Design Institute and SAMI to be subscribed by the qualified investors in the Capital Increase shall not be lower than the existing appraised value of 100% equity interest in CINF, Kunming Survey and Design Institute and SAMI/the registered capital of CINF, Kunming Survey and Design Institute and SAMI.

1. CINF

In accordance with the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange, the Investors will invest RMB1,080,000,000 to subscribe for the corresponding increase in registered capital, of which RMB398,419,271 shall be credited to the registered capital and the remaining RMB681,580,729 shall be credited to the capital reserve of CINF. The capital contribution of each investor is set out below:

Unit: RMB0'000

No.	**The investor**	**Capital increase price payable** *(RMB0'000)*	**Credited to registered capital** *(RMB0'000)*	**Credited to capital reserve** *(RMB0'000)*
1	Chinalco Suihe	50,000	18,445.3366	31,554.6634
2	BOCOM Investment	28,000	10,329.3885	17,670.6115
3	CCB Investment	30,000	11,067.2020	18,932.7980
	Total	**108,000**	**39,841.9271**	**68,158.0729**

2. Kunming Survey and Design Institute

In accordance with the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange, the Investors will invest RMB560,000,000 to subscribe for the corresponding increase in registered capital, of which RMB137,247,690 shall be credited to the registered capital and the remaining RMB422,752,310 shall be credited to the capital reserve of Kunming Survey and Design Institute. The capital contribution of each investor is set out below:

Unit: RMB0'000

No.	The investor	Capital increase price payable *(RMB0'000)*	Credited to registered capital *(RMB0'000)*	Credited to capital reserve *(RMB0'000)*
1	Chinalco Suihe	23,000	5,636.9587	17,363.0413
2	BOCOM Investment	22,000	5,391.8735	16,608.1265
3	CCB Investment	11,000	2,695.9368	8,304.0632
	Total	**56,000**	**13,724.7690**	**42,275.2310**

3. SAMI

In accordance with the results of the Company's public tendering on the GuangDong United Assets and Equity Exchange, the Investors will invest RMB650,000,000 to subscribe for the corresponding increase in registered capital, of which RMB337,327,985 shall be credited to the registered capital and the remaining RMB312,672,015 shall be credited to the capital reserve of SAMI. The capital contribution of each investor is set out below:

Unit: RMB0'000

No.	The investor	Capital Increase Price payable *(RMB0'000)*	Credited to registered capital *(RMB0'000)*	Credited to capital reserve *(RMB0'000)*
1	Chinalco Suihe	30,000	15,568.9839	14,431.0161
2	CCB Investment	30,000	15,568.9839	14,431.0161
3	AFHT Phase II	5,000	2,594.8307	2,405.1693
	Total	**65,000**	**33,732.7985**	**31,267.2015**

As a result, the consideration of the Capital Increase is RMB2.29 billion in aggregate. Taking into account the tendering results on the GuangDong United Assets and Equity Exchange, it is finally determined that the price for capital increase shall be RMB2.7107 per registered capital for CINF, RMB4.0802 per registered capital for Kunming Survey and Design Institute and RMB1.9269 per registered capital for SAMI.

Upon completion of the Capital Increase, the shareholding structure of CINF is as follows:

No.	Name	Subscribed registered capital (RMB0'000)	Shareholding percentage
1	The Company	73,679.6500	64.90%
2	Chinalco Suihe	18,445.3366	16.25%
3	BOCOM Investment	10,329.3885	9.10%
4	CCB Investment	11,067.2020	9.75%
		113,521.5771	100%

Upon completion of the Capital Increase, the shareholding structure of Kunming Survey and Design Institute is as follows:

No.	Name	Subscribed registered capital (RMB0'000)	Shareholding percentage
1	The Company	20,850.0000	60.30%
2	Chinalco Suihe	5,636.9587	16.30%
3	BOCOM Investment	5,391.8735	15.60%
4	CCB Investment	2,695.9368	7.80%
		34,574.7690	100%

Upon completion of the Capital Increase, the shareholding structure of SAMI is as follows:

No.	Name	Subscribed registered capital (RMB0'000)	Shareholding percentage
1	The Company	51,074.3216	60.22%
2	Chinalco Suihe	15,568.9839	18.36%
3	CCB Investment	15,568.9839	18.36%
4	AFHT Phase II	2,594.8307	3.06%
		84,807.1201	100%

2.3.1.1 Assessment on the qualification and experience of the Appraisal Institution

To assess the fairness and reasonableness of the consideration, we have obtained and reviewed the valuation reports on the appraised value of the entire equity interests of the Target Companies as at 31 December 2023 (the "**Valuation Reports**") prepared by the Appraisal Institution (namely Beijing Guorong Xinghua Asset Appraisal Company Limited).

In order to assess the expertise and independence of the Appraisal Institution, we have (i) reviewed the engagement letter between the Appraisal Institution and the Company; (ii) conducted a phone interview with the appraisal personnel of the Appraisal Institution to understand, among others, the valuation methodology being adopted in arriving the Valuations; and (iii) discussed with the appraisal personnel about their previous experiences on valuation projects of similar in nature.

We have reviewed and enquired the qualification and experience of the person in charge of the Valuations and noted that the person in charge is a professional member of China Appraisal Society with professional qualifications in business valuation, real estate valuation and land valuation, a registered real estate appraiser of the Ministry of Housing and Urban-Rural Development of the PRC, a land valuer of the Ministry of Land and Resources, PRC, and a certified public accountant of The Chinese Institute of Certified Public Accountants. Furthermore, we have reviewed the Appraisal Institution's terms of engagement and its scope of work and noted that the scope of work is appropriate for arriving at the opinion required to be given and we were not aware of any irregularities during our interview with the core team members of the Appraisal Institution or in our review of the Valuation Reports. Further, during our interview with the appraisal personnel, they confirmed that they are not aware of any limitations on the relevant scope of work. The Appraisal Institution has also confirmed its independence to the Company, the connected persons of the Company and other parties to the transaction. Based on the above, we considered that the scope of work of the Appraisal Institution is appropriate.

2.3.1.2 Assessment on the valuation approaches

We understand from the appraisal personnel that as stated in the Practice Guidelines for Asset Valuation – Enterprise Value, when performing any appraisal of enterprise value, the suitability of the three basic asset valuation methods namely the income approach, the market approach and the asset-based approach shall be analysed based on the purpose of valuation, the valuation target, the type of value, information gathering, etc. in its selection of valuation methods. If different valuation methods are suitable for any appraisal of enterprise value, two or more valuation methods should be adopted and considered in the valuations.

We understand that the Appraisal Institution has considered three generally adopted valuation approaches, which are income approach, market approach and asset-based approach in performing the Valuation. We understand from the Valuation Reports that the market approach has not been adopted for the current appraisal because of the limited access to transaction information in the domestic asset trading market and the relatively large differences in the business structure of similar enterprises, which made it extremely difficult to select market references of the same type. Having considered the lack of market references, the Appraisal Institution rejected the use of market approach. The Target Companies are operating on a going concern basis and the selection of the economic and technical parameters involved in the application of the asset-based approach is based on sufficient data and information. Taking into account the subject of the asset appraisal, the type of value, the purpose of the appraisal and the information collected by the Appraisal Institution, it has been determined that the asset-based approach will be adopted for the current appraisal. Regarding income approach, as stated in the Valuation Reports, since the Target Companies operate on a going concern basis, with relatively complete information in relation to its principal business for the historical years, and its future operating income can be forecasted upon discussion with the respective management, the income approach is also applicable in the Valuations.

As a result of the foregoing, the Appraisal Institution has assessed the valuation of the entire equity interest in the Target Companies under both asset-based approach and income approach and set out below summarised the appraised value under the said approaches as at 31 December 2023, being the Valuation Benchmark Date:

	Appraised value of the entire equity interest as at 31 December 2023		**Net asset value as at**
	Asset-based approach	**Income approach**	**31 December 2023**
CINF	RMB1,901,041,300	RMB1,997,243,300	RMB1,334,307,500
SAMI	RMB957,673,000	RMB984,155,200	RMB470,147,100
Kunming Survey and Design Institute	RMB577,164,900	RMB850,724,700	RMB443,026,700

The two appraisal methods consider different perspectives. As set out in the Valuation Reports, the asset-based approach considers the re-acquisition of assets and reflects the replacement value of the existing assets of the enterprise whereas the income approach considers the enterprise's future profitability and reflects the comprehensive profitability of the assets of the enterprise. The income approach not only considers the value of all tangible assets, intangible assets and liabilities presented on the balance sheet of the enterprise, but also covers the value of intangible assets such as customer resources, human resources, technical and business capabilities, etc. The Target Companies are light-asset enterprises, and the sources of future income are the existing stable customer base, the service capacity of the business, the industry status, the reputation among customers for new customers and new business development, etc. The Appraisal Institution considers that the results of the income approach could better reflect the overall enterprise value of the Target Companies. In light of the above, the income approach is more reflective of the enterprise value of the Target Companies and the Appraisal Institution has therefore adopted the income approach in concluding the appraisal results in the three Valuation Reports.

As set out in the table above, as appraised under the income approach, as at the Valuation Benchmark Date, (i) the value of the entire shareholders' equity of CINF was RMB1,997,243,300 under the premise of going concern. An appreciation of RMB662,935,800 was recorded, representing an appreciation rate of 49.68%; (ii) the value of the entire shareholders' equity of SAMI was RMB984,155,200 under the premise of going concern. An appreciation of RMB514,008,100 was recorded, representing an appreciation rate of 109.33%; and (iii) the value of the entire shareholders' equity of Kunming Survey and Design Institute was RMB850,724,700 under the premise of going concern, with an appreciation of RMB407,698,000, representing an appreciation rate of 92.03%. It is also note that the appraised value of the entire shareholders' equity of each of the Target Companies is higher under the income approach as compared with that of the asset-based approach.

Based on the above, in particular that (i) the Target Companies are light-asset enterprises, and the sources of future income are the existing stable customer base, the service capacity of the business, the industry status, the reputation among customers for new customers and new business development, etc; and (ii) the income approach is more reflective of the enterprise value of the Target Companies, we are of the view that the valuation approaches adopted by the Appraisal Institution are appropriate.

2.3.1.3 Assessment on the principal basis and assumptions adopted in the Valuation Reports

We have reviewed the Valuation Reports and understand that under the income approach, the Appraisal Institution adopts the discounted cash flow method under the present value of income ("**PVI**") income approach to appraise the overall value of the enterprise in order to indirectly obtain the value of the entire shareholders' equity, which consists of the value of operating assets arising from normal business activities and the value of non-operating assets not related to normal business activities. For the determination of the value of operating assets, the discounted free cash flow model is applied, which is based on the free cash flow of the enterprise in the next few years, discounted at an appropriate discount rate and then summed up to arrive at the value of operating assets. The PVI approach evaluates an asset from the perspective of its expected profitability, and can fully reflect the overall value of an enterprise, i.e., the value of an enterprise to an investor lies in the expected future income that the enterprise may generate. Although the PVI approach does not directly utilize references in the real market to illustrate the current fair market value of the subject of appraisal, it evaluates the assets from the perspective of the expected profitability of the assets, which is the fundamental basis for determining the current fair market value of the assets, and can fully reflect the overall value of the enterprise, and its appraisal conclusions are more reliable and persuasive. After interviewing the management of the enterprise and conducting research and analysis, the appraisal personnel considers that the conditions for valuation under the PVI approach are met.

We have reviewed the Valuation Reports and understand that under the PVI approach, the free cash flows of the Target Companies are discounted based on the respective cash flow forecast, which is derived according to the operation history, market demand and future development of the Target Companies, and is based on the sales, cost of sales and financial data analysis as stated in the audited financial statements since 2021. The discount rate for the valuations of equity interest of the Target Companies is derived by the Appraisal Institution through the Capital Asset Pricing Model (the "**CAPM Model**"). We understand that the CAPM Model is a widely used financial model that used to calculate the expected return of an asset. In arriving at the beta being adopted in the CAPM Model, the Appraisal Institution had made reference to market available data such as treasury bond yield and equity market risk premium.

We have reviewed the Valuation Reports and note that the same key quantitative input parameter values and assumptions have been used in calculating the appraised value for each Target Company. The key quantitative input parameter values and assumptions included, among others, (i) assuming that the assets to be valued are traded or intended to be traded on the open market, and both of the parties to the transaction of the assets are in equal position and have enough opportunities and time to obtain market information so as to make reasonable and rational judgment on the functions, purpose and considerations of the assets; (ii) assuming that all the assets to be valued are already in the process of transaction, and the appraiser carries out the valuation based on a simulated market which involves the transaction conditions of the assets to be valued. Transaction assumption is the most basic assumption for asset valuation; and (iii) assuming that the assets under appraisal will continue to be used legally and effectively in accordance with their current use and in the manner, scale, frequency and environment in which they are used, and that there will be no significant changes in their use during the foreseeable usage period. Details of the valuation assumptions are set out in the Letter from the Board and in Appendix II of this Circular. We have discussed with the Appraisal Institution and understand that the assumptions adopted in the Valuations are commonly adopted in asset valuations.

Regarding the information used under the income approach in deriving the appraised results, we understand that the Board (i) have discussed all aspects with the Appraisal Institution, including the basis and assumptions on which the estimates are based; (ii) have reviewed the estimates for which the Appraisal Institution is responsible; and (iii) have also considered the report issued by Grant Thornton Zhitong Certified Public Accountants LLP, the auditor of the Company (the "**Auditor**") on the proper preparation of the assessment in terms of the way it is calculated. The Board confirms that the profit forecast has been made by the Directors after careful and thorough enquiry. We have also reviewed a comfort letter on profit forecast of the Target Companies issued by the Auditor as set out in Appendix III of this Circular. We note that the Auditor is of the opinion that so far as the calculations are concerned, the discounted future estimated cash flows of the Target Companies, has been properly compiled in all material respects in accordance with the bases and assumptions made by directors of the Company as set out in the Valuation.

Based on the above and having considered that (i) the Appraisal Institution is suitably qualified and experienced with sufficient knowledge, skills and understanding necessary to prepare the Valuation Reports competently; (ii) the Valuation Reports has been prepared by the Appraisal Institution in accordance with the valuation procedures, standards, laws and regulations of the PRC; (iii) the Appraisal Institution has reviewed the financial data, operating data and other relevant data in relation to the Target Companies to fully understand the Target Companies; (iv) the reasons for adopting the income approach in the appraisal, the methodology and assumptions adopted by the Appraisal Institution, the scope of the appraisal and the results of the appraisal; (v) the valuation approaches adopted by the valuer are appropriate; (vi) during our discussion with the appraisal personnel, we did not identify any major factor which caused us to doubt the fairness and reasonableness of the methodology, principal bases, assumptions and parameters so adopted for the Valuation Reports; and (vii) the respective appraised values are at premiums to the net asset value of the Target Companies, we concur with the view of the Directors that such appraisal results could reflect the value of the Target Companies and are fair and reasonable so far as the Independent Shareholders are concerned.

2.3.2 Projected earnings and profit distribution

In view of the fact that the Capital Increase was priced on the basis of the appraised value of the net assets of CINF, Kunming Survey and Design Institute and SAMI as at 31 December 2023 determined by the income approach, and with reference to the operating conditions of the Target Companies in previous three financial years (i.e. 2021-2023) and various factors such as the future operating conditions, the projected earnings of CINF, Kunming Survey and Design Institute and SAMI for the next five years ("**Projected Earnings**") are therefore derived and the net profit of CINF, Kunming Survey and Design Institute and SAMI on a consolidated basis are the following amounts, respectively:

Unit: RMB0'000

			Year		
Target Company	**2024**	**2025**	**2026**	**2027**	**2028**
CINF	11,119.91	12,105.82	13,709.79	15,138.78	16,689.72
Kunming Survey and Design Institute	5,018.48	5,775.85	6,237.69	6,519.36	6,819.08
SAMI	5,376.16	5,810.81	6,241.26	6,630.95	6,892.17

The aforesaid net profit of CINF, Kunming Survey and Design Institute and SAMI on a consolidated basis is determined based on the annual audit reports issued by the accounting firms auditing the annual reports of CINF, Kunming Survey and Design Institute and SAMI at the respective year in the future.

Shareholders of CINF, Kunming Survey and Design Institute and SAMI shall share profits and losses in proportion to their paid-up shareholdings. Without prejudice to the relevant accounting policies, during the period when the Investors hold the equity interest in the Target Companies, all profits of CINF, Kunming Survey and Design Institute, SAMI and their controlled subsidiaries after making up for accumulated losses (if any) and withdrawing statutory provident fund from the after-tax profits of the year will be used for distribution and payment in the form of cash to the designated accounts of qualified investors.

Pursuant to the Capital Increase Agreement, the Company has no profit guarantee obligations with respect to the projected earnings to be achieved under the Deemed Disposal.

Based on our discussion with the Appraisal Institution and our review of the Valuation Reports, we understand that the Projected Earnings of each Target Company for the next five years was estimated with reference to the operating conditions of the Target Companies based on historical financial records (i.e. 2021-2023) and various factors such as (i) the future operating conditions; (ii) the historical fluctuations in operations of each Target Company; (iii) the profit forecast estimated by the management of the Company, etc. We have discussed with the management of the Company for the future development of each Target Company and understand that the Projected Earnings is based on the following assumptions, among others, (i) there are no material changes in the relevant prevailing laws, regulations and policies, and the macroeconomic situation of the country, and that there are no material changes in the political, economic and social environment of the regions where the parties to the transaction are located; (ii) the business continues as a going concern in view of the actual status of assets as at the Valuation Benchmark Date; and (iii) there are no substantial changes in such indicators as interest rates, exchange rates, tax bases, tax rates and policy based levies related to the appraised entity after the Valuation Benchmark Date. We have discussed with the Appraisal Institution and understand that the above assumptions are common assumptions adopted.

In order to assess whether the Projected Earnings of each Target Company are prepared under reasonable basis, we have also obtained and reviewed the description of the Valuations Reports and discussed with the Appraisal Institution on the followings:

(1) CINF

As set out in the section headed "1.6 Background information of the Target Companies" above, the operating income of CINF decreased from approximately RMB255.2 billion for the year ended 31 December 2021 to approximately RMB244.8 billion for the year ended 31 December 2022, and further decreased to approximately RMB216.4 billion for the year ended 31 December 2023. Notwithstanding the decrease in operating income of CINF during the year 2021 to year 2023, the profit indicators of CINF were stable and the growth ability of CINF was stable and will be improving in the long-term. The Appraisal Institution also made reference to the public data of the engineering inspection and design industry for the year 2018 to 2022. The Appraisal Institution considered that CINF is one of the industry leaders with relatively larger market share in the industry, it is estimated that the growth rate of CINF will be lower than the industry average in the next five years. As the operating costs were recognised by stages of project, the Appraisal Institution estimated the operating costs with reference to the historical gross profit margin.

(2) Kunming Survey and Design Institute

As set out in the section headed "1.6 Background information of the Target Companies" above, the operating income of Kunming Survey and Design Institute decreased from approximately RMB125.8 billion for the year ended 31 December 2021 to approximately RMB108.3 billion for the year ended 31 December 2022, and subsequently increased to approximately RMB125.0 billion for the year ended 31 December 2023. It is noted that the operation condition and gross profit margin of Kunming Survey and Design Institute were stable. The Appraisal Institution also made reference to the public data of the engineering inspection and design industry for the year 2018 to 2022. For the operating costs, we are given to understand that the Appraisal Institution estimated (i) the direct operating costs (such as the subcontractor fee, technical service fee, cost of material) for the next five years in proportion to the projected increase in operating income; (ii) the staff costs for the next five years based on management estimation; and (iii) other operating costs for the next five years with reference to historical operation data.

(3) SAMI

As set out in the section headed "1.6 Background information of the Target Companies" above, the operating income of SAMI decreased from approximately RMB47.0 billion for the year ended 31 December 2021 to approximately RMB125.4 billion for the year ended 31 December 2022, and subsequently increased to approximately RMB92.0 billion for the year ended 31 December 2023. The Appraisal Institution also made reference to the public data of the engineering inspection and design industry for the year 2018 to 2022. It is noted that the historical growth rate of SAMI was higher than the industry average. For the operating costs, we understand that (i) the direct operating costs (such as the subcontractor fee, cost of material) for the next five years are projected in proportion to the increase in operating income; and (ii) other operating costs are projected based on management estimation and historical operation data.

Having considered that (i) the profits and losses of the Target Companies will be shared in proportion to the respective paid-up shareholdings of the shareholders; (ii) the estimation of Projected Earnings of each Target Company are based on assumptions commonly adopted; (iii) the estimation of Project Earnings of each Target Company are based on the future operating conditions, the historical fluctuations in operations of each Target Company, the profit forecast estimated by the management of the Company; and (iv) the distribution of profits will be conducted in accordance with the relevant accounting policies, we are of the view that the Projected Earnings of each Target Company are prepared under reasonable basis and the profit distribution arrangement is fair and reasonable so far as the Independent Shareholders are concerned.

2.3.3 Our analysis on the Valuations

From the discussion with the Appraisal Institution and with reference to the Valuation Reports, we understand that in arriving at the beta being adopted in the CAPM Model, the Appraisal Institution identified seven comparable companies (the "**Comparable Companies**"), based on the criteria that (i) their shares are listed on the Shanghai Stock Exchange or the Shenzhen Stock Exchange of the PRC; (ii) their respective principal business is similar to that of the Target Companies; (iii) they have been listed on the Shanghai Stock Exchange or the Shenzhen Stock Exchange of the PRC for more than three years; and (iv) they issue A shares only. We consider that the basis and criteria of selecting the Comparable Companies is fair and reasonable given that (i) we were not able to identify companies of similar principal business as the Company that are listed on the Hong Kong Stock Exchange; and (ii) the Comparable Companies identified under such criteria were relevant for us to conduct the alternative analysis.

In order to assess the fairness and reasonableness of the Valuations, we have conducted alternative analysis by comparing the price-to-earning ("**P/E**") multiple and price-to-book ("**P/B**") multiple of the Comparable Companies and that of the Target Companies, based on the market capitalization of the Comparable Companies as at 21 November 2024, being the date of the Capital Increase Agreement. As each of the Comparable Companies has its own unique business and nature in terms of business operation and environment, size, profitability and financial position, the comparison of P/E multiple and P/B multiple may not represent an ideal comparison. We, however, consider such comparison could be treated as an indication on the fairness and reasonableness of the Valuations. The relevant details of the Comparable Companies are set forth in the table below:

Name of company	**Stock code**	**P/E multiple**	**P/B multiple**
Arcplus Group Plc	600629.SH	19.04	1.52
Power Construction Corporation of China, Ltd.	601669.SH	7.65	0.38
China Design Group Co., Ltd.	603018.SH	9.32	1.23
Anhui Transport Consulting & Design Institute Co., Ltd.	603357.SH	11.13	1.56
Zhenhai Petrochemical Engineering Co., Ltd.	603637.SH	19.66	2.07
Shenzhen Capol International & Associates Co., Ltd.	002949.SZ	18.24	1.77
Shenzhen Institute of Building Research Co., Ltd.	300675.SZ	94.81	3.54
	Minimum	7.65	0.38
	Maximum	94.92	3.54
	Average	25.71	1.73
CINF		**N/A**	**0.82**
Kunming Survey and Design Institute		**20.10**	**1.87**
SAMI		**52.23**	**3.25**

As shown in the above table, the P/E multiple of the Comparable Companies range from 7.65 to 94.92, with an average of 25.71, while the P/E ratio of Kunming Survey and Design Institute and SAMI are approximately 20.10 and 52.23 respectively. As CINF recorded a net loss for the year ended 31 December 2023, P/E multiple is not applicable. The P/B multiple of the Comparable Companies range from 0.38 to 3.54, with an average of 1.73, while the P/B multiple of CINF, Kunming Survey and Design Institute and SAMI are approximately 0.82, 1.87 and 3.25 respectively. Based on the alternative analysis above, we noted that the P/E multiple and P/B multiple of the Target Companies are within the range of the Comparable Companies. As such, we are of the view that the results of the Valuations are fair and reasonable.

2.3.4 Capital operation and exit arrangements

Within sixty (60) months after the Completion Date, the Company undertakes to make its best efforts to acquire the equity interests in CINF, Kunming Survey and Design Institute and SAMI (hereinafter referred to as "**Upturn Acquisition**") acquired by qualified investors through the Capital Increase by issuing shares, so as to create conditions for the qualified investors to realize their investments through market-oriented means. The Upturn Acquisition is subject to compliance with the Company's internal review and external approval procedures, laws and regulations pertaining to the acquisition of assets by way of share issuance and other relevant rules. The consideration of the Upturn Acquisition shall be determined in accordance with the then appraised value.

In the event of any of the following circumstances, the Company or its designated third party shall have the right (but not obliged) to pay in cash to acquire all or part of the qualified investors' shareholdings in CINF, Kunming Survey and Design Institute and SAMI:

(1) the failure to initiate the issuance of shares in pursuit of the acquisition within 60 months from the Completion Date, or where such issuance is initiated, the investors fail to implement the share offer or the issuance fails to obtain approval from regulatory bodies;

(2) CINF, Kunming Survey and Design Institute and SAMI fail to achieve 80% of the Projected Earnings in any year from 2024 to 2028, except where the cumulative dividend amount received by qualified investors has reached the amount that should be distributed if the Projected Earnings Targets has been achieved;

(3) CINF, Kunming Survey and Design Institute and SAMI are subject to the risk of bankruptcy or liquidation events;

(4) a change of the actual controller of CINF, Kunming Survey and Design Institute and SAMI, the occurrence of major risks, major illegal acts, or any situation that seriously affects the acceptance of the equity interests of CINF, Kunming Survey and Design Institute and SAMI by the controlling shareholder;

(5) CINF, Kunming Survey and Design Institute and SAMI violate the profit distribution policy stipulated in the Capital Increase Agreement and do not distribute profits;

(6) the asset-liability ratio of CINF, Kunming Survey and Design Institute and SAMI or their controlling shareholders (if proceeds from the Capital Increase are used to repay financial liabilities of the controlling shareholders) at the end of any year from the Completion Date (including the year in which the Completion Date occurs) as shown on the audited annual consolidated statements exceeds 65.99% (for CINF), 65.14% (for Kunming Survey and Design Institute) and 60.74% (for SAMI), respectively (at the Target Companies level) and 93.6% (at the controlling shareholder level), and the parties failed to address properly in a manner acceptable to the qualified investors within the grace period then provided by the qualified investors, unless exempted in writing by the qualified investors; or

(7) the Target Companies and/or the Company fail to comply with the provisions of the relevant transaction documents and address properly within the grace period then provided by the qualified investors in a manner acceptable to the qualified investors, unless exempted in writing by the qualified investors.

The specified percentage ratios referred to in item (2) above for falling short of projected earnings are the Company's targets based on forecasts of the future financial and operating performance of the Target Companies and agreed upon in the course of commercial negotiations with the potential investors, and the specified asset-liability ratio figures referred to in item (6) above are unaudited financial data of the Company and the respective Target Companies as of 30 June 2024 (CINF's have been subject to accounting adjustment following the consolidation of Changkan Institute).

We have obtained and reviewed the Capital Increase Agreement and discussed with the management of the Company. We understand that the Upturn Acquisition will be subjected to compliance with the Company's internal review and external approval procedures, laws and regulations pertaining to the acquisition of assets by way of share issuance and other relevant rules. The consideration of the Upturn Acquisition shall be determined in accordance with the then appraised value. In this regard, under these arrangements, we concur with the view of the Directors that the interests of the Shareholders are safeguarded should the Upturn Acquisition will be materialized in future. We are of the view that the Upturn Acquisition (including the terms of the exit arrangement) is fair and reasonable and in line with the normal market practice.

2.4 *Financial Effect of the Capital Increase*

In accordance with the Capital Increase Agreement, the auditor of the Company confirms that the Target Companies will continue to be subsidiaries of the Company as well as the accounting treatment of being included in the consolidated financial statements of the Company. As CNIF, Kunming Survey and Design Institute and SAMI will continue to be subsidiaries of the Company upon completion of the Capital Increase, therefore, the operating results and financial position of CNIF, Kunming Survey and Design Institute and SAMI will continue to be recorded in the Group's consolidated financial statements. As the reduction of the Company's interest in CNIF, Kunming Survey and Design Institute and SAMI will not result in a loss of control over these entities, the Company will not record a gain or loss on the Capital Increase in accordance with generally accepted accounting principles in the PRC.

It should be noted that the below analysis has assumed that full settlement of the consideration of the Capital Increase upon Completion and is for illustrative purposes only and do not purport to represent how the financial position of the Group will be upon full settlement of the consideration of the Capital Increase.

(i) Earnings

As CINF, Kunming Survey and Design Institute and SAMI will continue to be subsidiaries of the Company upon completion of the Capital Increase, therefore, the operating results and financial position of the Target Companies will continue to be recorded in the Group's consolidated financial statements. As the reduction of the Company's interest in CINF, Kunming Survey and Design Institute and SAMI will not result in a loss of control over these entities, the Company will not record a gain or loss on the capital increase in accordance with generally accepted accounting principles in the PRC. Moreover, proceeds from the Capital Increase will be used for long-term development strategies of the Target Companies and enhance the future profitability of the Company.

(ii) Net asset value

The Capital Increase provide the Target Companies with additional cash. Moreover, the price of RMB1 registered capital of CINF, Kunming Survey and Design Institute and SAMI subscribed by the investors in the Capital Increase shall not be lower than the existing appraised value of 100% equity interest in CINF, Kunming Survey and Design Institute and SAMI/registered capital of CINF, Kunming Survey and Design Institute and SAMI.

The Capital Increase will increase the size of the Company's equity as a whole, and the proceeds are expected to be used to optimize the capital structure, including repayment of interest-bearing liabilities, which will directly reduce interest expenses and will help improve the Company's profitability and indirectly achieve a decrease in the Group's asset-liability ratio.

(iii) Liquidity and gearing

As at 30 June 2024, the Group had cash and cash equivalents of approximately RMB3,977.8 million and net current assets of approximately RMB5,249.8 million. Upon Completion, the Target Companies will receive approximately RMB2.29 billion in cash. The cash and the net current asset position of the Group will be improved due to the proceeds of the Capital Increase. Assuming the total liabilities of the Group remain at the level as at 30 June 2024, the gearing ratio of the Group will be improved due to the proceeds of the Capital Increase.

RECOMMENDATION

Having taken into account the above-mentioned principal factors and reasons, we are of the view that (i) although the Capital Increase is not in the ordinary and usual course of business of the Group, it is fair and reasonable and in the interests of the Company and the Shareholders as a whole; and (ii) the terms of the Capital Increase Agreement are fair and reasonable so far as the Independent Shareholders are concerned. Accordingly, we recommend the Independent Shareholders, as well as the Independent Board Committee to recommend the Independent Shareholders, to vote in favour of the ordinary resolution to be proposed at the EGM.

Yours faithfully,
For and on behalf of
Goldlink Capital (Corporate Finance) Limited
Vincent Cheung
Managing Director

Mr. Vincent Cheung is a licensed person registered with the Securities and Futures Commission and regarded as a responsible officer of Goldlink Capital (Corporate Finance) Limited to carry out type 6 (advising on corporate finance) regulated activities under the SFO and has more than 15 years of experience in corporate finance industry.

1. RESPONSIBILITY STATEMENT

This circular, for which the Directors of the Company collectively and individually accept full responsibility, includes particulars given in compliance with the Hong Kong Listing Rules for the purpose of giving information with regard to the Company. The Directors, having made all reasonable enquiries, confirmed that to the best of their knowledge and belief the information contained in this document is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement herein or this circular misleading.

2. DISCLOSURE OF INTERESTS OF THE DIRECTORS, SUPERVISORS AND CHIEF EXECUTIVE

As at the Latest Practicable Date, the interests and/or short positions of the Directors, Supervisors and chief executives of the Company (the "**Chief Executives**") in the Shares, underlying shares and debentures of the Company or any of its associated corporation (within the meaning of Part XV of the SFO) which were required to be notified to the Company and the Hong Kong Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests or short positions which they were deemed or taken to have under such provisions of the SFO), or which were required to be recorded in the register maintained by the Company under section 352 of the SFO, or otherwise notified to the Company and the Hong Kong Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers are as follows:

Name of Director	Nature of interest	Class of Shares	Number of Shares/ underlying shares held	Long/short position	Approximate percentage of the relevant class of Shares	Approximate percentage of the total issued share capital of the Company
LI Yihua	Beneficial owner	A Share	267,400	Long position	0.01%	0.01%
LIU Jing	Beneficial owner	A Share	267,400	Long position	0.01%	0.01%
LIU Dongjun	Beneficial owner	A Share	200,600	Long position	0.01%	0.01%
ZHAO Hongmei	Beneficial owner	A Share	200,600	Long position	0.01%	0.01%

Long position held in the shares of the associated corporations/underlying Shares

As at the Latest Practicable Date, none of the Directors, Supervisors and chief executives of the Company had any interest in the underlying Shares of the Company.

3. SHAREHOLDINGS OF THE SUBSTANTIAL SHAREHOLDER AND OTHER PERSONS DISCLOSED UNDER THE SFO

So far as is known to the Directors, as at the Latest Practicable Date, saved as the Directors, Supervisors and chief executives, the following persons had interests and/or short positions in the Shares and underlying shares of the Company which were required to be notified to the Company pursuant to Divisions 2 and 3 of Part XV of the SFO, and which were required to be recorded in the register maintained by the Company under section 336 of the SFO:

Name of Shareholder	Nature of interest	Class of Shares	Number of Shares	Long/short position	Approximate percentage of the relevant class of Shares *(Note 1)*	Approximate percentage of the total issued share capital of the Company *(Note 1)*
Chinalco *(Note 2)*	Beneficial owner	A Share	2,176,758,534	Long position	84.16	72.90
	Interest of controlled corporation	A Share	86,925,466	Long position	3.36	2.91
Guizhou Construction Investment Group Co., Ltd. *(Note 3)*	Beneficial owner	H Share	69,096,000	Long position	17.30	2.31
CNMC Trade Company Limited	Beneficial owner	H Share	59,225,000	Long position	14.83	1.98
Peaktrade Investments Ltd.	Beneficial owner	H Share	59,210,000	Long position	14.82	1.98
Leading Gain Investments Limited *(Note 4)*	Nominee of another person (other than passive trustee	H Share	29,612,000	Long position	7.41	0.99
China XD Group	Beneficial owner	H Share	29,612,000	Long position	7.41	0.99

Note 1: The percentage is calculated by dividing number of relevant class of Shares in issue of the Company as at the Latest Practicable Date by total number of Shares.

Note 2: Chinalco is beneficially interested in 2,263,684,000 A Shares, representing approximately 75.81% of the total share capital of the Company. Among them, Chinalco directly holds 2,176,758,534 A shares, representing approximately 72.90% of the Company's total share capital, Luoyang Institute is a wholly-owned subsidiary of Chinalco and directly holds 86,925,466 A Shares, representing approximately 2.91% of the total share capital of the Company. Chinalco is therefore also deemed to be interested in the A Shares held by Luoyang Institute under the SFO.

Note 3: Upon enquiry, The Seventh Metallurgical Construction Group Co., Ltd. changed its name to Guizhou Construction Investment Group Co., Ltd. on 26 July 2023.

Note 4: Leading Gain Investments Limited is the nominee holder of Beijing Jundao Technology Development Co., Ltd.

As at the Latest Practicable Date, so far as is known to the Directors and saved as disclosed above, no persons (other than the Directors, Supervisors and chief executives of the Company) had an interest or short position in the Shares according to the register of interests and short positions required to be maintained by the Company pursuant to section 336 of the SFO.

4. INTERESTS OF DIRECTORS AND SUPERVISORS IN COMPETING BUSINESS

As at the Latest Practicable Date, none of the Directors, proposed Directors and their associates had any competing interest in any business which directly or indirectly competes or is likely to compete with the business of the Group.

5. SERVICE CONTRACTS OF DIRECTORS AND SUPERVISORS

The Company has entered into service contracts with all the Directors and Supervisors. As at the Latest Practicable Date, none of the Directors or Supervisors had entered into or proposed to enter into any service contract with any member of the Group, which contained a provision that the Company must give more than one year's notice or payment of compensation (other than statutory compensation) for termination of the contract.

6. INTERESTS OF DIRECTORS AND SUPERVISORS IN ASSETS OR CONTRACTS

As at the Latest Practicable Date, none of the Directors and Supervisors had: (i) any direct or indirect interests in any asset which had been, since 31 December 2023, being the date to which the latest published audited accounts of the Company were made up, acquired or disposed of by or leased to any member of the Group, or were proposed to be acquired or disposed of by or leased to any member of the Group; and (ii) any material interests in any contract or arrangement subsisting as at the Latest Practicable Date which had a significant impact on the business of the Group.

7. MATERIAL LITIGATION OR ARBITRATION

As at the Latest Practicable Date, the Group was not engaged in any litigation or arbitration of material importance and no litigation or claim of material importance was known to the Directors to be pending or threatened against the Group.

8. MATERIAL ADVERSE CHANGE

As at the Latest Practicable Date, the Directors confirmed that there were no any material adverse change in the financial or trading position of the Group since 31 December 2023, being the date to which the latest published audited consolidated financial statements of the Group were made up.

9. QUALIFICATION AND CONSENT OF EXPERT

The following are the qualifications of the experts who provided opinion or advice contained in this circular:

Name	**Qualification**
Grant Thornton Zhitong Certified Public Accountants LLP	Certified Public Accountants in the PRC
Goldlink Capital (Corporate Finance) Limited	a licensed corporation to carry out type 6 (advising on corporate finance) regulated activities under the SFO
Beijing Guo Rong Xing Hua Asset Appraisal Co., Ltd.	Independent and professional appraiser

Each of Grant Thornton Zhitong Certified Public Accountants LLP, the Independent Financial Adviser and the Appraisal Institution has issued a letter of consent to the publication of this circular, agreeing to publish their respective letters or quote their names in this circular in its current form and content, and has not withdrawn the letter of consent so far.

As at the Latest Practicable Date, Grant Thornton Zhitong Certified Public Accountants LLP, the Independent Financial Adviser and the Appraisal Institution did not hold any equity interest in any member of the Group, nor had the right (whether legally enforceable or not) to subscribe for or nominate others to subscribe for securities of any member of the Group, and Grant Thornton Zhitong Certified Public Accountants LLP, the Independent Financial Adviser and the Appraisal Institution did not have any direct or indirect interests in any asset which had been, since 31 December 2023, being the date to which the latest published audited accounts of the Company were made up, acquired or disposed of by or leased to any member of the Group, or were proposed to be acquired or disposed of by or leased to any member of the Group.

10. DOCUMENTS ON DISPLAY

Copies of the following documents shall be displayed on the website of the Hong Kong Stock Exchange (http://www.hkexnews.hk) and the Company's website (https://zlgj.chinalco.com.cn/) for fourteen days (the last day inclusive) (excluding public holidays) from the date of this circular:

1. the Capital Increase Agreement;

2. the letter of recommendation from the Independent Board Committee of the Company to the Independent Shareholders set out in this circular;

3. the letter issued by the Independent Financial Adviser set out in this circular;

4. the Valuation Reports;

5. the 2023 financial statements and audit reports of the Target Companies;

6. the consent letter issued by Grant Thornton Zhitong Certified Public Accountants LLP;

7. the consent letter issued by the Independent Financial Adviser; and

8. the consent letter issued by the Appraisal Institution.

SUMMARY OF VALUATION REPORTS

Important

This summary is extracted from the main body of the valuation report. If you want to know the details of this valuation and gain reasonable understanding of the valuation conclusion, you should read the main body of the valuation report carefully.

Summary of the Asset Valuation Report on the Entire Shareholders' Equity of Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. Involved in the Proposed Introduction of Strategic Investors to the Subsidiaries by China Aluminum International Engineering Corporation Limited

Guo Rong Xing Hua Ping Bao Zi [2024] No. 010495

China Aluminum International Engineering Corporation Limited:

As engaged by the Company, Beijing Guo Rong Xing Hua Assets Appraisal Co., Ltd. has, in accordance with the laws, administrative regulations and asset valuation standards, and carried out necessary valuation procedures, appraised the market value of the entire shareholders' equity of Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. as at the Valuation Benchmark Date in the principles of independence, objectivity and impartiality. The asset valuation report is summarised as follows:

Purpose of valuation: China Aluminum International Engineering Corporation Limited proposed to introduce strategic investors to its subsidiaries. In this regard, it is necessary to assess the value of the entire shareholders' equity of Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. involved in order to provide reference for the value of the above economic behaviour.

Subject of valuation: the value of the entire shareholders' equity of Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd.

Scope of valuation: all audited assets and liabilities of Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd., including current assets, non-current assets, current liabilities and non-current liabilities.

Valuation benchmark date: 31 December 2023.

Type of value: market value.

Valuation method: asset-based approach and income approach.

Valuation conclusion: this valuation adopted the income approach in concluding the valuation result. The valuation result is set out as follows:

Consolidated net assets attributable to the parent of Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. amounted to RMB604,227,800, book value of the net assets of the parents amounted to RMB470,147,100. Total equity value of shareholders as appraised under the income approach was RMB984,155,200, which is RMB379,927,400 higher than the consolidated net assets attributable to the parent, representing a value appreciation rate of 62.88%, and RMB514,008,100 higher than the parent company's level, representing a value appreciation rate of 109.33%.

Description of major special matters:

The results of this valuation have not taken into account the impact of special transactions such as equity liquidity on equity value.

This asset valuation report is issued for the sole purpose of providing value reference for the economic behaviour described herein, and the valuation conclusion shall be valid for one year from the Valuation Benchmark Date.

Users of the asset valuation report shall fully consider the assumptions, limiting conditions and notes on special matters set out in the asset valuation report and their impacts on the valuation conclusion.

The above has been extracted from the full text of the asset valuation report. For details of this valuation, and in order to properly understand and use the valuation conclusion, you should carefully read the full text of the asset valuation report.

(II) Overview of the Appraised Entity

1. Industrial and Commercial Registration Information

Company Name:	Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. (hereinafter referred to as "**SAMI**")
Unified social credit code:	912101021176814954
Legal representative:	Huang Fei
Type of enterprise:	limited liability company (sole proprietorship of legal person not invested or controlled by natural persons)
Registered capital:	RMB510,743,216
Registered address:	No. 184, Heping North Street, Heping District, Shenyang, Liaoning Province
Date of establishment:	17 January 1991
Term of operation:	17 January 1991 to 16 January 2041

Business scope:	external dispatch of labor required for projects; typing and photocopying; non-ferrous and non-metallic mining; light metal smelting; non-ferrous metallurgy, construction engineering, metallurgy, municipal public utilities, chemical engineering, electric power, building materials engineering survey and design, consulting, supervision, project contracting and sales of equipment and materials; environmental assessment; automatic fire alarm, automatic fire extinguishing engineering design; computer hardware and software and complete sets of equipment, non-standard equipment, environmental protection, power supply and distribution, industrial automation system and building intelligent system technology development and sales, technical consulting, service, technology transfer and commissioning; survey, consultation, design and supervision of foreign and domestic foreign-funded projects; contracting of overseas projects and domestic international bidding projects and export of required equipment and materials; lease of properties; binding, printing; import and export of goods or technologies (except those prohibited by the State or involving administrative approval); design, production, release and agency of all kinds of advertisements at home and abroad. Publication and distribution of Light Metals magazine; conference services. (For items subject to approval according to law, business activities can only be carried out after approval by relevant departments.)

2. *Overview of the Company*

Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. (hereinafter referred to as "**SAMI**"), formerly a civil and architectural design company of the Ministry of Industry of the Northeast People's Government, was established in Harbin in 1951. As the first state-owned design unit of the new China, SAMI has opened up the road of scientific and technological independence in China's aluminum and magnesium industry and become the "cradle" of industry talents, and was high applauded by the Group. In 1953, it moved to Shenyang, successively affiliated to the Ministry of Heavy Industry, the Ministry of Metallurgical Industry, the State Administration of Non-ferrous Metals, China Nonferrous Metals Corporation, etc. In May 2001, it came under direct control by the Aluminum Corporation of China. Over the past 20 years, SAMI has made outstanding contributions to the construction of Chinalco as a world-class non-ferrous metals group.

Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. has a registered capital of RMB510,743,216. China Aluminum International Engineering Corporation Limited contributed by way of cash in an amount of RMB510,743,216, accounting for 100% of the company's registered capital.

Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. (hereinafter referred to as "**SAMI**") is an international engineering technology company principally engaging in the electrolytic aluminum, alumina and carbon industries, including science and technology research and development, engineering consulting, engineering design, new energy materials, green equipment, intelligent application and digital delivery, and general engineering contracting.

Founded in March 1951, SAMI is the first state-owned design enterprise in the new China, opening up the road of scientific and technological independence of China's aluminum and magnesium industry, and becoming the "cradle" of industry talents. The company operates under Aluminum Corporation of China, one of the world's top 500 enterprises. It is also the country's first large-scale comprehensive class-A design and research unit, and is among the top 100 national comprehensive survey and design powerhouses and was named a national "trust worthy" unit.

SAMI has a management team of 6 individuals, including Huang Fei (vice chairman, general manager, deputy Party secretary); Bu Qian (deputy secretary of the Party Committee and secretary of the Commission for Discipline Inspection); Liu Yi, Qiu Yang and Li Zhiguo (Vice General Managers); Wei Xin (Chief Financial Officer), all aged between 40-54 years old and possessed a bachelor's degree or above among the senior management. They are experienced in scientific research and design, engineering management, financial management and enterprise management, and are expert management talents in related fields with a broad international vision and substantial work experience. SAMI has 10 functional departments, 7 design offices, 4 business units and 4 secondary companies, with a workforce of 342 employees, of which 43 were under 35 years old, 141 were between 35 and 44 years old, 111 were between 45 and 54 years old, 47 were over 55 years old. Among them, 3 has obtained doctorate degree, 109 were postgraduates and 180 were undergraduates. Specifically, 72 were senior staff with professor qualification, 144 were senior staff and 63 were intermediate staff. SAMI boasted a total 9 national non-ferrous metal industry engineering survey and design masters, 5 Chinalco chief engineers, 22 experts enjoying subsidies offered by the State Council, 2 engineering design masters in Liaoning Province, 4 "diamond" science and technology talent selected by Chinalco, and 12 "up and coming stars".

3. *Equity structure of the company on the benchmark date*

As of the Valuation Benchmark Date, the equity structure of Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. is as follows:

Serial number	**Name of investor**	**Subscription amount** *(RMB0'000)*	**Amount paid** *(RMB0'000)*	**Shareholding ratio** *(%)*
1	China Aluminum International Engineering Corporation Limited	51,074.3216	51,074.3216	100.00
	Total	51,074.3216	51,074.3216	100.00

5. ***The assets, liabilities, equity and operating performance of the assessed entity in recent years***

Financial position of the assessed entity in recent years
(based on the parent company)

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	116,886.91	113,810.49	127,028.64
Total liabilities	64,740.21	61,783.11	80,013.93
Shareholders' equity	52,146.70	52,027.39	47,014.71
Operating performance	**2021**	**2022**	**2023**
Operating income	31,919.44	75,627.16	60,494.79
Total profit	2,371.78	7,631.02	1,829.49
Net profit	2,315.37	7,043.95	1,649.94

Financial position of the assessed entity in recent years
(consolidated basis)

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	133,002.70	146,645.21	159,773.21
Total liabilities	71,009.00	82,322.40	98,277.80
Shareholders' equity	61,993.71	64,322.81	61,495.40
Operating performance	**2021**	**2022**	**2023**
Operating income	47,016.00	125,442.18	92,027.81
Total profit	1,712.19	10,275.97	4,200.68
Net profit	1,599.41	9,653.41	3,933.36

The 2021 financial data within the scope of this assessment has been audited by WUYIGE Certified Public Accountants LLP and an audit report Daxin Shen Zi [2022] No. 1-04988 with an unqualified opinion issued; the 2022 financial data has been audited by WUYIGE Certified Public Accountants LLP and an audit report Daxin Shen Zi [2023] No. 1-00890 with an unqualified opinion was issued; the 2023 financial data has been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report Zhitong Shen Zi [2024] 110C017790 with an unqualified opinion was issued.

6. Overview of long-term equity investments

(1) Shenyang Boyu Technology Co., Ltd.

1) Industrial and commercial situation

Name:	Shenyang Boyu Technology Co., Ltd.
Unified social credit code:	9121011174649334XR
Type:	other limited liability company (sole proprietorship of a legal person invested or controlled by a non-natural person)
Registered address:	No. 176-1, Dingxiang Street, Sujiatun District, Shenyang
Legal representative:	Qiu Yang
Registered capital:	RMB70 million
Date of establishment:	19 May 2003
Business period:	19 May 2003 to 19 May 2033

Business scope: Permitted items: construction engineering (for items subject to approval according to law, business activities can only be carried out after being approved by relevant departments, and the specific business items shall be subject to the approval documents or licenses of relevant departments). General items: technical services, technology development, technology consultation, technology exchange, technology transfer, technology popularization, engineering and technology research and experimental development, air pollution control, air pollution prevention and control services, environmental protection consulting services, foreign contracting projects, metallurgy special equipment manufacturing, environmental protection special equipment manufacturing, carbon emission reduction, carbon conversion, carbon capture, carbon storage technology research and development, new material technology research and development, new material technology promotion services, sales of special equipment for environmental protection, solid waste treatment, water pollution treatment, sewage treatment and its recycling, engineering management services, big data services, internet data services, machinery parts, parts processing, machinery and electrical equipment manufacturing, machinery equipment sales, machinery and electrical equipment sales, machinery equipment research and development, special equipment manufacturing (excluding licensed professional equipment manufacturing), industrial automatic control system device manufacturing, distribution switch control equipment manufacturing, electronic components and electromechanical components equipment sales, software development, industrial control computer and system manufacturing, computer system services, industrial automatic control system device sales, software sales, intelligent control system integration, development of artificial intelligence application software, retail of computer hardware, software and auxiliary equipment, professional design services, manufacturing of graphite and carbon products, sales of graphite and carbon products, sales of industrial control computers and systems (except for items subject to approval according to law, business activities are independently carried out according to law with the business license.)

2) Shareholding structure

As of the Valuation Benchmark Date, the company's shareholding structure is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Paid-in capital *(RMB0'000)*	Percentage of subscribed capital
Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd.	7,000.00	7,000.00	100.00%
Total	7,000.00	7,000.00	100.00%

3) The company's assets, liabilities, equity and operating performance in recent years

The financial position of the assessed unit in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	21,375.08	41,655.97	38,544.29
Total liabilities	14,611.04	27,717.68	23,006.07
Shareholders' equity	6,764.04	13,938.29	15,538.22
Operating performance	**2021**	**2022**	**2023**
Operating income	14,448.05	59,160.01	34,687.72
Total profit	264.02	2,211.37	1,641.15
Net profit	230.90	2,196.16	1,599.92

The above-mentioned data for 2021 and 2022 has been audited by WUYIGE Certified Public Accountants LLP and audit reports Daxin Shen Zi [2022] No. 1-04990 and Daxin Shen Zi [2023] No. 1-00892 with an unqualified opinion has been issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report Zhitong Shen Zi [2024] No. 110C007791 with an unqualified opinion has been issued.

(2) Shenyang Aluminum-Magnesium Technology Co., Ltd.

1) Industrial and commercial situation

Name:	Shenyang Aluminum-Magnesium Technology Co., Ltd.
Unified social credit code:	91210102793184312H
Type:	limited liability company (sole proprietorship of a legal person invested or controlled by a non-natural person)
Registered address:	No. 184, Heping North Street, Heping District, Shenyang
Legal representative:	Qiu Yang
Registered capital:	RMB10.5 million
Date of establishment:	14 December 2006
Business period:	14 December 2006 to 13 December 2026

Business scope:	Permitted items: intelligent building system design, electrical installation services, construction engineering construction (for items subject to approval according to law, business activities can only be carried out after being approved by relevant departments, and the specific business items shall be subject to the approval documents or licenses of relevant departments). General items: software development, intelligent control system integration, information system integration services, artificial intelligence industry application system integration services, industrial Internet data services, digital technology services, internet security services, artificial intelligence application software development, engineering and technology research and experimental development, integrated circuit design, intelligent robot research and development, information system operation and maintenance services, information technology consulting services, industrial engineering design services, Internet of Things equipment manufacturing, electronic products sales, Internet of Things equipment sales, wearable smart equipment sales, industrial automatic control system device sales, power distribution switch control equipment sales, capacitors and their supporting equipment sales, metallurgical special equipment sales, communication equipment sales, mechanical parts, spare parts sales, supply instrumentation sales, information security equipment sales, digital video surveillance system sales, intelligent unmanned aerial vehicle sales, network equipment sales, software sales, electrical equipment sales, mechanical electrical equipment sales, power electronic components sales, integrated circuit sales, technology import and export, goods import and export, import and export agents, technical service, technology development, technology consultation, technology exchange, technology transfer, technology promotion (except for items subject to approval according to law, business activities are independently carried out according to law with the business license.)

2) Shareholding structure

As of the Valuation Benchmark Date, the company's shareholding structure is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Paid-in capital *(RMB0'000)*	Percentage of subscribed capital
Shenyang Aluminum and Magnesium Engineering and Research Institute Company Limited	1,050.00	1,050.00	100.00%
Total	1,050.00	1,050.00	100.00%

3) The company's assets, liabilities, equity and operating performance in recent years

The financial status of the assessed unit in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	31 December 2021	31 December 2022	31 December 2023
Total assets	14,157.16	11,096.26	12,934.60
Total liabilities	9,752.95	6,301.21	7,735.42
Shareholders' equity	4,404.21	4,795.05	5,199.18
Operating performance	**2021**	**2022**	**2023**
Operating income	7,130.70	5,385.04	4,249.92
Total profit	200.95	398.63	417.32
Net profit	225.03	390.84	404.13

The above-mentioned data for 2021 and 2022 have been audited by WUYIGE Certified Public Accountants LLP and audit reports Daxin Shen Zi [2022] No. 1-04991 and Daxin Shen Zi [2023] No. 1-00893 with an unqualified opinion has been issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report Zhitong Shen Zi [2024] No. 110C007792 with an unqualified opinion has been issued.

(3) Shenyang Shengxin Construction Engineering Project Management Co., Ltd.

1) Industrial and commercial situation

Name:	Shenyang Shengxin Construction Engineering Project Management Co., Ltd.
Unified social credit code:	9121010224357835XM
Type:	limited liability company (sole proprietorship of a legal person invested or controlled by a non-natural person)
Registered address:	No. 184, Heping North Street, Heping District
Legal representative:	Qiu Yang
Registered capital:	RMB4,118,028
Date of establishment:	4 March 1994
Business period:	4 March 1994 to 3 March 2044
Business scope:	Project supervision; engineering project management; engineering and technical consultation; project cost consulting; project bidding agent; property management; construction labor subcontracting services; import and export of various kinds of commodities and technologies (except those commodities and technologies whose import and export are restricted or prohibited by the state); machinery and equipment rental and maintenance; hardware and electrical, chemical products, building materials, decorative materials, plumbing equipment, non-ferrous metal materials, concrete, mechanical equipment, water supply equipment, power equipment; pre-packaged food sales; design, manufacture and installation of non-standard equipment and metal structural parts; air conditioning and environmental purification system technology development, technical consulting, technical services, technology transfer; installation and commissioning of mechanical and electrical equipment; parking lot management; general merchandise retail; cigarette and cigar retail. (For items subject to approval according to law, business activities can only be carried out after being approved by relevant departments.)

2) Shareholding structure

As of the Valuation Benchmark Date, the company's shareholding structure is as follows:

Shareholder Name	**Subscribed capital** *(RMB0'000)*	**Paid-in capital** *(RMB0'000)*	**Percentage of subscribed capital**
Shenyang Aluminum and Magnesium Engineering and Research Institute Company Limited	411.8028	411.8028	100.00%
Total	411.8028	411.8028	100.00%

3) The company's assets, liabilities, equity and operating performance in recent years

The financial status of the assessed unit in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	1,958.48	2,142.80	2,259.81
Total liabilities	591.94	596.91	593.17
Shareholders' equity	1,366.54	1,545.88	1,666.64
Operating performance	**2021**	**2022**	**2023**
Operating income	2,898.40	3,145.60	3,280.52
Total profit	235.73	186.58	133.01
Net profit	224.38	179.34	120.76

The above-mentioned data for 2021 and 2022 have been audited by WUYIGE Certified Public Accountants LLP and audit reports Daxin Shen Zi [2022] No. 1-04992 and Daxin Shen Zi [2023] No. 1-00894 with an unqualified opinion has been issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report Zhitong Shen Zi [2024] No. 110C007793 with an unqualified opinion has been issued.

(4) Beijing Autosky Science & Technology Co., Ltd.

1) Industrial and commercial situation

Name:	Beijing Autosky Science & Technology Co., Ltd.
Unified social credit code:	911101085858988390
Type:	other limited liability company
Registered address:	Room 106, 1st Floor, Building 2, No. 99 Xingshikou Road, Haidian District, Beijing
Legal representative:	Qiu Yang
Registered capital:	RMB17.5 million
Date of establishment:	26 October 2011
Business period:	26 October 2011 to 25 October 2061
Business scope:	Technology development, technology dissemination, technology transfer, technology consulting, technology services; specialized contracting; basic software services; application software services; software development; sales of software, hardware and electrical, electronic products, mechanical equipment; import and export of goods, agent import and export, technology import and export. (Market entities shall independently choose business projects and carry out business activities in accordance with the law; for projects subject to approval according to law, business activities shall be carried out in accordance with the approved contents after approval by relevant departments; prohibited from engaging in business activities prohibited and restricted by national and municipal industrial policies.)

2) Shareholding structure

As of the Valuation Benchmark Date, the company's shareholding structure is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Paid-in capital *(RMB0'000)*	Percentage of subscribed capital
Shenyang Aluminum and Magnesium Engineering and Research Institute Company Limited	1,050.00	1,050.00	60.00%
Zhou Yanshan	595.00	595.00	34.00%
Li Feng	105.00	105.00	6.00%
Total	1,750.00	1,750.00	100.00%

3) The company's assets, liabilities, equity and operating performance in recent years

The financial status of the assessed unit in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	31 December 2021	31 December 2022	31 December 2023
Total assets	3,751.28	3,950.63	4,685.27
Total liabilities	776.40	1,296.78	2,003.72
Shareholders' equity	2,974.88	2,653.86	2,681.55
Operating performance	**2021**	**2022**	**2023**
Operating income	2,695.78	2,698.14	2,157.24
Total profit	522.78	94.59	294.17
Net profit	486.81	89.33	273.07

The above-mentioned data for 2021 and 2022 have been audited by WUYIGE Certified Public Accountants LLP and audit reports Daxin Shen Zi [2022] No. 1-04989 and Daxin Shen Zi [2023] No. 1-00891 with an unqualified opinion has been issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report Zhitong Shen Zi [2024] No. 110C007798 with an unqualified opinion has been issued.

The above data was provided by the enterprise.

(III) The relationship between the Principal and the assessed entity

The Principal is China Aluminum International Engineering Corporation Limited, and the assessed entity is Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd., which is a wholly-owned subsidiary of the Principal.

(IV) Other users of asset valuation report as agreed upon in the asset appraisal entrustment contract

Except for the Principal and its superior administrative unit, the asset appraisal entrustment contract does not stipulate other users of the valuation report; unless otherwise provided by national laws and regulations, any organization or individual that has not been confirmed by the appraisal institution cannot become a user of the valuation report by virtue of obtaining the valuation report.

II. Purpose of appraisal

China Aluminum International Engineering Co., Ltd. plans to introduce strategic investors to its subsidiary. For this purpose, it is necessary to evaluate the total equity value of the shareholders of Shenyang Aluminum and Magnesium Design and Research Institute Co., Ltd. involved to provide a value reference for the above economic behavior.

The above economic behavior has been approved by a resolution of the seventh meeting of board of directors of Chinalco in 2024.

III. Evaluation object and scope

(I) Target of appraisal

The target of appraisal is the total equity value of shareholders of Shenyang Aluminum and Magnesium Design Institute Co., Ltd.

(II) Scope of appraisal

The scope of the appraisal is all assets and liabilities of Shenyang Aluminum and Magnesium Design Institute Co., Ltd. as of the Valuation Benchmark Date of 31 December 2023. The total assets are RMB1,270,286,400, of which: current assets are RMB876,792,700 and non-current assets are RMB393,493,700; the total liabilities are RMB800,139,300, of which: current liabilities are RMB736,515,200 and non-current liabilities are RMB63,624,200; the total owner's equity is RMB470,147,100.

The object and scope of the entrusted appraisal are consistent with the object and scope of the appraisal involved in the economic behavior.

As of the Valuation Benchmark Date, the book value of assets and liabilities of Shenyang Aluminum and Magnesium Design Institute Co., Ltd. within the valuation scope has been audited by Grant Thornton Zhitong Certified Public Accountants LLP, and an unqualified audit report No. Zhi Tong Shen Zi [2024] 110C007790 has been issued.

(III) Status of major assets within the scope of appraisal

The main physical assets included in this appraisal include: inventory, investment properties, buildings (structures), equipment assets and construction in progress – equipment. The types and characteristics of the assets are as follows:

1. Inventory

The inventories included in the scope of this appraisal are mainly raw materials and working capital materials in use.

A total of 97 raw materials were included in the scope of this appraisal, mainly isolation suits, protective masks, protective goggles and electric kettles for employees. All inventories were managed in an orderly manner and were in normal use as of the Valuation Benchmark Date.

There are 5 items of working capital materials in use included in the scope of this appraisal, mainly mesh chairs, conference supplies, calculators, network testers and mapping instruments, etc. As of the Valuation Benchmark Date, they are in normal use.

2. Investment properties

There are two investment properties included in the scope of this appraisal, which are a comprehensive building and a main office building located in Shenyang City. They were built in 1995 and 1988 respectively, and have mixed building structures. As of the Valuation Benchmark Date, both have been rented out.

3. Buildings (structures)

There are 8 buildings included in the scope of this appraisal, mainly residential buildings and staff dormitories, with mixed building structures. Among them, Building 78 of Shuntian Community and Courtyard 23 of Yunji Street were obtained through debt offset judgments; 020004 commercial housing (Haitian Apartment) was purchased, and the rest of the properties were self-built. As of the Valuation Benchmark Date, the above assets were all in normal use.

There are 3 structures included in the scope of this appraisal, mainly security booths, metal sheet houses and bicycle sheds; they were built between 2006 and 2007, and the building structures are mainly plastic steel, color steel and iron, etc. As of the Valuation Benchmark Date, the above assets are in normal use.

4. Equipment assets

Equipment assets included in the appraisal scope include machinery and equipment, vehicles and office equipment.

A total of 130 items of machinery and equipment were included in the scope of this appraisal, mainly including furnace planning robots, circuit breakers, separators and vacuum metallurgical furnaces, etc. As of the Valuation Benchmark Date, the above assets were in normal use.

A total of 25 vehicles were included in the scope of this appraisal, including Trumpchi GAC6520MDA6A, Buick BUICKSGM6522UBB5, and Derby Previa JINGE52M. As of the Valuation Benchmark Date, except for 3 assets that were in a state of pending scrap, the rest of the vehicles were in normal use.

A total of 2,199 items of office equipment were included in the scope of this appraisal, mainly including servers, printers, notebooks, televisions, etc. As of the Valuation Benchmark Date, the above assets were all in normal use.

5. Construction in progress – equipment

The construction in progress and equipment included in the scope of the appraisal is the temporary busbar purchased in 2021. As of the Valuation Benchmark Date, the above assets are in normal use.

(IV) Intangible assets declared by the enterprise

The intangible assets included in the valuation scope are mainly land, software and intellectual property rights.

1. Intangible assets – land

There are 2 intangible assets – land, which are used for scientific research and design, with an area of 10,386.80 m^2, acquired through transfer in 2004. As of the Valuation Benchmark Date, there is no mortgage, pledge or guarantee on the assets.

2. Intangible assets – software

Intangible assets-software are 107 items of office software purchased by the unit under appraisal, with a book value of RMB7,414,410.49. As of the Valuation Benchmark Date, all of them were in normal use.

3. Intangible assets – intellectual property

The intangible assets and intellectual property rights declared by the enterprise are 571 externally purchased patents, which are in normal use as of the Valuation Benchmark Date.

(V) Other off-book assets reported by the enterprise

The off-balance sheet assets declared by the enterprise are 256 patents, 22 software copyrights and 4 trademarks. None of the above intangible assets are pledged.

(VI) The asset types, quantities and book values (or assessed values) involved in the conclusions of reports issued by other institutions.

The financial data within the scope of this appraisal has been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report Zhi Tong Shen Zi [2024] No. 110C007790 has been issued.

IV. *Value type*

According to the purpose of this appraisal, the value type of the appraisal object is determined to be market value.

Market value refers to the estimated value of the subject of appraisal in a normal and fair transaction on the Valuation Benchmark Date between a willing buyer and a willing seller, each acting rationally and without any coercion.

V. *Valuation benchmark date*

(I) The Valuation Benchmark Date of this report is 31 December 2023.

(II) The Valuation Benchmark Date is determined by the client based on economic behavior.

(III) In the current asset appraisal, the definition of the scope of appraisal, the selection of appraisal parameters, the determination of the appraisal value, etc. are all determined based on the internal financial statements of the enterprise, the external economic environment and the market conditions on the Valuation Benchmark Date. All pricing standards in this report are the price standards effective on the Valuation Benchmark Date.

VI. *Basis of appraisal*

(I) Economic behavior basis

1. The Resolution of the Seventh Session of Board of Directors of Chinalco in 2024.

(II) Legal and regulation basis

1. Asset Appraisal Law of the People's Republic of China (adopted at the 21st meeting of the Standing Committee of the 12th National People's Congress on 2 July 2016);

2. Civil Code of the People's Republic of China (adopted at the third session of the 13th National People's Congress on 28 May 2020);

3. Securities Law of the People's Republic of China (revised for the second time at the 15th meeting of the Standing Committee of the 13th National People's Congress on 28 December 2019);

4. Company Law of the People's Republic of China (revised at the 6th meeting of the Standing Committee of the 13th National People's Congress on 26 October 2018);

5. Measures for the Financial Supervision and Administration of the Asset Appraisal Industry (Order No. 97 of the Ministry of Finance of the People's Republic of China);

6. Enterprise Income Tax Law of the People's Republic of China (amended at the 7th Session of the Standing Committee of the 13th National People's Congress on 29 December 2018);

7. Regulations for the Implementation of the Enterprise Income Tax Law of the People's Republic of China (State Council Decree No. 714, 23 April 2019);

8. Law of the People's Republic of China on State-owned Assets in Enterprises (adopted at the fifth meeting of the Standing Committee of the Eleventh National People's Congress on 28 October 2008);

9. Interim Regulations on the Supervision and Administration of State-owned Assets of Enterprises (revised by State Council Decree No. 709 on 2 March 2019);

10. Measures for the Supervision and Administration of Enterprise State-owned Assets Transactions (State-owned Assets Supervision and Administration Commission of the State Council and Ministry of Finance Order No. 32);

11. Measures for the Administration of State-owned Assets Appraisal (issued by State Council Decree No. 91, revised by State Council Decree No. 732);

12. Interim Measures for the Administration of Enterprise State-owned Assets Appraisal (State-owned Assets Supervision and Administration Commission of the State Council Decree No. 12);

13. Notice on Strengthening the Management of Enterprise State-owned Assets Appraisal (Guo Zi Wei Chan Quan [2006] No. 274);

14. Notice on Matters Concerning the Review of Enterprise State-owned Assets Valuation Reports (Guo Zi Chan Quan [2009] No. 941);

15. Guidelines for the Record-filing of Enterprise State-owned Assets Appraisal Projects (Guo Zi Fa Chan Quan [2013] No. 64);

16. Enterprise Accounting Standards – Basic Standards (Ministry of Finance Order No. 33), Ministry of Finance's Decision on Amending the Enterprise Accounting Standards – Basic Standards (Order of the Ministry of Finance No. 76);

17. Notice of the Ministry of Finance and the State Administration of Taxation on Several Issues Concerning the Implementation of the Value-Added Tax Transformation Reform Nationwide [Amendment of Articles] (Cai Shui [2008] No. 170);

18. Provisional Regulations of the People's Republic of China on Value Added Tax (State Council Decree No. 691);

19. Detailed Rules for the Implementation of the Provisional Regulations of the People's Republic of China on Value Added Tax (Order No. 50 of the Ministry of Finance and the State Administration of Taxation);

20. Notice of the Ministry of Finance and the State Administration of Taxation on Adjusting the Value-Added Tax Rate (Cai Shui No. 32, 2018);

21. Announcement on Policies Concerning Deepening Value-Added Tax Reform (Announcement No. 39 of 2019 by the Ministry of Finance, the State Administration of Taxation, and the General Administration of Customs);

22. Notice on Comprehensively Launching the Pilot Program of Replacing Business Tax with Value-Added Tax (Cai Shui [2016] No. 36);

23. Vehicle Purchase Tax Law of the People's Republic of China (adopted at the 7th Session of the Standing Committee of the 13th National People's Congress on 29 December 2018);

24. Urban Real Estate Administration Law of the People's Republic of China (Decree No. 72 of the President of the People's Republic of China);

25. Land Administration Law of the People's Republic of China (Decree No. 28 of the President of the People's Republic of China, as amended for the second time in 2004);

26. Regulations for the Implementation of the Land Administration Law of the People's Republic of China (as amended on 29 July 2014);

27. Provisional Regulations of the People's Republic of China on Urban Land Use Tax (Decree No. 645 of the State Council of the People's Republic of China);

28. Other relevant laws, regulations and notification documents.

VII. Valuation methodology

(I) Selection of valuation method

The Asset Valuation Practice Standards – Enterprise Value stipulates that when performing enterprise value valuation business, the applicability of the three basic methods of income method, asset-based method and market method should be analyzed according to the valuation purpose, valuation object, value type, data collection, etc., and the valuation method should be selected. For enterprise valuation that is suitable for different valuation methods, asset valuation professionals should use more than two valuation methods for valuation. The valuation methods selected for this valuation are: asset-based method and income method. The reasons for selecting the valuation method are as follows:

Due to the limited channels for obtaining transaction information in the domestic property rights trading market and the large differences in business composition among similar enterprises, it is extremely difficult to select market references of the same type. Therefore, the market method was not used in this appraisal.

The entity being appraised in this report has the prerequisite of going concern, and the selection of economic and technical parameters involved in the application of the asset-based method has sufficient data as the basis and foundation. Combined with the asset appraisal object, value type, appraisal purpose and the information collected by the appraiser, it is determined to use the asset-based method for appraisal.

The income present value method evaluates assets from the perspective of their expected profitability, which can fully reflect the overall value of the enterprise. That is, for investors, the value of the enterprise lies in the expected future earnings that the enterprise can generate. Although the income present value method does not directly use reference objects in the real market to illustrate the current fair market value of the evaluation object, it evaluates assets from the perspective of the expected profitability of assets, which is the basic basis for determining the current fair market value of assets. It can fully reflect the overall value of the enterprise, and its evaluation conclusion has good reliability and persuasiveness. After interviewing the company's management and conducting research and analysis, the appraiser believes that the conditions for income present value method evaluation are met.

(II) Introduction to the asset-based method

The asset-based method, also known as the cost-plus method, uses the amount of investment required to rebuild an enterprise or an independent profit-making entity identical to the subject of the appraisal on the Valuation Benchmark Date as the basis for judgment of the overall asset value. Specifically, it refers to a method of calculating the enterprise value by adding up the assessed values of the various element assets that constitute the enterprise and subtracting the assessed value of liabilities.

1. Current assets

The scope of current asset appraisal includes cash, accounts receivable, receivables financing, prepaid expenses, other receivables, inventory, contract assets and other current assets.

(1) Monetary funds: bank deposits and other monetary funds, verify bank statements, bank confirmations, check general ledgers, detailed ledgers, vouchers, etc., and determine the valuation based on the verified value. The value of foreign currency is determined by converting it into RMB based on the foreign currency midpoint rate announced by the People's Bank of China on the Valuation Benchmark Date.

(2) Accounts receivable: including accounts receivable, accounts receivable financing and other receivables. The appraiser first checks the declaration form, general ledger, detailed ledger, and original vouchers to verify the correctness of the amounts listed in the declaration form. After verifying that the other receivable is correct, the appraiser talks with the company's financial personnel and related personnel based on the customer business content, occurrence date, and amount listed in the detailed other receivable table reported by the unit being appraised. The financial personnel and relevant personnel gave a detailed introduction to the actual situation of the debtor unit. The appraiser analyzes the reasons for the formation of other receivable, the time of occurrence of the payment, and the credit status of the debtor in accordance with the provisions of the Enterprise Accounting Standards and relevant laws and regulations, and determines the recoverability of the outstanding balances of each account. For those where there are sufficient reasons to believe that all accounts receivable can be recovered, the valuation is calculated based on the total amount of accounts receivable; for those where it is very likely that part of the money will not be recovered, with the assistance of historical data and on-site

investigations, the time and reason for the arrears, the recovery of the money, the debtor's funds, credit, and business management status are analyzed in detail to determine the amount of money that may not be recovered, and the valuation amount is confirmed by deducting the amount of money that may not be recovered from the book balance; for general customers, sufficient discussions are held with relevant personnel of the unit being appraised and the auditor to estimate the part of the money that may not be recovered, and the aging analysis method is used to determine the valuation risk loss, and at the same time, the bad debt provision for other receivable set aside on the Valuation Benchmark Date is assessed to be zero.

(3) Prepaid Accounts: The appraiser first checks the declaration form, general ledger, detailed ledger and original vouchers to verify the correctness of the amount listed in the declaration form. After verifying that the prepaid amount is correct, the appraiser talks with the company's financial personnel and related personnel based on the customer business content, date of occurrence and amount listed in the detailed list of prepaid amounts declared by the unit being appraised. The financial personnel and related personnel gave a detailed introduction to the actual situation of the debtor unit. The appraiser analyzes the reasons for the formation of prepaid amounts in detail in accordance with the requirements of relevant laws and regulations on asset appraisal, and determines the appraised value based on the assets or rights formed by the corresponding goods that can be recovered.

(4) Inventories: In the course of the assessment, the appraiser checked the inventory within the scope of the appraisal on the basis of the consistency of the accounts and tables, and based on the inventory schedule provided by the unit under appraisal, the assessors, together with the person in charge of finance, the person in charge of the supply department and the person in charge of items in the warehouse, carried out a spot-check inventory, recorded the results of the inventory in detail, and compiled a spot-check inventory table. It was verified that the accounts of the enterprise were in line with the inventory after the spot-check inventory. This part of the inventory is for the enterprise's own use, and the appraisal value was confirmed on the basis of the verified book value.

(5) Contract assets: The appraiser firstly checks the declaration form as well as the general ledger and the detailed accounts and consults the original documents to verify the correctness of the amounts listed in the declaration form. On the basis of verifying the correctness of the contract assets, based on the content of the customer's business, the date of the last change and the amount listed in the schedule of contract assets declared by the unit being appraised, the appraiser talked with the financial staff and relevant personnel of the company, and the financial staff and relevant personnel introduced the actual situation of the debtor unit in detail. The appraiser analyzed the contract assets in accordance with the Accounting Standards for Business Enterprises as well as the regulations related to appraisal. The appraiser analyzed the reasons for the formation of the assets, the time of occurrence of the payments and the creditworthiness of the defaulting parties in accordance with the provisions of the Accounting Standards for Business Enterprises and the relevant regulations on appraisal, and judged the recoverability of the amounts owed in each account. For those with sufficient reasons to believe that all the amounts are recoverable, the appraised value was calculated on the basis of the entire contract assets; for those where it is very likely that part of the funds will not be recovered, with the assistance of historical data and on-site investigations, the time and reason for the arrears, the recovery of the funds, the funds, credit, and management status of the debtor are analyzed in detail to determine the amount of funds that may not be recovered, and the appraised value is confirmed by deducting the amount of funds that may not be recovered from the book balance; for general customers, sufficient discussions are held with the relevant personnel of the unit under appraisal and the auditor to estimate the part of the funds that may not be recovered, and the aging analysis method is used to determine the valuation risk loss, and at the same time, the provision for bad debts of contract assets accrued on the Valuation Benchmark Date is assessed to be zero.

(6) Other current assets: The appraiser checked relevant documents and vouchers and talked with the company's financial personnel and related personnel. The financial personnel and related personnel gave a detailed introduction to the actual financial accounting situation of the unit being appraised, and the appraisal value was determined based on the verified book value.

2. Non-current assets

The appraisal scope of non-current assets includes long-term receivables, long-term equity investments, other equity instrument investments, investment properties, fixed assets, construction in progress, intangible assets, and deferred income tax assets.

(1) Long-term receivables

The appraiser investigated the reasons for the occurrence of long-term receivables, reviewed the relevant contracts and accounting vouchers, communicated with the personnel of the unit under appraisal, and used the verified book value as the appraised value.

(2) Long-term equity investment

According to the long-term equity investment details table, relevant investment agreements, business licenses of corporate legal persons of invested units, capital verification reports, articles of association, financial statements on the Valuation Benchmark Date and other information are collected and compared with the contents listed in the asset valuation declaration form. After verification, there are no adjustments. The appraiser learns from the enterprise about the accounting method of long-term equity investment and the operating conditions of the invested unit, focusing on the actual control of the invested unit, and adopts the following valuation methods based on the actual control of the invested unit:

1) Holding long-term investment company

Companies appraised using the asset-based approach and the income approach.

Based on the information that the assessed company can provide and the appraiser can collect from outside to meet the requirements of the asset-based method, the asset-based method can be used to conduct a comprehensive inventory and appraisal of the assets and liabilities of the assessed company; the income method can be used for companies that have had normal historical operations, have business occurring, and is able to provide future operating plans, development plans and profit forecasts.

The appraised value of long-term equity investments is determined by multiplying the value of all shareholders' equity after overall appraisal of the investee by the shareholding ratio.

(3) Other equity instrument investments

The appraiser determined the appraised value based on the verified book value by consulting the relevant investment agreements, base date statements and related impairment statements.

(4) Investment properties

Due to the active transactions of residential and commercial real estate, buildings for which we could obtain similar housing and building transaction cases in the same area are appraised using the market comparison method; for properties with poor market reference, we use the income method to discount and calculate based on their market rental net income. The real estate appraisal value calculated by the market method and the income method includes the value of land use rights.

The calculation steps of the market method are as follows:

1) Based on the substitution principle, the price of real estate transaction examples with the same or similar uses in the same area or the same supply and demand circle is used as the reference. By comparing the regional conditions, physical conditions, equity conditions, transaction timing and transaction conditions of the real estate to be appraised with those of the transaction examples, the real estate price of the transaction examples is corrected for regional conditions, physical conditions, equity conditions, transaction date and transaction conditions, and the price of the real estate as at the Valuation Benchmark Date is obtained.

2) Determination of correction coefficient

Transaction condition correction factor = normal market price condition index/actual transaction price condition index

Transaction date correction factor = valuation timing factor condition index/transaction date factor condition index

Regional condition correction factor = appraisal target regional condition factor condition index/ comparable instance regional condition factor condition index

Physical condition correction factor = physical condition factor condition index of the assessed object/ physical condition factor condition index of the comparable example

Equity status correction factor = equity status factor condition index of the evaluation object/equity status factor condition index of comparable examples

(5) Building (structure) category fixed assets

The same valuation method as investment real estate.

(6) Equipment category fixed assets

We check the equipment list provided by the enterprise to ensure that the accounts are consistent with the table, and confirm the ownership by reviewing and verifying the relevant contracts, legal ownership certificates and accounting vouchers. On this basis, we conduct necessary on-site investigation and verification of the principal equipment.

Based on the characteristics of various types of equipment, the type of appraised value, data collection conditions and other relevant conditions, the cost method is mainly used for evaluation, and the market method is partially used for evaluation.

1. Machinery and equipment

(1) Determination of the full replacement price

Full replacement price = equipment purchase costs + freight and miscellaneous expenses + installation engineering costs + basic costs + pre-construction and other expenses + capital costs – deductible VAT input tax

1) Equipment purchase costs

The purchase cost of machinery and equipment is mainly determined by market inquiry or by reference to the 2023 China Mechanical and Electrical Products Price Manual, or by reference to the contract price of similar equipment purchased recently. For equipment whose purchase price cannot be found, the purchase price is estimated by using the price change rate or relevant price index of equipment of the same generation and category.

2) Freight and miscellaneous expenses

Freight and miscellaneous expenses refer to the transportation fees, loading and unloading fees and other relevant miscellaneous expenses during the transportation of equipment. It is determined according to the distance between the origin and destination of the equipment, and with reference to the Handbook of Common Data and Parameters for Asset Valuation. The calculation formula for freight and miscellaneous expenses is as follows:

Freight and miscellaneous expenses = Equipment purchase price × rate of freight and miscellaneous expenses

If the contract price includes transportation costs, they will not be calculated again.

3) Installation engineering costs

According to the seller's quotation conditions, if the quotation includes installation engineering costs, no installation engineering costs will be charged; if the quotation does not include installation engineering costs, the actual installation and commissioning costs will be calculated based on the budget data, and the unreasonable costs caused by abnormal factors will be eliminated to reasonably determine the costs; if there are no budget data, the actual installation engineering costs expenditure of the enterprise will be used, with reference to the installation engineering costs rate level of similar equipment with the same purpose, the Manual of Common Data and Parameters for Asset Valuation will be referred to and carry out reasonable determination after comprehensive calculation.

For small equipment that does not require installation, installation fees are not considered.

4) Basic costs

For large equipment, if the equipment foundation is independent, refer to the Manual of Common Data and Parameters for Asset Valuation and make a reasonable determination after comprehensive calculation.

For small and general equipment, no separate foundation is required and the equipment foundation fee is not considered; for foundation projects that have been recorded as separate buildings, the equipment foundation fee is not considered.

5) Preliminary and other expenses

The preliminary and other expenses include project construction management fees, production preparation fees, scientific research and testing fees, survey and design fees, and soil and water conservation facility compensation fees. The calculation of each fee shall refer to the relevant charging standards formulated by various state ministries and commissions.

According to the document "Cai Shui [2016] No. 36", the pilot program of replacing business tax with value-added tax will be fully implemented nationwide from 1 May 2016. The rate of the preliminary fees within the scope of the business tax-to-value-added tax reform shall be deducted from the corresponding value-added tax rate.

6) Capital costs

The capital costs are determined based on the reasonable construction period of the project, the quoted interest rate of the corresponding period on the Valuation Benchmark Date, and the sum of equipment purchase costs, installation project costs, and preliminary and other costs.

7) Deductible input VAT

For those who meet the conditions for VAT deduction, the deductible VAT input tax amount will be calculated and then deducted.

8) Determination of comprehensive newness rate

The determination is made through on-site inspection of the equipment usage (engineering environment, maintenance, appearance, start-up rate, and intact rate), and review of necessary records of equipment operation, accidents, repairs, performance assessments, etc., and corrections.

Mainly based on the economic life of the equipment and the years of use, through on-site investigation and understanding of the equipment's usage and technical conditions, its remaining service life is determined, and then its comprehensive newness rate is determined according to the following formula.

Comprehensive newness rate = remaining useful life/(remaining useful life + used life) × 100%

9) Determination of evaluation value

Equipment evaluation value = equipment replacement price × comprehensive new rate

2. Vehicles

① Replacement cost method

1) Determination of replacement cost

Based on the local automobile market sales information and other recent vehicle market price data, the current tax-inclusive purchase price of the transport vehicle is determined. On this basis, the vehicle purchase tax, license and other fees are included in accordance with the provisions of the Vehicle Purchase Tax Law of the People's Republic of China. At the same time, according to the "Cai Shui [2016] No. 36", "Cai Shui [2018] No. 32" and "Announcement No. 39 of the Ministry of Finance, State Administration of Taxation and General Administration of Customs in 2019", the value-added tax on the purchase of vehicles can be deducted. The replacement cost is determined, and the calculation formula is as follows:

Replacement cost = purchase price including tax + vehicle purchase tax + license fee and other fees – deductible value-added tax

2) Determination of comprehensive newness rate

For vehicles, reference is made to the provisions on compulsory scrapping standards for historical motor vehicles and the Handbook of Common Data for Asset Valuation: the theoretical newness rate is determined based on the lower of the vehicle mileage and service life. Finally, the lower of the two methods, the ageing method rate and the mileage method newness rate is used, and then the comprehensive adjustment coefficient is determined based on the on-site investigation to finally determine the comprehensive newness rate. The calculation formula is as follows:

Ageing method rate = (economic useful life – used life)/economic useful life × 100%

Mileage method newness rate = (prescribed mileage – mileage travelled)/prescribed mileage × 100%

The theoretical value for newness is determined based on the lower of the ageing method rate or the mileage method newness rate.

Comprehensive newness rate = theoretical newness rate × adjustment coefficient

3) Determination of evaluation value

Vehicle evaluation value = replacement cost × comprehensive newness rate

② Market approach

For vehicles which were purchased a long time ago and are still usable even though no new vehicles of the same model available in the market, we can obtain similar second-hand vehicles transaction cases through investigation or inquiry, and correct the evaluation value of such vehicles. The details are as follows:

Through market research and price inquiries, we collected three recent market transaction examples of used vehicles similar to the appraisal object. Based on the substitution principle, we corrected the market price (excluding tax) of the comparison case according to differences in factors such as brand model, vehicle condition, appearance, year of use, mileage, etc., to determine the price of the entrusted vehicle.

Corrected price = reference vehicle transfer price × transaction time correction factor × vehicle model correction factor × vehicle configuration correction factor × engine correction factor × manufacturer correction factor × purchase time correction factor × mileage correction factor × usage correction factor × exterior maintenance correction factor × interior maintenance correction factor × transaction location correction factor

3. Office equipment

① Replacement cost method

1) Determination of replacement cost

For office equipment, the replacement cost is determined based on local market information and recent online transaction prices excluding tax.

2) Determination of comprehensive newness rate

For office equipment, its comprehensive ageing rate is determined mainly based on its economic life using the ageing method.

Yearly newness rate = (economic life – years in use)/economic life × 100%

3) Determination of evaluation value

Office equipment valuation = replacement cost × comprehensive newness rate

② Market approach

For office equipment that was purchased at an earlier date and is not available in the market but is still usable, the valuation was conducted by adopting the market approach based on the second-hand market price as at the valuation date.

(7) Construction in progress

The cost method is used for appraisal based on the characteristics of the project under construction, the type of appraisal value, the data collection situation and other relevant conditions.

For projects under construction that started more than half a year from the benchmark date and are under normal construction, if the price changes of equipment, materials, labor, etc. involved in the investment during this period are not large, the appraisal value shall be determined by deducting unreasonable expenses and capital costs from the book value, taking into account the reasonable construction period plus appropriate capital costs.

(8) Intangible assets

1) Land use rights

The land included in the appraisal scope is the land used for Jinyang office building. This time, the real estate and land are assessed together. The value of the land has been included in the investment properties and buildings. For detailed appraisal explanations, please refer to the investment properties and buildings explanations. The land use right is not being assessed separately.

2) Software

According to the characteristics of the software, the type of valuation, the data collection and other relevant conditions, the market method is used for valuation. Specifically, for purchased software that is sold in the market on the Valuation Benchmark Date, the market price on the Valuation Benchmark Date is used as the valuation; for purchased software that is sold in the market on the Valuation Benchmark Date but has been upgraded, the market price on the Valuation Benchmark Date minus the software upgrade fee is used as the valuation value; for customized software, the price inquired from the software developer is used as the valuation; for software that has been discontinued and has no use value after verification with the enterprise, the valuation is zero.

3) Intellectual Property

For intangible assets and intellectual property rights, according to the operational specifications of intangible asset valuation, the valuation of intangible assets and intellectual property rights can adopt the cost method, income method or market method according to the prerequisites for their use and the specific circumstances of the valuation.

It is generally believed that the value of intangible assets, especially the value of high-tech achievements, is difficult to reflect by replacement cost, because the value of such assets is usually mainly reflected in the creative intellectual labor of high-tech talents, and it is difficult to measure the results of such labor in terms of labor cost. Based on the above factors, the replacement cost method is not used for this valuation.

The market comparison method can be used in asset valuation, whether it is for the valuation of tangible assets or intangible assets. The prerequisite for using the market comparison method is that there are identical or similar transaction cases, and the transaction be conducted at arm's length. In combination with the characteristics of the intellectual property rights entrusted for valuation and the market transaction situation, according to our search and review of papers in related fields, there are currently no similar intellectual property transfer cases in China. Since this valuation cannot find comparable historical transaction cases and transaction price data, the market method is not applicable to this valuation.

The income approach is a method of estimating the budgeted income of the intangible asset during its technical and economic lifespan and converting it into present value at a certain discount rate to obtain the valuation price of the intangible asset. The theoretical basis of the income approach is the theory of utility value. It is the main valuation method in intangible asset transactions such as intangible asset transfer and investment. It can reflect the potential value and excess returns of intangible assets, especially high-tech intangible asset portfolios, and reflects the increasingly significant role of intangible asset factors in output.

Applicable conditions: To use the income method to evaluate intangible assets, the following two conditions must be met: Firstly, the future income of intangible assets can be predicted and measured in monetary terms. Technology itself cannot directly generate income. It is an intangible asset. It can only be used by enterprises in product development or technical services. It combines various factors such as enterprise management, capital, and labor to form the profitability of the enterprise. Intangible assets are one of the indispensable and important factors. Therefore, when predicting the future income of intangible assets, it is necessary to first predict the sales revenue, after-tax profit or net cash flow of the enterprise that uses the intangible assets. Then determine the corresponding technology contribution rate to calculate the assessed value of the technology. Secondly, the risks of intangible assets in future commercial applications can be predicted and quantified. Risk factors are a determining factor in determining the size of the assessed value of intangible assets.

In accordance with the provisions of the Asset Valuation Standards – Intangible Assets, combined with the purpose and object of the asset valuation and the relevant information that can be collected for the valuation, this asset valuation mainly uses the income method for valuation.

The asset value determined when using the income approach to evaluate an asset refers to the total amount of money paid to acquire the right to obtain the expected income from the asset. That is, the assessed value of an asset is closely related to the utility or usefulness of the asset. The greater the utility of the asset, the stronger its profitability, and the greater its value. The specific evaluation process is as follows:

According to the above evaluation ideas, the following evaluation model is used to estimate the evaluation value of intellectual property rights:

$$P = \sum_{t=1}^{n} \frac{kR_t}{(1 + i)^t}$$

Where: P — intellectual property technology value;

R_t — the expected revenue of the technology product in the t-th year in the future;

k — sharing rate;

i — discount rate;

t — the t-th year. This is the mid-term discount. The corresponding discount period is adjusted according to the mid-term discount;

n — economic benefit period of technological products.

(9) Deferred tax assets

Based on the audited book value, the appraiser investigated and verified the rationality and correctness of the reasons for the various deductible temporary tax differences of the enterprise. After verification, the amount of deferred income tax assets was calculated correctly, and the appraisal value was confirmed based on the verified book value.

3. Liabilities

The appraisal of corporate liabilities mainly involves review and verification. Appraisers verify the relevant documents, account books and related vouchers. After confirming their authenticity, the appraisal value is determined based on the verified book value or the actual liabilities that should be borne.

(III) Introduction to the Income Approach

This time, the cash flow discounting method in the present value of income method is used to evaluate the overall value of the enterprise to indirectly obtain the value of all shareholders' equity. The overall value of the enterprise is composed of the value of operating assets generated from normal business activities and the value of non-operating assets unrelated to normal business activities. The enterprise free cash flow discounting model is used to determine the value of operating assets, that is, the free cash flow of the enterprise in the next few years is used as the basis, and the calculation is obtained by summing up after discounting with an appropriate discount rate.

The basic model for this assessment is:

$$E = B - D$$

Where: E: the value of all shareholders' equity (net assets) of the valuation object;

B: the enterprise value of the valuation object;

D: the value of the interest-bearing debt of the valuation object.

Among them, B: The model of the enterprise value of the valuation object is:

$$B = P + \sum C_i$$

Where: P: the operating asset value of the valuation object;

$$P = \sum_{i=1}^{n} \frac{R_i}{(1 + r)^i} + \frac{R_{i+1}}{r(1 + r)^i}$$

R_i: the expected income (free cash flow) of the valuation object in the i-th year in the future;

r: discount rate (this time mid-term discount is adopted, and the discount period is adjusted accordingly);

n: the future operating period of the valuation object. The future operating period for this assessment is indefinite;

ΣC_i: the value of non-operating and surplus assets and long-term equity investment existing on the base date of the valuation object.

$$\sum C_i = C_1 + C_2$$

C_1: the value of other non-operating assets and surplus assets existing on the base date of the valuation object;

C_2: long-term equity investment value.

1. Determination of the income period

This income method valuation is made under the premise of the enterprise's continuing operation. Therefore, the income period is determined to be indefinite. According to the company's operating history, industry development trends and other information, a two-stage model is adopted, that is, five years after the Valuation Benchmark Date, a reasonable forecast of the enterprise's income, costs, expenses, profits, etc. is made based on the enterprise's actual situation and policies, market and other factors. After the sixth year, each year will remain the same as the fifth year.

2. Correlation between income subject and caliber

In this evaluation, the free cash flow of the enterprise is used as the income indicator of the operating assets of the valuation object. The basic formula is:

Free cash flow of the enterprise = net profit + depreciation and amortization + interest on interest-bearing debt after tax – additional capital

Forecast of free cash flow of the enterprise

A. Forecast of operating revenue

The operating revenue of each appraised entity for the historical years primarily consisted of engineering survey, design and general contracting. The revenue is forecasted based on analysis of the revenues for the historical years and with reference to the market demand, industry competition, orders on hand and future development plans of the enterprise.

B. Forecast of operating cost

The major operating costs of the enterprise are outsourced project payments, outsourcing and subcontracting costs, outsourced labor costs, raw materials, staff costs, and other costs. Outsourcing cost is the cost required for subcontracting a portion of the construction project to other construction units for construction, outsourced labor cost refers to the labor cost in the construction of the project, raw material cost is the cost of purchasing construction materials, employee compensation is the salary of the project personnel, and other costs are the indirect costs of the construction project and so on.

Each cost and expense is forecasted primarily on the basis of the ratio of each cost and expense to revenue for the historical years, taking into account the future development of the enterprise.

C. Forecast of taxes and surcharges

Taxes and surcharges include urban construction tax, education surcharge, property tax, vehicle and vessel use tax, land use tax, stamp duty, and so on.

The urban construction tax, education surcharge and local education surcharge are calculated at 7%, 3% and 2% of the value-added tax payable, respectively; the property tax is calculated at a tax rate of 1.2% on 70% of the original value of the property; the land use tax is calculated on the basis of the land area and the corresponding fee collection standard to the grade of the land; and stamp duty is measured as a percentage of revenue.

The VAT output tax is 9% and 6% of sales revenue. The input tax includes input tax arising from subcontracting costs, raw materials and staff expenses in operating costs; input tax arising from office expenses, travel expenses, property expenses and bidding fees in administrative expenses; and deductible input tax in capital expenditures.

D. Forecasts of sales expenses

Sales expenses primarily include employee compensation, depreciation and amortisation, operating expenses, travel and transportation expenses, and other expenses.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the enterprise's current depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the enterprise's current amortisation policy to measure the amortisation amount for each period.

Forecast of other sales expenses: operating expenses, travel and transportation expenses, etc., are measured based on the actual amount incurred in historical years as a percentage of revenue.

E. Forecast of administrative expenses

Administrative expenses primarily include employee compensation, depreciation, amortisation, office expenses, business hospitality expenses, intermediary agency fees and other expenses.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the enterprise's current depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the enterprise's current amortisation policy to measure the amortisation amount for each period.

Forecast of other administrative expenses: office expenses, business hospitality expenses, and fees are measured based on the actual amounts incurred in historical years as a percentage of revenues or by considering an appropriate growth rate based on the actual amount incurred for 2023.

F. Forecast of R&D expenses

Research and development expenses comprise employee compensation, depreciation and amortisation, consumed materials, fuel and power costs, outsourced development costs, and so on.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the current enterprise's depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the current enterprise's amortisation policy to measure the amortisation amount for each period.

Other expenses are projected for R&D with reference to historical levels.

G. Forecast of finance expense

① *Interest expense*

The appraised entity has no obligation to pay interest, which is not measured at this time;

② *Interest income*

Due to the random occurrence and small amount of this component, it will not be forecasted for this time;

③ *Handling fee*

Due to the random occurrence and small amount of this component, it will not be forecasted at this time;

H. Forecast of depreciation and amortisation

① *Forecast of depreciation*

Depreciation includes depreciation of inventory fixed assets, and depreciation of renewed or new fixed assets.

Depreciation of inventory assets is measured at the original book value of fixed assets as at the Valuation Benchmark Date based on a reasonable depreciation policy.

Depreciation of renewed assets is where only the depletion (depreciation) of existing assets is renewed in future years, provided that the current scale of operations is maintained. That is, an asset is assumed to be fully depreciated when the accumulated depreciation of the asset is close to its original value or when the net value of the asset is close to its estimated residual value; upon the end of its economic life, the asset needs to be renewed in accordance with its original value. At the same time as the asset renewal expenditure is incurred, the original asset is written off at its residual value and depreciation is provided on the original value of the renewed asset until the end of the operating period.

Depreciation of renewed and new assets is measured by asset class by allocating the capital expenditure over the forecast period in accordance with the existing depreciation policy.

② *Forecast of amortisation*

Amortisation of assets in the future is primarily the amortisation of software in intangible assets, and measured for each period in accordance with the enterprise's current amortisation policy.

Housing buildings	20 years
Machinery and equipment	10 years
Transportation equipment	6 years
Furniture and office equipment	5 years
Land use rights	40-50 years

I. Forecast of income tax

Currently the company enjoys the corporate income tax standard of national high-tech enterprises at an income tax rate of 15%.

Income tax for future years is calculated on the basis of total profits, adjusted for significant tax adjustments in accordance with the Enterprise Income Tax Law and its supplemental regulations, making up for the operating losses of the previous five years starting from the year of profitability, and then multiplied by the flat corporate income tax rate.

J. Estimation of additional capital

Additional capital refers to the increase in working capital and long-term capital investment over more than one year, which are required to maintain continuing operations without changing the conditions of the current business operations. Additional working capital is required for changes in the scale of operations and the renewal of assets necessary for continuing operations.

In this appraisal, it is assumed that the enterprise will not make any further capital investment in its existing operating capacity, and that the additional capital in the future operating period will primarily consist of the renewal of assets and the increase in working capital required for continuing operations. That is, the additional capital as defined in this report is:

Additional capital = investment in asset renewal + investment in asset additions + increase in working capital

① *Investment in asset renewal and additional investment*

On the premise and basis of income estimation, the renewal and addition of input fixed assets are considered for this time. With reference to the company's asset renewal expenditures in previous years and the planning of new assets to be added by the appraised entity in the next five years and by forecasting the future capital expenditures, the asset renewal expenditures for the perpetuity period equal the aggregation of depreciation and amortisation.

② *Estimation of increase in working capital*

Working capital equals current assets other than cash less interest-free current liabilities. Current assets other than cash include notes receivable, accounts receivable, accounts receivable financing, other receivables, prepayments, inventories, contract assets, and other non-current assets used or required for the company's operations, etc. Non-interest-bearing current liabilities include notes payable, accounts payable, contract liabilities, other payables, taxes payable, other current liabilities and long-term payables, etc.

Working capital = current assets other than cash – interest-free current liabilities

Increase in working capital refers to the additional working capital that an enterprise needs to invest in order to maintain normal operations without changing the conditions of its current main business, i.e., the additional funds needed to maintain the enterprise's ability to continue operations, such as the cash required to maintain normal operations, inventory purchases, receivables owed by customers and other basic funds required and payables. The increase in working capital refers to the cash occupied to gain others' commercial credit with the change of business activities of the enterprise, the cash required to be maintained for normal operations, inventory, etc.; meanwhile, the provision of commercial credit in the economic activities can reduce the immediate payment of cash accordingly. Usually, other receivables and other accounts payable account for the vast majority of related-party or non-operational transactions; taxes payable and wages payable, etc., mostly incurred in the operation with relatively fast turnover, relatively short delinquency time and in relatively small amount, are assumed at the time of estimation to be kept at the turnover level of the benchmark date. Therefore, the increase in working capital is estimated in principle by considering only the main factors such as cash (minimum cash holdings), inventories, receivables and payables required to be maintained for normal operations. The increase in working capital as defined in this report is:

Increase in working capital = current working capital – prior period working capital

Working capital as at the Valuation Benchmark Date = Current assets (excluding cash and non-operating assets) – Current liabilities (excluding interest-bearing current liabilities and non-operating liabilities)

Operating cash = total annual cash costs/cash turnover ratio

Total annual paid costs = total cost of goods sold + total period expenses – total non-cash costs

Cash turnover period = inventory turnover period + receivables turnover period – payables turnover period

Accounts receivable = total operating revenue/accounts receivable turnover ratio

Accounts receivable primarily include accounts receivable, notes receivable, prepayments and other receivables related to business operation.

Inventory = total operating costs/inventory turnover ratio

Accounts payable = total operating costs/accounts payable turnover ratio

Accounts payable include accounts payable, notes payable, advance receipts and other payables related to business operation.

Based on the investigation of the operating conditions of the appraised entity, as well as the audited statistical analysis of assets and profit and loss, revenues, costs and expenses of historical operations and the results of the estimation of revenues and costs for each year during the future operating period, the increase in money funds, inventory, receivables and payables, etc., and the working capitals can be obtained for each of the years during the future operating period according to the above definitions.

In accordance with the principle of consistency between earnings and discount rates, the earnings for this evaluation are based on the enterprise's free cash flow, and the discount rate is the weighted average cost of capital (WACC).

The discount rate (weighted average cost of capital, WACC) is calculated as follows:

$$WACC = R_d \times (1 - T) \times \frac{D}{D + E} + R_e \times \frac{E}{D + E}$$

Where: R_e: cost of equity capital;

R_d: cost of interest-bearing debt capital;

E: market value of equity;

D: market value of interest-bearing debt;

T: income tax rate.

The cost of equity capital is calculated using the Capital Asset Pricing Model (CAPM). The calculation formula is as follows:

$$R_e = Rf1 + \beta (R_m - Rf2) + Alpha$$

Where: R_e: expected rate of return on equity, i.e. cost of equity capital;

Rf1: risk-free rate of return;

β: Beta coefficient;

R_m: market expected rate of return;

Rf2: long-term market expected return rate;

Alpha: idiosyncratic risk premium;

(R_m–Rf2): Market risk premium, called ERP.

Determination of discount rate

Valuation process of specific parameters:

① Determination of the risk-free rate (Rf).

The yield on treasury bonds is generally considered risk-free as the risk of nonpayment of the debt is remote and negligible. The appraisers queried the yields to maturity of treasury bonds with remaining maturities of 10 years or more to the Valuation Benchmark Date, which were traded in the vicinity of the Valuation Benchmark Date through Flush Financial Terminal, and took the average of the yields as the risk-free rate of return, and the calculated Rf1 was 2.8819%.

② Determination of market risk premium (ERP).

The determination of ERP, i.e., the equity market excess risk return (Rm-Rf2). Generally, the equity market excess risk return rate, i.e. the equity risk premium, is the ratio of the amount of risk compensation received by investors to the amount of risky investment, which exceeds the rate of return that would otherwise have been due on an investment in a risk-free security. Currently in China, publicly available information on the securities market is usually used to study the risk-reward ratio.

The market risk premium for projects with an income period of over 10 years is calculated to be 6.40%.

③ Determination of beta coefficients

a. Identifying comparable companies

The selection criteria for the comparable companies in this appraisal are as follows:

◎ the industry in which the comparable companies are engaged or their main business being professional services;

◎ The comparable company has been profitable in recent years;

◎ The comparable companies must have been listed for at least three years;

◎ The comparable companies issued A shares only.

Currently in China, Flush Information Company is engaged in the research of beta and gives the formula for calculating beta value. In this appraisal, the appraisers have selected the beta calculator published by the company to calculate the beta values of comparable companies. The said beta values contain the comparable companies' own capital structure. After screening and selecting 7 listed companies, which are similar in business content and others to the appraised company, as comparable companies, the weekly index calculates the imputed risk factor β relative to the Shanghai and Shenzhen markets (using the CSI 300 Index), and excludes the β coefficient after financial leverage of each comparable company to calculate the average value thereof as the β coefficient after excluding financial leverage of the appraised company. The beta coefficient after excluding financial leverage is 0.5561.

④ Determination of capital structure ratio of the appraised entity

Taking into account the operating characteristics of the industry, the average target capital structure for this time has been selected as the own capital structure (D/E) of the appraised entity, i.e. 8.28%.

⑤ Estimation of the β coefficient of the appraised entity under the capital structure ratio determined above

The income tax rate implemented on the Valuation Benchmark Date of the appraised entity is 15%.

$$\text{With financial leverage } \beta = \text{Without financial leverage } \beta \times [1 + D/E \times (1 - T)]$$

The calculated beta coefficient was determined to be 0.5952.

⑥ Blume adjustment of the β coefficient

The idea and method of the adjustment proposed by Blume are as follows:

$$a = 0.35 + 0.65\ \beta L$$

Where: a is the adjusted beta and βL is the measured historical beta.

The adjusted risk factor β for the appraised entity is 0.7369.

⑦ Determination of the special risk premium ε

The specific risk reward ratio ε is the reward rate for non-systematic risks caused by the factors specific to the appraised enterprise. The comprehensive analysis method is adopted in this appraisal to determine the specific risk reward rate ε, i.e. to determine a reasonable specific risk reward rate by taking into account the appraised enterprise's asset size, operation stage, market competition, reliance on major customers and suppliers, corporate governance, capital structure and other factors.

The specific risk-based reward ratio is determined to be 3.00% after taking into account factors such as the appraised entity's asset size, operation stage, market competition, reliance on major customers and suppliers, corporate governance and capital structure.

⑧ Determination of the cost of equity capital

Based on the above analytical calculations, the appraisers determined that the expected return on equity used for this appraisal, i.e., the after-tax equity capital cost, was 10.60%.

⑨ Determination of the cost of debt capital

Considering the target capital structure of comparable companies, the one-year LPR rate of 3.45% published on the benchmark date was used as the cost of debt capital in this case.

⑩ Determination of the weighted cost of capital

The WACC model was used to calculate the weighted average cost of capital (WACC) by substituting the above parameters into the WACC model, resulting in a WACC of 10.01%.

3. Value of interest-bearing liabilities of non-operating assets and liabilities

Non-operating assets and liabilities refer to assets and liabilities that are not related to the production and operation of the assessed unit and are not involved in the free cash flow forecast of the enterprise after the Valuation Benchmark Date. The valuation method and results of non-operating assets and liabilities are consistent with the asset-based method. For details, please refer to the corresponding sections of the description of the asset-based method.

1) Determination of the value of excess assets

Excess assets refer to the excess cash over the business operations required on the Valuation Benchmark Date, which is the difference between the monetary funds on the base date and the cash holdings required for daily operations.

2) Determination of the value of unconsolidated subsidiaries

Unconsolidated subsidiaries refer to corresponding subsidiaries that are not valued on a consolidated basis this time; the value of the unconsolidated subsidiaries is determined through reasonable analysis after an overall assessment using appropriate valuation methods.

3) Determination of the value of other non-operating assets and liabilities

Other non-operating assets and liabilities refer to assets and liabilities that are not related to the production and operation of the appraised entity (such as working capital and long-term effective assets), except for – excess assets and unconsolidated subsidiaries.

4) Value of interest-bearing liabilities

Interest-bearing liabilities refer to debts on the books that require interest payments on the base date, including short-term loans, interest-bearing notes payable, long-term borrowings, bonds payable and long-term accounts payable.

(IV) Method for determining the evaluation results

The preliminary conclusions of the two valuation methods are compared and analyzed, and the rationality of the different valuation methods and preliminary value conclusions as well as the quality and quantity of the data used are comprehensively considered to form the final valuation results. This time, the conclusion of the income method is determined as the final valuation results.

IX. Valuation assumptions

The assumptions adopted in analysing the estimates in this asset valuation report are as follows:

A. Assumptions applied to both the asset-based approach and the income approach

(I) Basic Assumptions

1. Open market assumption assumes that the assets to be valued are traded or intended to be traded on the open market, and both of the parties to the transaction of the assets are in equal position and have enough opportunities and time to obtain market information so as to make reasonable and rational judgment on the functions, purpose and considerations of the assets;

2. Transaction assumption assumes that all the assets to be valued are already in the process of transaction, and the appraisal carries out the valuation based on a simulated market which involves the transaction conditions of the assets to be valued. Transaction assumption is the most basic assumption for asset valuation;

3. The assumption of continued use of assets assumes that the assets being valued are assumed to continue to be used legally and effectively in accordance with their current purpose and use methods, scale, frequency, environment and other conditions, and that no major changes will occur during the foreseeable period of use;

4. Going concern assumption assumes that the appraised entity will not cease operation for any reason in the foreseeable future, but will continue to operate lawfully with its existing assets and resources.

(II) General Assumptions

1. It is assumed that there are no material changes in the relevant prevailing laws, regulations and policies, and the macroeconomic situation of the country, and that there are no material changes in the political, economic and social environment of the regions where the parties to the transaction are located;

2. It is assumed that the business continues as a going concern in view of the actual status of assets as at the Valuation Benchmark Date;

3. It is assumed that there are no substantial changes in such indicators as interest rates, exchange rates, tax bases, tax rates and policy based levies related to the appraised entity after the Valuation Benchmark Date;

4. It is assumed that the management of the appraised entity after the Valuation Benchmark Date is responsible, stable and capable of performing their duties;

5. Unless otherwise specified, it is assumed that the Company is fully in compliance with all relevant laws and regulations;

6. It is assumed that the values of various parameters estimated in this valuation are determined in accordance with the current price system, without taking into account the impact of inflation factors after the date of valuation;

7. It is assumed that there will be no force majeure and unforeseeable factors having a material adverse impact on the appraised entity after the Valuation Benchmark Date.

(III) Special assumptions

1. It is assumed that the accounting policies to be adopted by the appraised entity after the Valuation Benchmark Date and the accounting policies adopted at the time of preparing the valuation reports are consistent in material aspects;

2. It is assumed that the appraised entity's scope and mode of operation after the Valuation Benchmark Date are consistent with current orientation on the basis of the existing management method and management standard;

3. The companies are able to continue to use the existing self-owned real estate and purchased equipment, and will not bear any costs caused by changes in asset ownership in the future.

B. *Assumptions applicable only to the income approach based on above assumptions*

1. It is assumed that the cash inflow and cash outflow of the appraised entity after the Valuation Benchmark Date are uniform;

2. It is assumed that the principal businesses of the appraised entity remain unchanged;

3. It is assumed that the appraised entity's existing qualification certificates can be extended upon expiration;

4. It is assumed that the R&D expenses of the appraised entity are collected accurately, and can be deducted in accordance with relevant policies in the upcoming forecast years;

5. It is assumed that the high-tech certificates of the appraised entity can continue to be extended upon expiration, and the enterprise can continue to enjoy the preferential income tax rate of 15%;

6. It is assumed that the enterprise's judgment on future markets and its associated revenue costs are realized as planned currently.

The valuation conclusion in this asset valuation report was effective as at the Valuation Benchmark Date on the aforesaid assumptions. We and the signing valuers disclaim any responsibility for any different valuation conclusion arising from any significant change in any assumption.

X. Valuation conclusion

(I) Valuation result under asset-based approach

The book value of total assets of Shenyang Aluminum and Magnesium Design Institute Co., Ltd. on the Valuation Benchmark Date was RMB1,270,286,400, the appraised value was RMB1,749,275,600, the appraised value-added amount was RMB478,989,200, and the assessed value-added rate was 37.71%; the book value of total liabilities was RMB800,139,300, the appraised value was RMB791,602,600, the appraised impairment amount was RMB8,536,700, and the appraised impairment rate was 1.07%; the book value of all shareholders' equity was RMB470,147,100, the appraised value of all shareholders' equity was RMB957,673,000, the appraised value-added amount was RMB487,525,900, and the appraised value-added rate was 103.70%.

The book value and appraised value of major assets and liabilities are as follows:

	Items	Book value A	Appraised value B	Increase or decrease C=BA	Appreciation rate % D=C/A×100%
1	Current assets	87,679.27	87,679.27	–	–
2	Non-current assets	39,349.37	87,248.29	47,898.92	121.73
3	Including: Debt investment	–	–	–	–
4	Available-for-sale financial assets	–	–	–	–
5	Other debt investments	–	–	–	–
6	Held-to-maturity investments	–	–	–	–
7	Long-term receivables	7,082.70	7,082.70	–	–
8	Long-term equity investment	10,604.90	44,495.91	33,891.01	319.58
9	Other equity instrument investments	–	–	–	–
10	Other non-current financial assets	–	–	–	–
11	Investment properties	2,268.57	6,167.63	3,899.06	171.87
12	Fixed assets	10,683.97	22,203.58	11,519.61	107.82
13	Construction in progress	908.28	941.32	33.04	3.64
14	Engineering materials	–	–	–	–
15	Fixed assets liquidation	–	–	–	–
16	Productive biological assets	–	–	–	–
17	Oil and gas assets	–	–	–	–
18	Intangible assets	5,058.42	3,614.62	(1,443.80)	(28.54)
19	Development expenditure	–	–	–	–
20	Goodwill	–	–	–	–
21	Right-of-use assets	–	–	–	–
22	Long-term deferred expenses	–	–	–	–
23	Deferred tax assets	2,742.53	2,742.53	–	–
24	Other non-current assets	–	–	–	–
25	**Total assets**	127,028.64	174,927.56	47,898.92	37.71
26	Current liabilities	73,651.52	73,651.52	–	–
27	Non-current liabilities	6,362.42	5,508.75	(853.67)	(13.42)
28	**Total liabilities**	80,013.93	79,160.26	(853.67)	(1.07)
29	**Net assets (owners' equity)**	47,014.71	95,767.30	48,752.59	103.70

The book value and appraised value of major assets and liabilities and the reasons for the differences:

1. Long-term equity investment

The book value of long-term equity investment was RMB106,049,000, the appraised value was RMB444,959,100, the appraised appreciation was RMB338,910,100, and the appraised appreciation rate was 319.58%. The reason for the appraised appreciation was that when the long-term equity investment was a holding company, the book value of the enterprise's financial accounting was the historical cost of the long-term equity investment, and the future profit generated by the enterprise in the course of operation was not reflected in the book value of the long-term equity investment. This assessment uses the appraised net assets of the investee multiplied by the equity ratio as the appraised value of the long-term equity investment, thereby assessing the appreciation.

2. Investment Properties

The book value of investment properties was RMB22,685,700, the appraised value was RMB61,676,300, the appraised appreciation was RMB38,990,600, and the appraised appreciation rate was 171.87%. The main reason for the appraised appreciation of investment properties was the increase in real estate market prices, which led to an increase in appraised value.

3. Fixed assets

The book value of fixed assets was RMB106,839,700, the appraised value was RMB222,035,800, and the appraised appreciation was RMB115,196,100. The main reason for the appraised appreciation of fixed assets was the increase in real estate market prices, which led to an increase in appraised value.

(II) Valuation result under the income approach

As of the Valuation Benchmark Date of 31 December 2023, under the premise of going concern, the valuation result of the total equity value of Shenyang Aluminum and Magnesium Design Institute Co., Ltd. based on the income method was RMB984,155,200, an increase of RMB514,008,100, with an appreciation rate of 109.33%.

(III) Determination of the valuation conclusion

Upon comparison of the appraisal results of the asset-based approach and the income approach, the difference in valuation between the income approach and the asset-based approach amounted to RMB26,482,200, representing a difference of 2.69% based on the conclusion of the income-based approach.

1. Main reasons for the difference in results under the two valuation approaches

   The two valuation approaches consider different perspectives. The asset-based approach considers the re-acquisition of assets and reflects the replacement value of the existing assets of the enterprise whereas the income approach considers the enterprise's future profitability and reflects the comprehensive profitability of the assets of the enterprise. It is normal for the two valuation approaches to have different results.

2. Reasons for selecting the valuation result under the income approach

   The income approach not only considers the value of all tangible assets, intangible assets and liabilities presented on the balance sheet of the enterprise, but also covers the value of intangible assets such as customer resources, human resources, technical and business capabilities, etc., and the sources of future income are the existing stable customer base, the service capacity of the business, the industry status, the reputation among customers for new customers and new business development, etc. The results of the income approach could better reflect the overall enterprise value of the unit under appraisal.

   Based on the above analysis, the valuation result under the income approach was selected as the valuation conclusion. Therefore, the appraised value of the entire shareholders' equity of Shenyang Aluminum and Magnesium Design Institute Co., Ltd. was RMB984,155,200.

The result of this valuation did not take into account the impact of special transactions such as equity liquidity on equity value.

XI. Special matters

(III) This valuation report is based on the information in relation to asset valuation provided by the client and related parties of the appraised entity. It is the responsibility of the client and the related parties to provide the necessary information and ensure the truthfulness, legality and completeness of such information and legality of the operation. The responsibility of asset valuation professionals is to analyse, estimate and express professional view on the value of valuation target as at the Valuation Benchmark Date for the specific purpose. Asset valuation professionals conduct the necessary verification and disclosure on such information and its sources, which does not represent any guarantee provided as to the truthfulness, legality and completeness of the information mentioned above beyond the scope of practice for asset valuation professionals to ascertain or express opinions on such information and its sources.

(IV) Citation of conclusions from reports issued by other institutions

The financial data within the scope of this valuation was audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report was issued.

Apart from the above-mentioned reports, no other reports were cited.

(V) Incomplete or defective information on main ownership

A total of 25 vehicles, including Trumpchi GAC6520MDA6A, Buick BUICKSGM6522UBB5, and Derby Previa JINGE52M. As of the Valuation Benchmark Date, except for 3 assets that were in a state of pending scrap, the rest of the vehicles were in normal use.

This time, vehicles to be scrapped and those that have been scrapped will be assessed based on their residual value.

(VI) Restrictions on valuation procedures

None.

(VII) Incomplete information in the valuation

None.

(XI) Other conditions that may have material impact on the valuation conclusion

None.

(XII) Other matters

The unit under appraisal has a total of 9 patents with co-owners, of which 7 are shared within Chinalco and 2 are shared externally. It is understood that the unit under appraisal has not signed relevant revenue sharing contracts and profit distribution contracts with the co-owners. Considering that there are fewer co-ownership patents, the intellectual property rights were calculated based on the entire asset group and the patent value of the co-owners was not taken into account.

Users of the asset valuation report should pay attention to the impact of the above special matters on the valuation conclusion.

XIII. Date of the asset valuation report

This asset valuation report is dated 15 August 2024.

Summary of the Asset Valuation Report on the Entire Shareholders' Equity of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy Involved in the Proposed Introduction of Strategic Investors to the Subsidiaries by China Aluminum International Engineering Corporation Limited

Guo Rong Xing Hua Ping Bao Zi [2024] No. 010496

China Aluminum International Engineering Corporation Limited:

As engaged by the Company, Beijing Guo Rong Xing Hua Assets Appraisal Co., Ltd. has, in accordance with the laws, administrative regulations and asset valuation standards, and carried out necessary valuation procedures, appraised the market value of the entire shareholders' equity of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy as at the Valuation Benchmark Date in the principles of independence, objectivity and impartiality. The asset valuation report is summarised as follows:

Purpose of valuation: China Aluminum International Engineering Corporation Limited proposed to introduce strategic investors to its subsidiaries. In this regard, it is necessary to assess the value of the entire shareholders' equity of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy involved in order to provide reference for the value of the above economic behaviour.

Subject of valuation: the value of the entire shareholders' equity of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy.

Scope of valuation: All audited assets and liabilities within the audited simulated statements of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy, including current assets, non-current assets, current liabilities and non-current liabilities.

Valuation benchmark date: 31 December 2023.

Type of value: market value.

Valuation method: asset-based approach and income approach.

Valuation conclusion: this valuation adopted the income approach in concluding the valuation result. The valuation result is set out as follows:

The book value of all shareholders' equity of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy on the Valuation Benchmark Date was RMB1,334,307,500, and the appraised value was RMB1,997,243,300, with an appraised value-added of RMB662,935,800 and an assessed value-added rate of 49.68%.

Special matters

1. ***Description of simulated statements items:***

On the Valuation Benchmark Date, China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. and Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy were both wholly-owned subsidiaries of China Aluminum International Engineering Corporation Limited. According to the decision of China Aluminum International Engineering Corporation Limited, China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. was regarded as a wholly-owned subsidiary of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy and simulated financial statements were prepared. At the request of the principal, it was simulated and consolidated on the Valuation Benchmark Date this time.

2. ***Parking spaces without certificates***

The unit under appraisal has not obtained real estate certificates for the 1st and 2nd items declared in "Investment Real Estate – Land Use Rights", namely the right to use the underground parking spaces in Changsha Hongfei Building (2 parking spaces), the 4th item declared in "Fixed Assets – Buildings", namely the underground garage of the Cheonggyecheon No. 9 New Campus Office Building (417 parking spaces), and the 1st item declared in "Intangible Assets – Land Use Rights", namely the right to use the underground parking spaces in Building No. 2, No. 39 Jinqiao Road, Chengdong District, Xining City (5 parking spaces). This time, the unit under appraisal has issued a letter of commitment, promising that the above-mentioned parking spaces belong to it and that there are no property rights and debt disputes.

3. ***Mortgaged property without certificate***

According to the Execution Order of the Intermediate People's Court of Zhangjiajie City, Hunan Province ((2020) Xiang 08 Zhi Hui 22), the unit under appraisal acquired the 18th real estate of Zhangjiajie Future City on 15 July 2020 by way of debt-in-kind swap. The court ruled that the 18th real estate of Zhangjiajie Future City belongs to Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy. As the real estate management department does not handle the registration of the debt-in-kind housing, the above-mentioned real estate has not yet obtained the real estate certificate. The unit under appraisal reported a construction area of 20,107.36 square meters, and the real estate is used for residential purposes.

As of the Valuation Benchmark Date, the ownership of the residential building was obtained according to the court execution order, and the real estate certificate has not yet been processed. The unit under appraisal has issued a letter of commitment, promising that the above-mentioned real estate belongs to it and there are no property rights and debt disputes.

This asset valuation report is issued for the sole purpose of providing value reference for the economic behaviour described herein, and the valuation conclusion shall be valid for one year from the Valuation Benchmark Date.

Users of the asset valuation report shall fully consider the assumptions, limiting conditions and notes on special matters set out in the asset valuation report and their impacts on the valuation conclusion.

The above has been extracted from the full text of the asset valuation report. For details of this valuation, and in order to properly understand and use the valuation conclusion, you should carefully read the full text of the asset valuation report.

(II) Overview of the Appraised Entity

1. Industrial and Commercial Registration Information

Company Name:	Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy (hereinafter referred to as "**CINF**")
Unified social credit code:	91430000183765064G
Legal representative:	Tan Ronghe
Type of enterprise:	limited liability company (sole proprietorship of legal person not invested or controlled by natural persons)
Registered capital:	RMB736,796,500
Registered address:	No. 299, Mulian East Road, Yuhua District, Changsha
Date of establishment:	18 November 1991
Term of operation:	18 November 1991 to indefinite term

Business scope: consulting, design and general contracting within the qualification scope of metallurgical industry, coal industry, construction industry, municipal industry, machinery industry, commerce, supplies and food industry, building materials industry, electric power industry, chemical, petrochemical and pharmaceutical industry and environmental engineering; scientific research of the above engineering projects and sales of equipment and materials; engineering investigation within the qualification scope of geotechnical engineering, engineering survey and solid mineral exploration; urban and rural planning, environmental impact assessment of construction projects, engineering cost consulting; pressure vessel design and pressure pipeline design; to undertake the survey, consultation, design and supervision of foreign (overseas) projects within the scope of qualification and the export of equipment and materials required for the above-mentioned projects; to contract foreign engineering projects that are compatible with its capacity, scale and performance, and to dispatch labors necessary for the implementation of the above-mentioned overseas projects; lease of self-owned properties. (For items subject to approval according to law, business activities can only be carried out after being approved by relevant departments.)

2. *Overview of the Company*

CINF is a technology and service provider for the whole industrial chain and project life cycle of non-ferrous metal industry. It is qualified with Class A qualification in metallurgy industry, municipal industry (drainage engineering, thermal engineering, manned ropeway engineering), construction industry (architectural engineering), environmental engineering design speciality (water pollution prevention and treatment engineering, air pollution prevention and treatment engineering, solid waste treatment and disposal engineering), and chemical industry, petrochemical and pharmaceutical industry (chemical engineering). It has Class A qualifications in engineering consulting, engineering design, general contracting, engineering supervision, engineering survey, engineering construction, equipment manufacturing, environmental management, ecological restoration, scientific research and technology development, etc. It has nearly 40 technical specialties, including mining, ore dressing, geology, smelting, chemical industry, machinery, construction, structure, environmental protection, electric power, water supply and drainage, thermal energy, gas, general plan and technical economy.

3. *Equity structure of the company on the benchmark date*

Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy was established in November 1991. Its equity structure at the time of establishment was as follows:

Serial number	Name of investor	Subscription amount	Amount paid	Percentage of shareholding
		(RMB0'000)	*(RMB0'000)*	*(%)*
1	China Aluminum International Engineering Corporation Limited	35,993.82	35,993.82	100.00
	Total	35,993.82	35,993.82	100.00

In August 2015, the registered capital was changed. The equity situation after the change is as follows:

Serial number	Name of investor	Subscription amount	Amount paid	Percentage of shareholding
		(RMB0'000)	*(RMB0'000)*	*(%)*
1	China Aluminum International Engineering Corporation Limited	46,283.82	46,283.82	100.00
	Total	46,283.82	46,283.82	100.00

In December 2016, the registered capital was changed. The equity situation after the change is as follows:

Serial number	Name of investor	Subscription amount	Amount paid	Percentage of shareholding
		(RMB0'000)	*(RMB0'000)*	*(%)*
1	China Aluminum International Engineering Corporation Limited	65,883.82	65,883.82	100.00
	Total	65,883.82	65,883.82	100.00

In March 2018, the registered capital was changed. The equity situation after the change is as follows:

Serial number	Name of investor	Subscription amount *(RMB0'000)*	Amount paid *(RMB0'000)*	Percentage of shareholding *(%)*
1	China Aluminum International Engineering Corporation Limited	70,883.82	70,883.82	100.00
	Total	70,883.82	70,883.82	100.00

In September 2020, the registered capital was changed, and the equity situation after the change is as follows:

Serial number	Name of investor	Subscription amount *(RMB0'000)*	Amount paid *(RMB0'000)*	Percentage of shareholding *(%)*
1	China Aluminum International Engineering Corporation Limited	72,468.87	72,468.87	100.00
	Total	72,468.87	72,468.87	100.00

In August 2023, the registered capital was changed, and the equity situation after the change is as follows:

Serial number	Name of investor	Subscription amount *(RMB0'000)*	Amount paid *(RMB0'000)*	Percentage of shareholding *(%)*
1	China Aluminum International Engineering Corporation Limited	73,679.65	73,679.65	100.00
	Total	73,679.65	73,679.65	100.00

As of the Valuation Benchmark Date, the equity structure of the unit under appraisal has not changed.

5. *The assets, liabilities, equity and operating performance of the unit under appraisal in recent years*

In May 2024, China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. was transferred to Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy as a subsidiary. It will be simulated and merged on the Valuation Benchmark Date this time. The simulated consolidated financial data are as follows:

Simulated consolidated financial position of the unit under appraisal
(based on the parent company)

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	231,731.80	236,968.86	241,217.11
Total liabilities	106,938.92	107,203.30	107,786.36
Shareholders' equity	124,792.89	129,765.56	133,430.75
Operating performance	**2021**	**2022**	**2023**
Operating income	102,595.99	92,296.23	92,944.27
Total profit	6,564.37	11,065.44	6,966.42
Net profit	5,320.25	9,622.70	6,649.29

The simulated consolidated financial status of the unit under appraisal
(consolidated basis)

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	372,765.57	377,592.71	372,346.94
Total liabilities	237,698.59	229,329.48	252,118.97
Shareholders' equity	135,066.97	148,263.22	120,227.98
Equity attributable to parent company	133,326.48	146,408.61	119,632.11

Operating performance	2021	2022	2023
Operating income	255,214.58	244,807.74	216,431.20
Total profit	–1,451.61	11,224.61	–25,397.26
Net profit	–2,376.05	10,606.73	–22,797.53
Net profit attributable to parent company	–2,493.72	10,492.62	–23,089.17

6. ***Overview of long-term equity investments***

The principal, China Aluminum International Engineering Corporation Limited, is the current shareholder of China Nonferrous Metal Changsha Survey, Design and Research Institute Co., Ltd. According to the description of the Principal, China Nonferrous Metal Changsha Survey, Design and Research Institute Co., Ltd. will be transferred free of charge to a subsidiary of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy, with the specific time of the industrial and commercial changes to be determined. At the request of the client, it will be simulated and merged on the Valuation Benchmark Date this time.

*(1) Chalco International Southern Engineering Co., Ltd. (hereinafter referred to as "**Southern Engineering**")*

① Industrial and commercial situation

Name:	Chalco International Southern Engineering Co., Ltd.
Unified social credit code:	91370300732630411P
Type:	Limited Liability Company (sole proprietorship of a legal person invested or controlled by a non-natural person)
Registered address:	22-23F, Building 6, Jilian Commercial Center, No. 268, Laodong East Road, Yuhua District, Changsha
Legal representative:	Chen Mingye
Registered capital:	RMB152.9 million
Date of Establishment:	13 October 2001
Operating period:	13 October 2001 to indefinite period

Business scope:	Metallurgical industrial engineering, nonferrous industrial engineering, building materials industrial engineering, mining engineering, power engineering, environmental protection engineering, municipal public engineering, electromechanical engineering, petrochemical engineering, waterproofing, anti-corrosion and thermal insulation engineering, building decoration and decoration engineering, steel structure engineering, general contracting of industrial and civil construction engineering; production and sales of ready-mixed commercial concrete, concrete, concrete components, concrete grouting materials, non-standard equipment, waterproofing, anti-corrosion and thermal insulation materials, complete sets of electrical equipment, high and low voltage complete sets of switchgear and components, instruments and meters, transformers, foaming and self-leveling cement, and filling adhesive materials; Production, installation and sales of Class III low and medium pressure containers, aluminum alloy and steel-plastic doors and windows; production and sales of aluminum products and furniture, polymer, aluminum alloy, hot-dip galvanized and other various materials cable trays; sales of building materials, aluminum plates, antifreeze, metal materials, generators and generator sets, pulping and papermaking equipment, etc.; leasing of construction turnover materials and mechanical equipment; equipment and pipeline installation; cargo import and export services; production, production and sales of finned tube heat exchangers, plate heat exchangers, bag dust collectors, and furnaces; engineering cost consulting; special cargo transportation (tank type); design consulting services. (Projects that require approval according to law can only carry out business activities after approval by relevant departments.)

② Equity structure

In October 2001, China Aluminum International Southern Engineering Co., Ltd. was founded by Shandong Aluminum Industry Co., Ltd. The equity structure at the time of its establishment was as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of subscribed capital	Paid-in capital *(RMB0'000)*	Percentage of paid-in capital
Shandong Aluminum Industry Co., Ltd.	5,090.00	100.00%	5,090.00	100.00%
Total	5,090.00	100.00%	5,090.00	100.00%

In March 2011, the shareholder was changed from Shandong Aluminum Industry Co., Ltd. to China Aluminum International Engineering Corporation Limited. The shareholding structure after the change is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of subscribed capital	Paid-in capital *(RMB0'000)*	Percentage of paid-in capital
China Aluminum International Engineering Corporation Limited	5,090.00	100.00%	5,090.00	100.00%
Total	5,090.00	100.00%	5,090.00	100.00%

In January 2013, the registered capital was changed from RMB50.9 million to RMB102.9 million. The equity structure after the change is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of subscribed capital	Paid-in capital *(RMB0'000)*	Percentage of paid-in capital
China Aluminum International Engineering Corporation Limited	10,290.00	100.00%	10,290.00	100.00%
Total	10,290.00	100.00%	10,290.00	100.00%

In June 2015, the shareholder was changed from China Aluminum International Engineering Corporation Limited to Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy. The equity structure after the change is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of subscribed capital	Paid-in capital *(RMB0'000)*	Percentage of paid-in capital
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	10,290.00	100.00%	10,290.00	100.00%
Total	10,290.00	100.00%	10,290.00	100.00%

In October 2019, the registered capital was changed from RMB102.9 million to RMB152.9 million. The equity structure after the change is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of subscribed capital	Paid-in capital *(RMB0'000)*	Percentage of paid-in capital
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	15,290.00	100.00%	15,290.00	100.00%
Total	15,290.00	100.00%	15,290.00	100.00%

As of the Valuation Benchmark Date, the company's equity structure has not changed.

③ Company Profile

The main construction scope of Chinalco International Southern Engineering Co., Ltd. covers the general contracting business of metallurgical engineering, mining engineering, construction engineering and electromechanical engineering. The main product range covers pressure vessels and non-standard equipment, steel structure, high and low voltage panels and cabinets, commercial concrete, doors and windows production and installation business, product business are concentrated in Shandong base.

④ The company's assets, liabilities, equity and operating performance in recent years

The financial status of the unit under appraisal in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	31 December 2021	31 December 2022	31 December 2023
Total assets	73,729.47	71,810.04	65,514.08
Total liabilities	58,172.58	56,432.96	45,663.81
Shareholders' equity	15,556.89	15,377.08	19,850.26

Operating performance	2021	2022	2023
Operating income	75,470.49	65,694.12	38,541.00
Total profit	265.69	85.74	–10,611.42
Net profit	77.30	103.69	–10,534.26

The above-mentioned financial data for 2021 have been audited by the Guangxi Branch of WUYIGE Certified Public Accountants LLP, and an unqualified audit report Da Xin Gui Shen Zi [2022] No. 00011 was issued; the financial data for 2022 have been audited by the Guangxi Branch of WUYIGE Certified Public Accountants LLP, and an unqualified audit report Da Xin Gui Shen Zi [2023] No. 00019 was issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP, and an unqualified audit report Zhi Tong Shen Zi [2024] No. 110C011160 was issued.

(2) Hunan Changye Construction Drawing Examination Co., Ltd. (hereinafter referred to as "Construction Drawing Examination")

① Industrial and commercial situation

Name:	Hunan Changye Construction Drawing Examination Co., Ltd.
Unified social credit code:	9143000077009260XQ
Type:	Limited Liability Company (sole proprietorship of a legal person invested or controlled by a non-natural person)
Registered address:	No. 199, Jiefang Middle Road, Furong District, Changsha
Legal representative:	Kang Guohua
Registered capital:	RMB3,299,900
Date of establishment:	18 January 2005
Operating period:	18 January 2005 to indefinite period
Business scope:	Construction Drawing Examination of housing construction projects. (Projects that require approval according to law can only be carried out after approval by relevant departments.)

② Equity structure

Hunan Changye Construction Drawing Examination Co., Ltd. was established in January 2005. At the time of its establishment, the company's equity structure was as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of shareholding	Paid-in capital *(RMB0'000)*
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	329.99	100.00%	329.99
Total	329.99	100.00%	329.99

③ Company Profile

Hunan Changye Construction Drawing Examination Co., Ltd. is designated by the Hunan Provincial Department of Housing and Urban-Rural Development as the Hunan Provincial Construction Drawing Design Document Review Agency. Its agency category is Class I housing construction projects. Its review business scope covers large and below housing construction projects (excluding super-high-rise buildings). It has 18 technical review qualified personnel and 4 management personnel. The chief reviewer is a leader who is engaged in design work on the production line of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy and has rich experience in construction engineering design and construction.

④ The company's assets, liabilities, equity and operating performance in recent years

The financial status of the unit under appraisal in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	1,130.77	1,104.08	881.23
Total liabilities	269.17	150.48	22.46
Shareholders' equity	861.60	953.60	858.78
Operating performance	**2021**	**2022**	**2023**
Operating income	1,125.71	1,128.83	563.23
Total profit	280.89	377.45	178.57
Net profit	210.47	281.43	158.46

The above-mentioned financial data for 2021 have been audited by WUYIGE Certified Public Accountants LLP and an unqualified audit report Da Xin Gui Shen Zi [2022] No. 00010 was issued; the financial data for 2022 have been audited by WUYIGE Certified Public Accountants LLP and an unqualified audit report Da Xin Gui Shen Zi [2023] No. 00018 was issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report Zhi Tong Shen Zi [2024] No. 110C011159 was issued.

(3) Huachu Intelligent Technology (Hunan) Co., Ltd.

① Industrial and commercial situation

Name:	Huachu Intelligent Technology (Hunan) Co., Ltd.
Unified social credit code:	914301007533604499
Type:	Limited Liability Company (sole proprietorship of a legal person invested or controlled by a non-natural person)
Registered address:	Room A788, 7th Floor, Building 9, Phase I, Changsha CETC Software Park, No. 39, Jianshan Road, Changsha High-tech Development Zone
Legal representative:	Liang Yong
Registered capital:	RMB20,000,000
Date of Establishment:	21 August 2003
Operating period:	21 August 2003 to 30 December 2053
Business scope:	intelligent technology research and development; information technology consulting services; software development; information system integration services; electrical equipment system integration; network integration system operation and maintenance services; computer network system engineering services; integrated wiring; automation control system research and development, installation, sales and services; computer software, computer aids, computer hardware sales; intelligent installation engineering services; communications System engineering services; broadcasting system engineering services; building equipment automatic control system engineering services; fire protection facilities engineering professional contracting; animation and derivative product design services; graphic production. (Items subject to approval by law can only be carried out after approval by the relevant departments, and may not engage in P2P lending, equity crowdfunding, Internet insurance, asset management and cross-border financial, third-party payment, virtual currency trading, ICO, illegal foreign exchange, and other Internet financial business without approval.)

② Equity structure

Huachu Intelligent Technology (Hunan) Co., Ltd. was established in August 2003. The equity structure at the time of establishment was as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of shareholding	Paid-in capital *(RMB0'000)*
China Aluminum International Technology Development Co., Ltd.	120.00	60.00%	120.00
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	80.00	40.00%	80.00
Total	200.00	100.00%	200.00

In April 2019, China Aluminum International Technology Development Co., Ltd. transferred its equity to Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy. The equity structure after the change is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of shareholding	Paid-in capital *(RMB0'000)*
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	200.00	100.00%	200.00
Total	200.00	100.00%	200.00

In March 2020, the company's registered capital increased to RMB20 million. The equity ratio after the capital increase is as follows:

Shareholder Name	**Subscribed capital** *(RMB0'000)*	**Percentage of shareholding**	**Paid-in capital** *(RMB0'000)*
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	2,000.00	100.00%	1,000.00
Total	2,000.00	100.00%	1,000.00

As of the Valuation Benchmark Date, the company's equity structure has not changed.

③ Company Profile

Huachu Intelligent Technology (Hunan) Co., Ltd. is a high-tech enterprise providing intelligent manufacturing solutions, the business scope includes production process automation design integration, intelligent equipment, digital twin, system integration, application software development, integrated operation and maintenance services, data centre construction, intelligent manufacturing technology consulting and so on. The company has a high-quality professional and technical team with many years of experience in the design, engineering and project management of intelligent factories and mines in the non-ferrous industry, which can provide customers with high-quality technology and perfect after-sales service at any time.

④ The company's assets, liabilities, equity and operating performance in recent years

The financial status of the unit under appraisal in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	3,289.75	2,873.38	2,995.55
Total liabilities	1,927.82	1,651.27	1,636.50
Shareholders' equity	1,361.93	1,222.11	1,359.05
Operating performance	**2021**	**2022**	**2023**
Operating income	5,001.15	3,614.75	3,116.42
Total profit	421.94	19.10	142.58
Net profit	400.79	4.89	136.94

The above-mentioned financial data for 2021 have been audited by WUYIGE Certified Public Accountants LLP and an unqualified audit report Daxin Gui Shen Zi [2022] No. 00008 was issued; the financial data for 2022 have been audited by WUYIGE Certified Public Accountants LLP and an unqualified audit report Daxin Gui Shen Zi [2023] No. 00016 was issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report Zhi Tong Shen Zi [2024] No. 110C011161 was issued.

(4) *Hunan Huachu Project Management Co., Ltd.*

① Industrial and commercial situation

Name:	Hunan Huachu Project Management Co., Ltd.
Unified social credit code:	91430000183775596X
Type:	Other Limited Liability Company
Registered address:	4th Floor, No. 299, Mulian East Road, Yuhua District, Changsha
Legal representative:	Gan Huaiying
Registered capital:	RMB6,000,200
Date of Establishment:	29 March 1993
Operating period:	29 March 1993 to indefinite period
Business scope:	project supervision; construction project agency; project management; project cost consulting; bidding agency for engineering construction projects; engineering technology consulting; project operation management; full-process consulting for engineering projects; building information modeling technology development, technical consulting, and technical services; environmental supervision; engineering software development and application consulting. (For projects that require approval according to the law, business activities can only be carried out after approval by relevant departments.)

② Equity structure

The unit under appraisal was established in March 1993. At the time of its establishment, the company's equity structure was as follows:

Shareholder Name	Subscribed capital (RMB0'000)	Percentage of shareholding	Paid-in capital (RMB0'000)
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	50.00	100.00%	50.00
Total	50.00	100.00%	50.00

In August 1996, the company's registered capital increased to RMB1,100,000, and the equity structure after the change was as follows:

Shareholder Name	Subscribed capital (RMB0'000)	Percentage of shareholding	Paid-in capital (RMB0'000)
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	110.00	100.00%	110.00
Total	110.00	100.00%	110.00

In September 2007, the company's registered capital increased to RMB6,000,000. The equity structure after the change is as follows:

Shareholder Name	**Subscribed capital** *(RMB0'000)*	**Percentage of shareholding**	**Paid-in capital** *(RMB0'000)*
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	600.00	100.00%	600.00
Total	600.00	100.00%	600.00

In March 2011, the company's registered capital increased to RMB6,000,200, and the equity structure after the change is as follows:

Shareholder Name	**Subscribed capital** *(RMB0'000)*	**Percentage of shareholding**	**Paid-in capital** *(RMB0'000)*
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	600.02	100.00%	600.02
Total	600.02	100.00%	600.02

In December 2020, there was an equity change. After the change, the company's equity structure is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of shareholding	Paid-in capital *(RMB0'000)*
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	306.01	51.00%	600.02
Hunan Dream Real Estate Development Co., Ltd.	252.01	42.00%	–
Zhengmao Risheng Engineering Consulting Co., Ltd.	42.00	7.00%	–
Total	600.02	100.00%	600.02

As of the Valuation Benchmark Date, the equity structure of the unit under appraisal has not changed.

③ Company Profile

Hunan Huachu Project Management Co., Ltd. is one of the earliest domestic companies to carry out engineering construction supervision business. It has Class A qualifications for supervision of housing construction projects, smelting projects, and mining projects, and Class B qualifications for supervision of municipal public works, chemical and petroleum projects, power projects, and geological disaster control projects. Since its establishment, the company has always carried out construction project supervision and related service activities in a fair, independent, honest, and scientific manner. It has completed more than 800 supervision projects of various types at home and abroad involving housing construction projects, municipal public works, mining projects, smelting projects, highway traffic projects, chemical and petroleum projects, etc., and has achieved good supervision results and social reputation.

④ The company's assets, liabilities, equity and operating performance in recent years

The financial status of the unit under appraisal in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	31 December 2021	31 December 2022	31 December 2023
Total assets	1,279.16	1,390.82	1,641.35
Total liabilities	319.31	204.50	428.29
Shareholders' equity	959.85	1,186.33	1,213.06
Operating performance	**2021**	**2022**	**2023**
Operating income	2,151.06	2,708.10	2,961.96
Total profit	229.88	238.42	293.85
Net profit	223.72	226.48	127.41

The above-mentioned financial data for 2021 have been audited by WUYIGE Certified Public Accountants LLP and an unqualified audit report Daxin Gui Shen Zi [2022] No. 00009 was issued; the financial data for 2022 have been audited by WUYIGE Certified Public Accountants LLP and an unqualified audit report Daxin Gui Shen Zi [2023] No. 00017 was issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report Zhi Tong Shen Zi [2024] No. 110C011158 was issued.

(5) Zhongji Sunward Technology Co., Ltd.

① Industrial and commercial situation

Name:	Zhongji Sunward Technology Co., Ltd.
Unified social credit code:	91430000338552080Y
Type:	Other Limited Liability Company
Registered address:	No. 1335, Liangtang East Road, Xingsha Industrial Base (Changlong Street), Changsha Economic and Technological Development Zone
Legal representative:	Xia Zhihong
Registered capital:	RMB80,000,000

Date of establishment:	15 April 2015
Business period:	15 April 2015 to 14 April 2025
Business scope:	Licensed projects: construction engineering; electrical installation services (projects that must be approved according to the law can only be carried out after approval by relevant departments. The specific business projects are subject to the approval documents or licenses of relevant departments) General projects: mechanical equipment research and development; mechanical and electrical equipment manufacturing; metallurgical special equipment manufacturing; mining machinery manufacturing; special equipment manufacturing (excluding licensed professional equipment manufacturing); industrial robot manufacturing; material handling equipment manufacturing; general equipment manufacturing (excluding special equipment manufacturing); ovens, furnaces and electric furnaces manufacturing; environmental protection special equipment manufacturing; ecological environment material manufacturing; mineral washing and processing; mechanical parts and components processing; electromechanical coupling system research and development; technical services, technical development, technical consultation, technical exchanges, technology transfer, technology promotion; specialization Manufacturing of chemical products (excluding hazardous chemicals); public data platform for artificial intelligence; research and development of intelligent robots; integration of intelligent control systems; general application system of artificial intelligence; manufacturing of equipment for desulfurization and denitrification of coal-fired flue gas; sales of mechanical and electrical equipment; sales of special metallurgical equipment; sales of mining machinery; sales of industrial robots; sales of material handling equipment; sales of intelligent warehousing equipment; sales of drying furnaces, melting furnaces and electric furnaces; sales of special equipment for environmental protection; sales of ecological and environmental materials; sales of mechanical parts and components; sales of special chemical products (excluding hazardous chemicals); sales of equipment for desulfurization and denitrification of coal-fired flue gas; installation services for general mechanical equipment; undertaking engineering construction business of the head office; import and export of technology; import and export of goods. (Except for projects that must be approved according to law, business activities can be carried out independently in accordance with the law with a business license.)

② Equity structure

Zhongji Sunward Technology Co., Ltd. was established on 15 April 2015. At the time of its establishment, the company's equity structure was as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of shareholding	Paid-in capital *(RMB0'000)*
Sunward Intelligent Equipment Co., Ltd.	4,080.00	51.00%	4,080.00
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	3,920.00	49.00%	3,920.00
Total	8,000.00	100.00%	8,000.00

As of the Valuation Benchmark Date, the equity ratio of the unit under appraisal has not changed.

③ Company Profile

Zhongji Sunward Technology Co., Ltd. specializes in the development of professional equipment and common technical margins in the fields of mining, beneficiation and smelting. It can provide customers with an overall solution that integrates process testing, design and optimization, production equipment selection, system manufacturing and upgrading, and project EPC general contracting, so as to achieve the quality improvement or iterative upgrade of its equipment with "precision, intelligence and greenness".

1) Main finalized products

Metallurgy

Fully automatic zinc stripping equipment (including five major equipment systems such as zinc stripping unit, cathode washing unit, multi-functional crane, anode treatment unit, anode casting unit, etc.), automatic zinc sheet conveyor line, intelligent zinc melting and casting equipment, vertical ultra-fine grinding machine, disc ingot casting unit, hot consolidation material crusher, waste lead environmental protection recovery equipment, multi-functional crane for lead electrolysis, multi-functional refining furnace series suitable for various metals, etc.

Mining

Countercurrent contact aerated flotation column (CCF flotation column), large stirring device, CGJ series high-efficiency stirring tank, drum ore washer, trough ore washer, spiral classifier, variable frequency vibrating feeder, dosing machine, thickener, flotation machine, etc.

Environmental protection category

Mine tailings, smelting slag treatment technology and equipment system, anti-corrosion engineering, etc.

New energy

Power battery recycling equipment system, which is suitable for the disassembly of batteries in the new energy industry and the efficient recovery of valuable positive and negative electrode elements.

EPC general contracting category

Provision of EPC project engineering general contracting services including civil engineering projects with equipment and its supporting facilities as the core for the non-ferrous metal selection and smelting fields.

2) Non-standard design and customization service

The company is a technology-based enterprise with designers accounting for more than 50% of the company's total employees. It has a complete non-standard design and manufacturing system with mining and smelting processes, mechanical, electrical, soft liquid and intelligent disciplines. It can accurately customize mining equipment, zinc smelting, copper smelting, lead smelting, aluminum smelting and other equipment spare parts and main equipment according to process requirements.

3) Intelligent material transportation system

Provision of automated, intelligent transportation and storage solutions for workshop-level and factory-level production materials.

④ The assets, liabilities, equity and operating performance in recent years of the enterprise

The financial status of the unit under appraisal in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	27,125.89	28,077.58	27,083.11
Total liabilities	16,274.24	17,048.29	15,137.91
Shareholders' equity	10,851.65	11,029.29	11,945.20

Operating performance	**2021**	**2022**	**2023**
Operating income	22,737.51	29,491.91	17,313.36
Total profit	543.88	664.63	850.19
Net profit	606.23	825.52	975.69

The above-mentioned financial data for 2021 have been audited by the Hunan Branch of CAC CPA Limited Liability Partnership (Special General Partnership), and an unqualified audit report CAC Xiang Shen Zi [2022]0306 was issued; the financial data for 2022 have been audited by the Changsha Branch of ShineWing Certified Public Accountants (Special General Partnership), and an unqualified audit report No. XYZH/2023CSAA3B0027 was issued; the financial data for 2023 have been audited by the Changsha Branch of ShineWing Certified Public Accountants (Special General Partnership), and an unqualified audit report No. XYZH/2024CSAA3B0235 was issued.

(6) Chalco Environmental Protection and Energy Saving Technology (Hunan) Co., Ltd.

① Industrial and commercial situation

Name:	Chalco Environmental Protection and Energy Saving Technology (Hunan) Co., Ltd.
Unified social credit code:	91430111MA4QKGKQ03
Type:	Other Limited Liability Company
Registered address:	Room 113, Office Building and Comprehensive Building, Qing Xi Chuan No. 9, No. 299, Mulian East Road, Yuhua District, Changsha City
Legal representative:	Ren Shijin
Registered capital:	RMB50,000,000
Date of establishment:	25 June 2019
Business period:	25 June 2019 to indefinite period

Business scope: Licensed projects: construction engineering design (for projects that are subject to approval according to law, business activities shall only be carried out after approval by relevant departments, and the specific business projects are subject to the approval documents or licenses of relevant departments) General projects: technical services, technology development, technical consulting, technical exchanges, technology transfer, technology promotion; industrial engineering design services; industrial design services; environmental consulting services; campus management services; water pollution control; sewage treatment and recycling; water environment pollution prevention and control services; solid waste management; technical consulting for resource recycling services; new material technology research and development; soil pollution control and remediation services; soil environment pollution prevention and control services; ecological restoration and ecological protection services; air pollution control; operation efficiency evaluation services; energy conservation management services; contract energy management; power generation technology services; noise and vibration control services; technical R&D for carbon reduction, carbon conversion, carbon capture and carbon sequestration; technical R&D of greenhouse gas emission control; engineering management services; engineering and technology research and experimental development; environmental emergency management services; sales of special equipment for environmental protection; manufacturing of special equipment for environmental protection; manufacturing of special instruments and meters for environmental monitoring; sales of special instruments and meters for environmental monitoring; R&D of online energy monitoring technology; sales of distribution switch control equipment; sales of industrial automatic control system devices; sales of electrical instruments and meters; sales of power facility equipment; manufacturing of mechanical and electrical equipment; sales of mechanical and electrical equipment; sales of water quality pollutant monitoring and detection instruments and meters; R&D of resource recycling technology; R&D of construction waste recycling technology; management of planning and design; R&D of waste heat, waste pressure and waste gas utilization technology; R&D of key technologies for waste heat power generation; environmental protection monitoring; import and export of goods. (Except for projects that must be approved according to law, business activities can be carried out independently in accordance with the law with a business license.)

② Equity structure

The unit under appraisal was established on 15 June 2019, and its equity structure at the time of establishment was as follows:

Shareholder Name	Subscribed capital (RMB0'000)	Percentage of shareholding	Paid-in capital (RMB0'000)
China Aluminum Environmental Protection and Energy Saving Group Co., Ltd.	2,550.00	51.00%	2,550.00
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	2,450.00	49.00%	2,450.00
Total	5,000.00	100.00%	5,000.00

As of the Valuation Benchmark Date, the company's equity structure has not changed.

③ Company Profile

Chalco Environmental Technology is a professional company focusing on environmental protection and energy conservation. The company has Class B qualification for environmental engineering design (water pollution prevention and control projects, solid waste treatment and disposal projects, pollution remediation projects), has passed ISO safety and environmental quality system certification, is a national high-tech enterprise, and has been rated as an innovative small and medium-sized enterprise in Hunan Province. Since its establishment, the company's intellectual property creation capabilities have been continuously improved and developed rapidly. It has a total of 17 valid patents, mainly involving high-tech in the fields of energy conservation and environmental protection such as sewage treatment, equipment energy saving, waste heat utilization, and solid waste resource utilization, which can be widely used in non-ferrous metal mining, smelting, thermal power, water treatment and other fields.

At present, Chalco Environmental Technology has two business centers under its management, namely the environmental protection comprehensive service center and the industrial development center.

The scope of environmental protection comprehensive service business includes environmental impact assessment, completion environmental acceptance, environmental stewardship, corporate environmental due diligence, investigation, assessment and treatment of contaminated site, soil and groundwater pollution prevention and control, solid (hazardous) waste landfill disposal projects, corporate environmental compliance inspections, land reclamation plans, soil and water conservation plans, environmental risk emergency plans, occupational disease protection facility design, environmental supervision, clean production audits and environmental engineering consulting, etc.; the industrial development center is committed to the research and development and application of low-carbon energy-saving technologies, and has gradually realized the upgrading and transformation of technological achievements in the fields of waste heat recovery and utilization, power gas supply, research and application of energy-saving technologies for core energy-consuming equipment, and clean energy construction and configuration, assisting enterprises in building "green factories" and "zero-carbon factories".

④ Assets, liabilities, equity and operating performance of the enterprise in recent years

The financial status of the unit under appraisal in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	6,110.42	5,455.06	5,714.01
Total liabilities	716.81	142.97	234.72
Shareholders' equity	5,393.61	5,312.09	5,479.29
Operating performance	**2021**	**2022**	**2023**
Operating income	2,780.21	2,945.91	2,541.54
Total profit	277.60	130.51	250.97
Net profit	245.51	106.23	218.83

The above-mentioned financial data for 2021 have been audited by ShineWing Certified Public Accountants (Special General Partnership) and an audit report with an unqualified opinion of XYZH/2022BJAA161168 has been issued; the financial data for 2022 have been audited by ShineWing Certified Public Accountants (Special General Partnership) and an audit report with an unqualified opinion of XYZH/2023BJAA16B0433 has been issued; the financial data for 2023 have been audited by ShineWing Certified Public Accountants (Special General Partnership) and an audit report with an unqualified opinion of XYZH/2024BJAA16B0352 has been issued.

(7) Wenzhou Tongrun Construction Co., Ltd.

① Industrial and commercial situation

Name:	Wenzhou Tongrun Construction Co., Ltd.
Unified social credit code:	91330302059578667D
Type:	Limited Liability Company (State-controlled)
Registered address:	Room 420, Building 1, No. 31, Luohe Road, Lucheng District, Wenzhou City, Zhejiang Province
Legal representative:	Tan Ronghe
Registered capital:	RMB1,000,000
Date of establishment:	21 December 2012
Business period:	21 December 2012 to 20 December 2032
Business scope:	Investment in construction, industry, commerce, tourism, accommodation, infrastructure, road traffic facilities, municipal engineering projects, energy development projects, general contracting of construction projects.

② Equity structure

The unit under appraisal was established in December 2012. Its equity structure at the time of establishment was as follows:

Shareholder name	Subscribed capital (RMB0'000)	Percentage of shareholding	Paid-in capital (RMB0'000)
China Aluminum International Engineering Corporation Limited	60.00	60.00%	60.00
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	40.00	40.00%	40.00
Total	100.00	100.00%	100.00

As of the Valuation Benchmark Date, there was no change in the equity of the unit under appraisal.

③ Company Profile

Wenzhou Tongrun was established in December 2013. Its main business is to implement the affordable housing BT project in Lucheng District, Wenzhou City, Zhejiang Province signed by China Aluminum International. The project management and company operations are the responsibility of CINF.

The project is mainly a BT contract construction project signed with the People's Government of Lucheng District, Wenzhou City, including three BT contracts and seven project plots, namely Zhuangtou Plot, Dongyu Section 1 and Section 2 (C-7-1, C-8-2, C-12-1, C-2-5, C-1-6) and Putao 9-1 Plot. Currently, all projects have been completed and handed over. The purchase price of all projects should be recovered by about RMB1.8 billion, and the cumulative purchase price has been recovered by RMB1.808 billion (including the delayed interest on the recovery of the project).

④ The assets, liabilities, equity and operating performance in recent years of the enterprise

The financial status of the unit under appraisal in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	31 December 2021	31 December 2022	31 December 2023
Total assets	10,038.99	11,000.77	4,369.67
Total liabilities	5,289.11	5,340.66	2,706.39
Shareholders' equity	4,749.89	5,660.11	1,663.28
Operating performance	**2021**	**2022**	**2023**
Operating income	40.11	1,085.38	195.42
Total profit	670.28	897.63	291.90
Net profit	480.91	910.22	3.17

The above-mentioned 2021 financial data have been audited by WUYIGE Certified Public Accountants LLP and an unqualified audit report No. Da Xin Shen Zi [2022] No. 1-05534 was issued; the 2022 financial data have been audited by WUYIGE Certified Public Accountants LLP and an unqualified audit report Da Xin Shen Zi [2023] No. 1-01908 was issued; the 2023 financial data have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report was issued.

(8) *China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.*

① Industrial and commercial situation

Name:	China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.
Unified social credit code:	914300001837688983
Type:	Limited Liability Company (sole proprietorship of a legal person invested or controlled by a non-natural person)
Registered address:	Room 101, Building 1, Kangtingyuan, No. 579 Zhenhua Road, Yuhua District, Changsha City
Legal representative:	Liao Congrong
Registered capital:	RMB500,000,000
Date of Establishment:	17 October 1992
Operating period:	17 October 1992 to indefinite period

Business scope: Licensed projects: surveying and mapping services; construction engineering survey; construction engineering design; construction engineering construction; geological disaster control engineering construction; geological disaster control engineering design; geological disaster control engineering supervision; geological disaster control engineering survey; geological disaster risk assessment; construction engineering quality inspection; national land space planning; construction engineering supervision; inspection and testing services; construction labor subcontracting; mineral resource exploration (projects that must be approved according to law can only be carried out after approval by relevant departments, and the specific business projects are subject to the approval documents or licenses of relevant departments) General projects: software development; research and development of Internet of Things technology; planning and design management; basic geological exploration; technical services for geological exploration; earthwork engineering construction; engineering management services; geographic remote sensing information services; information system integration services; information technology consulting services; information consulting services (excluding licensed information consulting services); data processing and storage support services; measurement technology services; civil air defense engineering design; engineering cost consulting services; housing rental; rental services (excluding licensed rental services); rental of construction engineering machinery and equipment; typing and copying; office services; technology import and export; goods import and export; external contracting projects; business training (excluding education training, vocational skills training and other training that require a license). (Except for projects that must be approved according to law, business activities may be carried out independently in accordance with the law with a business license.)

② Equity structure

As of the Valuation Benchmark Date, the company's equity structure is as follows:

Shareholder name	Subscribed capital (RMB0'000)	Percentage of shareholding	Paid-in capital (RMB0'000)
China Aluminum International Engineering Corporation Limited	50,000.00	100.00%	50,000.00
Total	50,000.00	100.00%	50,000.00

③ The assets, liabilities, equity and operating performance in recent years of the enterprise

The financial status of the unit under appraisal in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	31 December 2021	31 December 2022	31 December 2023
Total assets	116,978.36	110,713.24	112,911.02
Total liabilities	91,774.75	76,807.58	99,916.02
Shareholders' equity	25,203.62	33,905.66	12,995.00
Operating performance	**2021**	**2022**	**2023**
Operating income	90,608.59	84,555.75	69,137.98
Total profit	–5,975.88	266.68	–23,515.39
Net profit	–5,446.98	1,164.26	–20,307.99

The above-mentioned financial data for 2021 have been audited by the Guangxi Branch of WUYIGE Certified Public Accountants LLP, and an unqualified audit report Da Xin Gui Shen Zi [2022] No. 00093 was issued; the financial data for 2022 have been audited by the Guangxi Branch of WUYIGE Certified Public Accountants LLP, and an unqualified audit report Da Xin Gui Shen Zi [2023] No. 00031 was issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP, and an unqualified audit report Zhi Tong Shen Zi [2024] No. 110C010773 was issued.

(III) The relationship between the principal and the unit under appraisal

The principal is China Aluminum International Engineering Corporation Limited, and the unit under appraisal is China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd., which is a wholly-owned subsidiary of the principal.

(IV) Other users of asset appraisal report as agreed upon in the asset appraisal entrustment contract

Except for the principal and its superior administrative unit, the asset appraisal entrustment contract does not stipulate other users of the appraisal report; unless otherwise provided by national laws and regulations, any organization or individual that has not been confirmed by the appraisal institution cannot become a user of the appraisal report by virtue of obtaining the appraisal report.

II. Purpose of appraisal

China Aluminum International Engineering Corporation Limited proposes to introduce strategic investors to its subsidiary, and needs to evaluate the relevant total equity value of shareholders of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy to provide a value reference for the above economic behavior.

The above economic behavior has been reviewed and approved by a resolution of the seventh meeting of the board of directors of China Aluminum Corporation in 2024.

III. Target and scope of appraisal

(I) Target of appraisal

The target of the appraisal is the total equity value of shareholders of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy (including the simulated merger of China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.).

(II) Scope of appraisal

The scope of the appraisal is the simulated all assets and liabilities of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy as of the Valuation Benchmark Date of 31 December 2023. The total assets amounted to RMB2,412,171,100, of which: current assets amounted to RMB1,280,054,000 and non-current assets amounted to RMB1,132,117,100; the total liabilities amounted to RMB1,077,863,600, of which: current liabilities amounted to RMB980,494,600 and non-current liabilities amounted to RMB97,369,000; the total owner's equity amounted to RMB1,334,307,500.

The target and scope of the entrusted appraisal are consistent with the object and scope of the appraisal involved in the economic activity.

The Valuation Benchmark Date, the simulated financial statements of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy within the scope of appraisal has been audited by Grant Thornton Zhitong Certified Public Accountants LLP, and a standard unqualified audit report Zhi Tong Shen Zi [2024] No. 110C025481 has been issued, and a standard unqualified opinion has been issued.

(III) Status of major assets within the scope of appraisal

The main physical assets included in this appraisal include: inventories, investment properties, buildings and equipment assets. The types and characteristics of the assets are as follows:

1. Inventories

The inventories included in the scope of the appraisal are mainly raw materials, working capital materials in storage and inventory goods.

Raw materials totaled 57 items, mainly cables and copper wires stored in the project department; working capital materials in storage totaled 14 items, such as Hunan embroidery and 1988 Ya Zhi liquor, etc.; and inventory commodities totaled 1 item, mainly the real estate of the 18th building of the Zhangjiajie Future City used as collateral.

Zhangjiajie Future City is located at Huilong Park in the north, Chongwen Road in the south, Tianshan Gate in the distance and Shuihe River in the near future, with unique natural conditions. The 18th real estate building of Zhangjiajie Future City to be appraised is located in Baotagang Resident Committee of Chongwen Sub-district Office of Zhangjiajie City. The structural type is steel-concrete structure, with an actual total of 18 floors above ground. The type is residential, with a total of 108 units (floor area: 20,107.36 m^2), of which 3 houses are property rooms (floor area: 472.56 m^2). The properties included in the scope of this appraisal are on the 1st to 18th floors.

As at the Valuation Benchmark Date, the construction progress of the properties to be appraised is that the main structure has been topped out. The properties to be appraised is in a state of suspended construction and has not yet been completed and cannot be used normally. The properties to be appraised has obtained all of the "five certificates", namely the Certificate of Right to Use State-owned Land (Zhang Guo Yong (2010) No. 1293), the Construction Land Use Planning Permit (Jian Gui [Di] Zi No. SY201611004), the Construction Project Planning Permit (Jian Gui [Jian] Zi No. SG201701002), the Construction Permit for Building Works (No. 430801201711020101-44) and the Pre-sale Licence for Commercial Properties (Zhang Fang Shou Xu Zi (2019) No. 0027).

2. Investment properties

(1) Investment properties – houses and buildings

The investment properties – houses and buildings included in the scope of appraisal are mainly the office building of Hongfei Building and its expenses and the office building of the old factory area for scientific research, design and single dormitories, totaling 17 items, which are all located in Furong District, Changsha City, Hunan Province. The houses and buildings are steel mixed and hybrid structures with a total floor area of 24,434.33 m^2 and were built between 1974 and 2017.

(2) Investment properties – land

There were 3 items of investment properties – land, mainly the right to use underground parking spaces in Hongfei Building and the right to use land at No. 199 Jiefang Middle Road.

There were 2 underground parking spaces in Hongfei Building, both with an area of 30 square meters, and the expiration date of the land use is July 2053, and the real estate right certificate had not yet been issued.

The land use right of No. 199 Jiefang Middle Road is the land corresponding to 9 items of houses and buildings at the office building of the old factory area for scientific research, design and single dormitories and single dormitory of the old factory of the above investment property – houses and buildings, and the unit under appraisal accounted for the property and the land separately in its books.

3. Houses and buildings

There are a total of 137 houses and buildings included in the scope of appraisal, mainly the office building of No. 9 Hong Qing Xi Chuan and 417 parking spaces attached to it and the office building of Jilian Commercial Center, which are located in Changsha City, Xining City and Xiamen City, etc., and the houses and buildings are of steel-cemented and mixed structure, with a total house floor area of 40,594.55 m^2, which were constructed during the period from 1981 to 2019.

4. Equipment assets

There are 62 vehicles in total, including Buick SGM6522UBB5 commercial vehicles, Foton BJ027V2M05 pickup trucks, Mitsubishi GMC6471C off-road vehicles, etc. As of the Valuation Benchmark Date, 4 vehicles have been scrapped, 5 vehicles are to be scrapped, and the rest are in normal use.

There are 4,602 items of office equipment in total, mainly including scanners, printers and computers, etc. As of the Valuation Benchmark Date, all of them are in normal use.

(IV) Intangible assets reported by enterprises

The intangible assets recorded on the books are 1 land use right, 70 software items and 410 intellectual property rights.

1. Intangible assets – land

The intangible assets recorded in the books – land, the unit being appraised owns the right to use a total of 5 underground parking spaces, with a total original recorded value of RMB800,000.00 and a book value of RMB654,667.03.

2. Intangible assets – software

Intangible assets-software are 70 items of office and design software purchased externally by the unit being appraised, with a book value of RMB4,120,011.36. As of the Valuation Benchmark Date, all of them were in normal use.

3. Intangible assets – intellectual property

The intangible assets – intellectual property rights declared by the enterprise are 410 intellectual property rights owned by Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy, including 3 software copyrights, 21 copyrights and 386 patents, with a book value of RMB914,846.84. For details, please see the appraisal details schedule.

(V) Other off-book assets declared by the enterprise

The off-balance sheet intangible assets declared by the enterprise are mainly 14 trademarks. For details, please see the appraisal details schedule.

(VI) The asset types, quantities and book values (or appraised values) involved in the conclusions of reports issued by other institutions

The financial data within the scope of this appraisal was audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report was issued.

Apart from the above-mentioned reports, no other reports were cited.

IV. Value Type

According to the purpose of the current appraisal, the value type of the target of appraisal is determined to be market value.

Market value refers to the estimated value of the subject of appraisal in a normal and fair transaction on the Valuation Benchmark Date between a willing buyer and a willing seller, each acting rationally and without any coercion.

V. Valuation benchmark date

(I) The Valuation Benchmark Date of this report is 31 December 2023.

(II) The Valuation Benchmark Date is determined by the principal based on economic behavior.

(III) In the current asset appraisal, the definition of the scope of appraisal, the selection of appraisal parameters, the determination of the appraisal value, etc. are all determined based on the internal financial statements of the enterprise, the external economic environment and the market conditions on the Valuation Benchmark Date. All pricing standards in this report are the price standards effective on the Valuation Benchmark Date.

VI. Basis of appraisal

(I) Economic behavior basis

1. "The Resolution of the Seventh Meeting of Board of Directors of China Aluminum Corporation in 2024".

(II) Legal and regulation basis

1. Securities Law of the People's Republic of China (revised for the second time at the 15th meeting of the Standing Committee of the 13th National People's Congress on 28 December 2019);

2. Asset Appraisal Law of the People's Republic of China (adopted at the 21st meeting of the Standing Committee of the 12th National People's Congress on 2 July 2016);

3. Civil Code of the People's Republic of China (adopted at the third session of the 13th National People's Congress on 28 May 2020);

4. Company Law of the People's Republic of China (revised at the 6th meeting of the Standing Committee of the 13th National People's Congress on 26 October 2018);

5. Measures for the Financial Supervision and Administration of the Asset Appraisal Industry (Order No. 97 of the Ministry of Finance of the People's Republic of China);

6. Enterprise Income Tax Law of the People's Republic of China (amended at the 7th Session of the Standing Committee of the 13th National People's Congress on 29 December 2018);

7. Regulations for the Implementation of the Enterprise Income Tax Law of the People's Republic of China (State Council Decree No. 714, 23 April 2019);

8. Law of the People's Republic of China on State-owned Assets in Enterprises (adopted at the fifth meeting of the Standing Committee of the Eleventh National People's Congress on 28 October 2008);

9. Interim Regulations on the Supervision and Administration of State-owned Assets of Enterprises (revised by State Council Decree No. 709 on 2 March 2019);

10. "Measures for the Supervision and Administration of Enterprise State-owned Assets Transactions" (State-owned Assets Supervision and Administration Commission of the State Council and Ministry of Finance Order No. 32);

11. "Measures for the Administration of State-owned Assets Appraisal" (issued by State Council Decree No. 91, revised by State Council Decree No. 732);

12. "Interim Measures for the Administration of Enterprise State-owned Assets Appraisal" (State-owned Assets Supervision and Administration Commission of the State Council Decree No. 12);

13. "Notice on Strengthening the Management of Enterprise State-owned Assets Appraisal" (Guo Zi Wei Chan Quan [2006] No. 274);

14. "Notice on Matters Concerning the Review of Enterprise State-owned Assets Valuation Reports" (Guo Zi Chan Quan [2009] No. 941);

15. "Guidelines for the Record-filing of Enterprise State-owned Assets Appraisal Projects" (Guo Zi Fa Chan Quan [2013] No. 64);

16. "Enterprise Accounting Standards – Basic Standards" (Ministry of Finance Order No. 33), "Ministry of Finance's Decision on Amending the Enterprise Accounting Standards – Basic Standards" (Order of the Ministry of Finance No. 76);

17. "Notice of the Ministry of Finance and the State Administration of Taxation on Several Issues Concerning the Implementation of the Value-Added Tax Transformation Reform Nationwide [Amendment of Articles]" (Cai Shui [2008] No. 170);

18. Provisional Regulations of the People's Republic of China on Value Added Tax (State Council Decree No. 691);

19. "Detailed Rules for the Implementation of the Provisional Regulations of the People's Republic of China on Value Added Tax" (Order No. 50 of the Ministry of Finance and the State Administration of Taxation);

20. Announcement on Policies Concerning Deepening Value-Added Tax Reform (Announcement No. 39 of 2019 by the Ministry of Finance, the State Administration of Taxation, and the General Administration of Customs);

21. "Notice on Comprehensively Launching the Pilot Program of Replacing Business Tax with Value-Added Tax" (Cai Shui [2016] No. 36);

22. Vehicle Purchase Tax Law of the People's Republic of China (adopted at the 7th Session of the Standing Committee of the 13th National People's Congress on 29 December 2018);

23. Land Administration Law of the People's Republic of China (as amended on 26 August 2019 at the Twelfth Meeting of the Standing Committee of the Thirteenth National People's Congress);

24. Urban Real Estate Administration Law of the People's Republic of China (as amended on 26 August 2019 at the Twelfth Session of the Standing Committee of the Thirteenth National People's Congress);

25. Trademark Law of the People's Republic of China (as amended on 23 April 2019 at the Fourth Session of the Tenth Meeting of the Standing Committee of the Thirteenth National People's Congress);

26. Copyright Law of the People's Republic of China (as amended for the third time on 11 November 2020 at the Twenty-third Meeting of the Standing Committee of the Thirteenth National People's Congress);

27. Regulations for the Implementation of the Land Administration Law of the People's Republic of China (as amended on 29 July 2014);

28. Provisional Regulations of the People's Republic of China on Urban Land Use Tax (Decree No. 645 of the State Council of the People's Republic of China);

29. Other relevant laws, regulations and notification documents.

VII. Valuation Methodology

(I) Selection of valuation method

The "Asset Valuation Practice Standards – Enterprise Value" stipulates that when performing enterprise value valuation business, the applicability of the three basic methods of income method, asset-based method and market method should be analyzed according to the valuation purpose, valuation object, value type, data collection, etc., and the valuation method should be selected. For enterprise valuation that is suitable for different valuation methods, asset valuation professionals should use more than two valuation methods for valuation. The valuation methods selected for this valuation are: asset-based method and income method. The reasons for selecting the valuation method are as follows:

Due to the limited channels for obtaining transaction information in the domestic property rights trading market and the large differences in business composition among similar enterprises, it is extremely difficult to select market references of the same type. Therefore, the market method was not used in this appraisal.

The entity being appraised in this report has the prerequisite of going concern, and the selection of economic and technical parameters involved in the application of the asset-based method has sufficient data as the basis and foundation. Combined with the asset appraisal object, value type, appraisal purpose and the information collected by the appraiser, it is determined to use the asset-based method for appraisal.

The income present value method evaluates assets from the perspective of their expected profitability, which can fully reflect the overall value of the enterprise. That is, for investors, the value of the enterprise lies in the expected future earnings that the enterprise can generate. Although the income present value method does not directly use reference objects in the real market to illustrate the current fair market value of the evaluation object, it evaluates assets from the perspective of the expected profitability of assets, which is the basic basis for determining the current fair market value of assets. It can fully reflect the overall value of the enterprise, and its evaluation conclusion has good reliability and persuasiveness. After interviewing the company's management and conducting research and analysis, the appraiser believes that the conditions for income present value method evaluation are met.

(II) Introduction to the asset-based method

The asset-based method, also known as the cost-plus method, uses the amount of investment required to rebuild an enterprise or an independent profit-making entity identical to the subject of the appraisal on the Valuation Benchmark Date as the basis for judgment of the overall asset value. Specifically, it refers to a method of calculating the enterprise value by adding up the assessed values of the various element assets that constitute the enterprise and subtracting the assessed value of liabilities.

1. Current assets

The scope of current asset appraisal includes cash, notes receivable, accounts receivable, receivables financing, prepaid expenses, other receivables, inventories, contract assets and other current assets.

(1) Monetary funds: including bank deposits and other monetary funds. The valuation is determined by checking the cash inventory, verifying bank statements, bank confirmations, checking general ledgers, detailed ledgers, vouchers, etc.

(2) Notes receivable: The appraiser first verifies the correctness of the declared amount, checks the general ledger, detailed ledgers and original vouchers, and the review results are consistent with the actual situation, and the declared amount is correct. The note has strong liquidity and good credit, and is expected to be fully recovered. The appraised value of notes receivable is determined by the verified book value.

(3) Accounts receivable: The appraiser first checks the declaration form, general ledger, detailed ledger, and original vouchers to verify the correctness of the amounts listed in the declaration form. After verifying that the accounts receivable is correct, the appraiser talks with the company's financial personnel and related personnel based on the customer business content, occurrence date, and amount listed in the detailed accounts receivable table reported by the unit being appraised. The financial personnel and relevant personnel gave a detailed introduction to the actual situation of the debtor unit. For accounts receivable that are uncollectible without a conclusive basis, bad debt losses are recognized as assessed risk losses in accordance with the principle of audit recognition of provision for bad debts, and for accounts receivable for which there is a conclusive basis for uncollectibility, the full amount is assessed as a risk loss; at the same time, the assessed value of the provision for bad debts for accounts receivable is determined at zero value.

(4) Accounts receivable financing: The appraiser verifies the authenticity and integrity of the bills by checking whether the detailed accounts are consistent with the general ledger and the balance of the statements, and whether they are consistent with the detailed tables of the entrusted appraisals. The appraiser also verifies the consistency of the bill face value, time of occurrence, business content and coupon rate with the accounting records. The verification result shows that the accounts, tables and bills are consistent. After verification, the receivables financing is genuine, the amount is accurate, and there is no unaccrued interest. The estimated risk loss is calculated based on the

customer's credit status, the historical annual bills receivable recovery status, etc., and the bad debt provision is assessed to be zero.

(5) Other receivables: The appraisers first checked the declaration form as well as the general ledger and the detailed accounts and consulted the original documents to verify the correctness of the amounts listed in the declaration form. On the basis of verifying the correctness of other receivables, the appraiser talks with the company's financial personnel and relevant personnel based on the customer business content, occurrence date, and amount listed in the detailed other receivable table reported by the unit being appraised. The financial personnel and relevant personnel gave a detailed introduction to the actual situation of the debtor unit. The appraiser analyzes the reasons for the formation of other receivable, the time of occurrence of the payment, and the credit status of the debtor in accordance with the provisions of the Enterprise Accounting Standards and relevant laws and regulations, and determines the recoverability of the outstanding balances of each account. For those where there are sufficient reasons to believe that all accounts receivable can be recovered, the valuation is calculated based on the total amount of accounts receivable; for those where it is very likely that part of the money will not be recovered, with the assistance of historical data and on-site investigations, the time and reason for the arrears, the recovery of the money, the debtor's funds, credit, and business management status are analyzed in detail to determine the amount of money that may not be recovered, and the valuation amount is confirmed by deducting the amount of money that may not be recovered from the book balance; for general customers, sufficient discussions are held with relevant personnel of the unit being appraised and the auditor to estimate the part of the money that may not be recovered, and the aging analysis method is used to determine the valuation risk loss, and at the same time, the bad debt provision for other receivables set aside on the Valuation Benchmark Date is assessed to be zero.

(6) Prepaid accounts: The appraiser first checks the declaration form, general ledger, detailed ledger and original vouchers to verify the correctness of the amount listed in the declaration form. After verifying that the prepaid amount is correct, the appraiser talks with the company's financial personnel and related personnel based on the customer business content, date of occurrence and amount listed in

the detailed list of prepaid amounts declared by the unit being appraised. The financial personnel and related personnel gave a detailed introduction to the actual situation of the debtor unit. The appraiser analyzes the reasons for the formation of prepaid amounts in detail in accordance with the requirements of relevant laws and regulations on asset appraisal, and determines the appraised value based on the assets or rights formed by the corresponding goods that can be recovered.

(7) Inventory:

① Raw materials: the accounting covers cables and copper wires stored in the project department. The appraiser firstly verified the purchase and sales contracts and invoices of raw materials, and verified their purchase time and recorded amount; the book cost composition was reasonable, and there was no material in surplus or deficit. The appraiser investigated the market price on the benchmark date, and the raw materials were mostly purchased recently, and the book price was similar to the market selling price on the benchmark date, so the appraisal value was determined by the book value of the raw materials after verification.

② Working capital materials in storage: the appraiser firstly verified the purchase and sales contracts and invoices of the working capital materials in storage, and verified the purchase time and recorded amount; the book cost was reasonable, and there was no material in surplus or deficit. For the working capital materials in storage, the appraiser investigated the market price on the benchmark date, and the book value of the working capital materials in storage was similar to the market selling price on the benchmark date, so the appraised value was determined by the book value of the working capital materials in storage after verification.

③ Inventory goods: For collateral properties accounted for in inventory goods, the appraisal methodology is based on reference to houses and buildings.

(8) Contract assets: The appraiser firstly checks the declaration form as well as the general ledger and the detailed accounts and consults the original documents to verify the correctness of the amounts listed in the declaration form. On the basis of verifying the correctness of the contract assets, based on the content of the customer's business, the date of the last change and the amount listed in the schedule of contract assets declared by the unit being appraised, the appraiser talked with the financial staff and relevant personnel of the company, and the financial staff and relevant personnel introduced the actual situation of the debtor unit in detail. The appraiser analyzed the contract assets in accordance with the "Accounting Standards for Business Enterprises" as well as the regulations related to appraisal. The appraiser analyzed the reasons for the formation of the assets, the time of occurrence of the payments and the creditworthiness of the defaulting parties in accordance with the provisions of the Accounting Standards for Business Enterprises and the relevant regulations on appraisal, and judged the recoverability of the amounts owed in each account. For those with sufficient reasons to believe that all the amounts are recoverable, the appraised value was calculated on the basis of the entire contract assets; for those where it is very likely that part of the funds will not be recovered, with the assistance of historical data and on-site investigations, the time and reason for the arrears, the recovery of the funds, the funds, credit, and management status of the debtor are analyzed in detail to determine the amount of funds that may not be recovered, and the appraised value is confirmed by deducting the amount of funds that may not be recovered from the book balance; for general customers, sufficient discussions are held with the relevant personnel of the unit under appraisal and the auditor to estimate the part of the funds that may not be recovered, and the aging analysis method is used to determine the valuation risk loss, and at the same time, the provision for bad debts of contract assets accrued on the Valuation Benchmark Date is assessed to be zero.

(9) Other current assets: The appraiser, on the basis of verifying that there were no errors, got to understand the relevant taxes and tax rates of the enterprise, checked the correctness and authenticity of the information in the accounts and statements, which were consistent with the book entries, and took the verified book value as the appraised value.

2. Non-current assets

The scope of appraisal of non-current assets includes long-term equity investments, investment properties, fixed assets, intangible assets, deferred income tax assets.

(1) Long-term equity investment

According to the long-term equity investment details table, relevant investment agreements, business licenses of corporate legal persons of invested units, capital verification reports, articles of association, financial statements on the Valuation Benchmark Date and other information are collected and compared with the contents listed in the asset valuation declaration form. After verification, there are no adjustments. The appraiser learns from the enterprise about the accounting method of long-term equity investment and the operating conditions of the invested unit, focusing on the actual control of the invested unit, and adopts the following valuation methods based on the actual control of the invested unit:

Companies appraised using the asset-based approach and the income approach

Based on the information that the assessed company can provide and the appraiser can collect from outside to meet the requirements of the asset-based method, the asset-based method can be used to conduct a comprehensive inventory and appraisal of the assets and liabilities of the assessed company; the income method can be used for companies that have had normal historical operations, have business occurring, and is able to provide future operating plans, development plans and profit forecasts.

The appraised value of long-term equity investments is determined by multiplying the value of all shareholders' equity after overall appraisal of the investee by the percentage of shareholding.

For perpetual bonds, the appraised value is confirmed based on the verified book value.

(2) Investment properties

① Investment properties – houses and buildings

Due to the active transactions of office buildings, buildings for which we could obtain similar housing and building transaction cases in the same area are appraised using the market comparison method. The real estate appraisal value calculated by the market includes the value of land use rights. For real estate where the land ownership of the buildings is not consolidated, the valuation of real estate and land shall be carried out separately.

The income method is a method of estimating the objective and reasonable price or value of the real estate to be appraised by using the principle of expected income, obtaining the normal future net income of the asset to be appraised, selecting an appropriate discount rate (reduction rate) to discount it to the Valuation Benchmark Date, and then accumulating it to obtain the sum of the present value of net income in each year. After verification and on-site inspection, the appraiser found that the asset to be appraised was being rented out and the surrounding trading market was relatively active, so the rental price could be obtained, so it was appropriate to use the income method.

The calculation steps of the market method are as follows:

1) Based on the substitution principle, the price of real estate transaction examples with the same or similar uses in the same area or the same supply and demand circle is used as the reference. By comparing the regional conditions, physical conditions, equity conditions, transaction timing and transaction conditions of the real estate to be appraised with those of the transaction examples, the real estate price of the transaction examples is corrected for regional conditions, physical conditions, equity conditions, transaction date and transaction conditions, and the price of the real estate as at the Valuation Benchmark Date is obtained.

2) Determination of correction coefficient

Transaction condition correction factor = normal market price condition index/actual transaction price condition index

Transaction date correction factor = valuation timing factor condition index/transaction date factor condition index

Regional condition correction factor = appraisal target regional condition factor condition index/comparable instance regional condition factor condition index

Physical condition correction factor = physical condition factor condition index of the assessed object/physical condition factor condition index of the comparable example

Equity status correction factor = equity status factor condition index of the evaluation object/equity status factor condition index of comparable examples

The calculation steps of the income method are as follows:

The income method uses the principle of expected income to calculate the normal future net income of the real estate to be appraised, selects an appropriate discount rate (reduction rate) to discount it to the timing of the Valuation Benchmark Date, and then accumulates it to obtain the sum of the present values of the net income of each year, thereby estimating the objective and reasonable price or value of the real estate to be appraised.

The basic formula of the income approach is as follows:

$$V = \sum_{i=1}^{t} \frac{A_i}{(1+R)^i} + P$$

In which: V equals the assessed value of real estate;

A_i equals the net income in the future i-th year;

R equals the discount rate (%);

t equals the number of years in which future benefits can be obtained (years);

P equals The discounted value of the residual value of land or property at the end of the period.

When using the income method for valuation, we first determine the effective gross income of the valuation target for each period, then deduct the annual operating expenses to calculate the net income (net cash flow) for each period, and further determine the market value of the assets to be appraised.

② Investment properties – land use rights

In accordance with the requirements of the "Asset Valuation Practice Standards – Real Estates", the valuation method is selected based on the valuation purpose, valuation object, value type, data collection, etc., the analysis of the applicability of the three basic asset valuation methods of market method, income method and cost method, as well as derivative methods such as hypothetical development method and benchmark land price coefficient correction method.

Because the area where the valuation object is located has an established urban land grading and benchmark land price correction system, the benchmark land price coefficient correction method is adopted.

Benchmark land price correction method is a method to analyze the factors affecting the land price of the land to be appraised, use the appraisal results such as the urban benchmark land price and the table of correction coefficients for benchmark land price, compare the regional and individual conditions of the land parcel to be appraised with the average conditions of the region in which it is situated in accordance with the principle of substitution, and select corresponding correction coefficients against the table of correction coefficients for correction of the benchmark land price, and then find the price of the land parcel to be appraised on the appraisal period date. Its basic formula is as follows:

Land price = benchmark land price × (1 ± comprehensive correction factor) × period date correction factor × annual correction factor × plot ratio correction factor ± development degree correction factor

(3) Building (structure) category fixed assets

Since the market for residential, office and parking space real estate is active, we can obtain similar housing and building transaction cases in the same area and use the market comparison method for evaluation. The appraised value of real estate calculated by the market method includes the value of land use rights.

The calculation steps of the market method are as follows:

According to the substitution principle, the price of real estate transaction instances with the same or similar uses in the same region or the same supply and demand circle is used as the reference price. By comparing the regional conditions, physical conditions, equity conditions, transaction time and transaction conditions of the real estate to be appraised and the transaction instances, the real estate prices of the transaction instances are corrected for regional conditions, physical conditions, equity conditions, transaction date and transaction conditions, and the price of the real estate to be appraised on the Valuation Benchmark Date is obtained.

Determination of correction factor

Transaction condition correction factor = normal market price condition index/actual transaction price condition index

Transaction date correction factor = valuation time factor condition index/transaction date factor condition index

Regional condition correction factor = valuation target regional condition factor condition index/comparable instance regional condition factor condition index

Physical condition correction factor = physical condition factor condition index of the valuation target/physical condition factor condition index of the comparable example

Equity status correction factor = equity status factor condition index of the valuation target/equity status factor condition index of comparable examples

(4) Equipment category fixed assets

We check the equipment list provided by the enterprise to ensure that the accounts are consistent with the table, and confirm the ownership by reviewing and verifying the relevant contracts, legal ownership certificates and accounting vouchers. On this basis, we conduct necessary on-site investigation and verification of the principal equipment.

Based on the characteristics of various types of equipment, the type of appraised value, data collection conditions and other relevant conditions, the cost method is mainly used for evaluation, and the market method is partially used for evaluation.

① Vehicles

1) Replacement cost method

a. Determination of replacement cost

Based on the local automobile market sales information and other recent vehicle market price data, the current tax-inclusive purchase price of the transport vehicle is determined. On this basis, the vehicle purchase tax, license and other fees are included in accordance with the provisions of the Vehicle Purchase Tax Law of the People's Republic of China. At the same time, according to the "Finance and Taxation [2016] No. 36" and "Announcement No. 39 of the Ministry of Finance, State Administration of Taxation and General Administration of Customs in 2019", the value-added tax on the purchase of vehicles can be deducted. The replacement cost is determined, and the calculation formula is as follows:

Replacement cost = purchase price including tax + vehicle purchase tax + license fee and other fees – deductible value-added tax

b. Determination of comprehensive newness rate

For vehicles, reference is made to the Provisions on Compulsory Scrapping Standards for Historical Motor Vehicles and the "Handbook of Common Data for Asset Valuation": the theoretical newness rate is determined based on the lower of the vehicle mileage and service life. Finally, the lower of the two methods, the ageing method rate and the mileage method newness rate is used, and then the comprehensive adjustment coefficient is determined based on the on-site investigation to finally determine the comprehensive newness rate. The calculation formula is as follows:

Ageing method rate = (economic useful life – used life)/economic useful life × 100%

Mileage method newness rate = (prescribed mileage – mileage travelled)/ prescribed mileage × 100%

The theoretical value for newness is determined based on the lower of the ageing method rate or the mileage method newness rate.

Comprehensive newness rate = theoretical newness rate × adjustment coefficient

c. Determination of evaluation value

Vehicle evaluation value = replacement cost × comprehensive newness rate

2) Market approach

For vehicles which were purchased a long time ago and are still usable even though no new vehicles of the same model available in the market, we can obtain similar second-hand vehicles transaction cases through investigation or inquiry, and correct the evaluation value of such vehicles. The details are as follows:

Through market research and price inquiries, we collected three recent market transaction examples of used vehicles similar to the appraisal object. Based on the substitution principle, we corrected the market price (excluding tax) of the comparison case according to differences in factors such as brand model, vehicle condition, appearance, year of use, mileage, etc., to determine the price of the entrusted vehicle.

Corrected price = reference vehicle transfer price × transaction time correction factor × vehicle model correction factor × vehicle configuration correction factor × engine correction factor × manufacturer correction factor × purchase time correction factor × mileage correction factor × usage correction factor × exterior maintenance correction factor × interior maintenance correction factor × transaction location correction factor

② Office equipment

Replacement cost method

1) Determination of replacement cost

For office equipment, the replacement cost is determined based on local market information and recent online transaction prices excluding tax.

2) Determination of comprehensive newness rate

For office equipment, its comprehensive ageing rate is determined mainly based on its economic life using the ageing method.

Yearly newness rate = (economic life – years in use)/economic life × 100%

3) Determination of evaluation value

Office equipment valuation = replacement cost × comprehensive newness rate

Market approach

For office equipment that was purchased at an earlier date and is not available in the market but is still usable, the valuation was conducted by adopting the market approach based on the second-hand market price as at the valuation date.

(5) Intangible assets

① Land use rights

The land included in the scope of appraisal is parking space in essence. The market method is used for assessment this time. Please refer to the building and structure category for detailed description of the specific method.

② Software

According to the characteristics of the software, the type of valuation, the data collection and other relevant conditions, the market method is used for valuation. Specifically, for purchased software that is sold in the market on the Valuation Benchmark Date, the market price on the Valuation Benchmark Date is used as the valuation; for purchased software that is sold in the market on the Valuation Benchmark Date but has been upgraded, the market price on the Valuation Benchmark Date minus the software upgrade fee is used as the valuation value; for customized software, the price inquired from the software developer is used as the valuation; for software that has been discontinued and has no use value after verification with the enterprise, the valuation is zero.

③ Intellectual Property

For intangible assets and intellectual property rights, according to the operational specifications of intangible asset valuation, the valuation of intangible assets and intellectual property rights can adopt the cost method, income method or market method according to the prerequisites for their use and the specific circumstances of the valuation.

It is generally believed that the value of intangible assets, especially the value of high-tech achievements, is difficult to reflect by replacement cost, because the value of such assets is usually mainly reflected in the creative intellectual labor of high-tech talents, and it is difficult to measure the results of such labor in terms of labor cost. Based on the above factors, the replacement cost method is not used for this valuation.

The market comparison method can be used in asset valuation, whether it is for the valuation of tangible assets or intangible assets. The prerequisite for using the market comparison method is that there are identical or similar transaction cases, and the transaction be conducted at arm's length. In combination with the characteristics of the intellectual property rights entrusted for valuation and the market transaction situation, according to our search and review of papers in related fields, there are currently no similar intellectual property transfer cases in China. Since this valuation cannot find comparable historical transaction cases and transaction price data, the market method is not applicable to this valuation.

The income approach is a method of estimating the budgeted income of the intangible asset during its technical and economic lifespan and converting it into present value at a certain discount rate to obtain the valuation price of the intangible asset. The theoretical basis of the income approach is the theory of utility value. It is the main valuation method in intangible asset transactions such as intangible asset transfer and investment. It can reflect the potential value and excess returns of intangible assets, especially high-tech intangible asset portfolios, and reflects the increasingly significant role of intangible asset factors in output.

Applicable conditions: To use the income method to evaluate intangible assets, the following two conditions must be met: Firstly, the future income of intangible assets can be predicted and measured in monetary terms. Technology itself cannot directly generate income. It is an intangible asset. It can only be used by enterprises in product development or technical services. It combines various factors such as enterprise management, capital, and labor to form the profitability of the enterprise. Intangible assets are one of the indispensable and important factors. Therefore, when predicting the future income of intangible assets, it is necessary to first predict the sales revenue, after-tax profit or net cash flow of the enterprise that uses the intangible assets. Then determine the corresponding technology contribution rate to calculate the assessed value of the technology. Secondly, the risks of intangible assets in future commercial applications can be predicted and quantified. Risk factors are a determining factor in determining the size of the assessed value of intangible assets.

In accordance with the provisions of the "Asset Valuation Standards – Intangible Assets", combined with the purpose and object of the asset valuation and the relevant information that can be collected for the valuation, this asset valuation mainly uses the income method for valuation.

The asset value determined when using the income approach to evaluate an asset refers to the total amount of money paid to acquire the right to obtain the expected income from the asset. That is, the assessed value of an asset is closely related to the utility or usefulness of the asset. The greater the utility of the asset, the stronger its profitability, and the greater its value. The specific evaluation process is as follows:

According to the above evaluation ideas, the following evaluation model is used to estimate the evaluation value of intellectual property rights:

$$P = \sum_{t=1}^{n} \frac{kR_t}{(1+i)^t}$$

Where: P — intellectual property technology value;

R_t — the expected revenue of the technology product in the t-th year in the future;

k — sharing rate;

i — discount rate;

t — the t-th year. This is the mid-term discount. The corresponding discount period is adjusted according to the mid-term discount;

n — economic benefit period of technological products.

(6) Deferred tax assets

Based on the audited book value, the appraiser investigated and verified the rationality and correctness of the reasons for the various deductible temporary tax differences of the enterprise. After verification, the amount of deferred income tax assets was calculated correctly, and the appraisal value was confirmed based on the verified book value.

3. Liabilities

The assessment of corporate liabilities mainly involves review and verification. Appraisers verify the relevant documents, account books and related vouchers. After confirming their authenticity, the appraisal value is determined based on the verified book value or the actual liabilities that should be borne.

(III) Introduction to the Income Approach

This time, the cash flow discounting method in the present value of income method is used to evaluate the overall value of the enterprise to indirectly obtain the value of all shareholders' equity. The overall value of the enterprise is composed of the value of operating assets generated from normal business activities and the value of non-operating assets unrelated to normal business activities. The enterprise free cash flow discounting model is used to determine the value of operating assets, that is, the free cash flow of the enterprise in the next few years is used as the basis, and the calculation is obtained by summing up after discounting with an appropriate discount rate.

The basic model for this assessment is:

$$E = B - D$$

Where: E: the value of all shareholders' equity (net assets) of the valuation object;

B: the enterprise value of the valuation object;

D: the value of the interest-bearing debt of the valuation object.

Among them, B: The model of the enterprise value of the valuation object is:

$$B = P + \sum C_i$$

Where:

P: the operating asset value of the valuation object;

$$P = \sum_{i=1}^{n} \frac{R_i}{(1+r)^i} + \frac{R_{i+1}}{r(1+r)^i}$$

R_i: the expected income (free cash flow) of the valuation object in the i-th year in the future;

r: discount rate (this time mid-term discount is adopted, and the discount period is adjusted accordingly);

n: the future operating period of the valuation object. The future operating period for this assessment is indefinite.

ΣC_i: the value of non-operating and surplus assets and long-term equity investment existing on the base date of the valuation object.

$$\sum C_i = C_1 + C_2$$

C_1: the value of other non-operating assets and surplus assets existing on the base date of the valuation object;

C_2: long-term equity investment value.

1. Determination of the income period

This income method valuation is made under the premise of the enterprise's continuing operation. Therefore, the income period is determined to be indefinite. According to the company's operating history, industry development trends and other information, a two-stage model is adopted, that is, five years after the Valuation Benchmark Date, a reasonable forecast of the enterprise's income, costs, expenses, profits, etc. is made based on the enterprise's actual situation and policies, market and other factors. After the sixth year, each year will remain the same as the fifth year.

2. Correlation between income subject and caliber

In this evaluation, the free cash flow of the enterprise is used as the income indicator of the operating assets of the valuation object. The basic formula is:

Free cash flow of the enterprise = net profit + depreciation and amortization + interest on interest-bearing debt after tax – additional capital

Forecast of free cash flow of the enterprise

A. Forecast of operating revenue

The operating revenue of each appraised entity for the historical years primarily consisted of engineering survey, design and general contracting. The revenue is forecasted based on analysis of the revenues for the historical years and with reference to the market demand, industry competition, orders on hand and future development plans of the enterprise.

B. Forecast of operating cost

The major operating costs of the enterprise are outsourced project payments, outsourcing and subcontracting costs, outsourced labor costs, raw materials, staff costs, and other costs. Outsourcing cost is the cost required for subcontracting a portion of the construction project to other construction units for construction, outsourced labor cost refers to the labor cost in the construction of the project, raw material cost is the cost of purchasing construction materials, employee compensation is the salary of the project personnel, and other costs are the indirect costs of the construction project and so on.

Each cost and expense is forecasted primarily on the basis of the ratio of each cost and expense to revenue for the historical years, taking into account the future development of the enterprise.

C. Forecast of taxes and surcharges

Taxes and surcharges include urban construction tax, education surcharge, property tax, vehicle and vessel use tax, land use tax, stamp duty, and so on.

The urban construction tax, education surcharge and local education surcharge are calculated at 7%, 3% and 2% of the value-added tax payable, respectively; the property tax is calculated at a tax rate of 1.2% on 70% of the original value of the property; the land use tax is calculated on the basis of the land area and the corresponding fee collection standard to the grade of the land; and stamp duty is measured as a percentage of revenue.

The VAT output tax is 9% and 6% of sales revenue. The input tax includes input tax arising from subcontracting costs, raw materials and staff expenses in operating costs; input tax arising from office expenses, travel expenses, property expenses and bidding fees in administrative expenses; and deductible input tax in capital expenditures.

D. Forecasts of sales expenses

Sales expenses primarily include employee compensation, depreciation and amortisation, operating expenses, travel and transportation expenses, and other expenses.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the enterprise's current depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the enterprise's current amortisation policy to measure the amortisation amount for each period.

Forecast of other sales expenses: operating expenses, travel and transportation expenses, etc., are measured based on the actual amount incurred in historical years as a percentage of revenue.

E. Forecast of administrative expenses

Administrative expenses primarily include employee compensation, depreciation, amortisation, office expenses, business hospitality expenses, intermediary agency fees and other expenses.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the enterprise's current depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the enterprise's current amortisation policy to measure the amortisation amount for each period.

Forecast of other administrative expenses: office expenses, business hospitality expenses, and fees are measured based on the actual amounts incurred in historical years as a percentage of revenues or by considering an appropriate growth rate based on the actual amount incurred for 2023.

F. Forecast of R&D expenses

Research and development expenses comprise employee compensation, depreciation and amortisation, consumed materials, fuel and power costs, outsourced development costs, and so on.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the current enterprise's depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the current enterprise's amortisation policy to measure the amortisation amount for each period.

Other expenses are projected for R&D with reference to historical levels.

G. Forecast of finance expense

① *Interest expense*

The appraised entity has no obligation to pay interest, which is not measured at this time;

② *Interest income*

Due to the random occurrence and small amount of this component, it will not be forecasted for this time;

③ *Handling fee*

Due to the random occurrence and small amount of this component, it will not be forecasted at this time;

H. *Forecast of depreciation and amortisation*

① *Forecast of depreciation*

Depreciation includes depreciation of inventory fixed assets, and depreciation of renewed or new fixed assets.

Depreciation of inventory assets is measured at the original book value of fixed assets as at the Valuation Benchmark Date based on a reasonable depreciation policy.

Depreciation of renewed assets is where only the depletion (depreciation) of existing assets is renewed in future years, provided that the current scale of operations is maintained. That is, an asset is assumed to be fully depreciated when the accumulated depreciation of the asset is close to its original value or when the net value of the asset is close to its estimated residual value; upon the end of its economic life, the asset needs to be renewed in accordance with its original value. At the same time as the asset renewal expenditure is incurred, the original asset is written off at its residual value and depreciation is provided on the original value of the renewed asset until the end of the operating period.

Depreciation of renewed and new assets is measured by asset class by allocating the capital expenditure over the forecast period in accordance with the existing depreciation policy.

② *Forecast of amortisation*

Amortisation of assets in the future is primarily the amortisation of software in intangible assets, and measured for each period in accordance with the enterprise's current amortisation policy.

Housing buildings	20 years
Machinery and equipment	10 years
Transportation equipment	6 years
Furniture and office equipment	5 years
Land use rights	40-50 years

I. *Forecast of income tax*

Currently the company enjoys the corporate income tax standard of national high-tech enterprises at an income tax rate of 15%.

Income tax for future years is calculated on the basis of total profits, adjusted for significant tax adjustments in accordance with the Enterprise Income Tax Law and its supplemental regulations, making up for the operating losses of the previous five years starting from the year of profitability, and then multiplied by the flat corporate income tax rate.

J. Estimation of additional capital

Additional capital refers to the increase in working capital and long-term capital investment over more than one year, which are required to maintain continuing operations without changing the conditions of the current business operations. Additional working capital is required for changes in the scale of operations and the renewal of assets necessary for continuing operations.

In this appraisal, it is assumed that the enterprise will not make any further capital investment in its existing operating capacity, and that the additional capital in the future operating period will primarily consist of the renewal of assets and the increase in working capital required for continuing operations. That is, the additional capital as defined in this report is:

Additional capital = investment in asset renewal + investment in asset additions + increase in working capital

① *Investment in asset renewal and additional investment*

On the premise and basis of income estimation, the renewal and addition of input fixed assets are considered for this time. With reference to the company's asset renewal expenditures in previous years and the planning of new assets to be added by the appraised entity in the next five years and by forecasting the future capital expenditures, the asset renewal expenditures for the perpetuity period equal the aggregation of depreciation and amortisation.

② *Estimation of increase in working capital*

Working capital equals current assets other than cash less interest-free current liabilities. Current assets other than cash include notes receivable, accounts receivable, accounts receivable financing, other receivables, prepayments, inventories, contract assets, and other non-current assets used or required for the company's operations, etc. Non-interest-bearing current liabilities include notes payable, accounts payable, contract liabilities, other payables, taxes payable, other current liabilities and long-term payables, etc.

Working capital = current assets other than cash – interest-free current liabilities

Increase in working capital refers to the additional working capital that an enterprise needs to invest in order to maintain normal operations without changing the conditions of its current main business, i.e., the additional funds needed to maintain the enterprise's ability to continue operations, such as the cash required to maintain normal operations, inventory purchases, receivables owed by customers and other basic funds required and payables. The increase in working capital refers to the cash occupied to gain others' commercial credit with the change of business activities of the enterprise, the cash required to be maintained for normal operations, inventory, etc.; meanwhile, the provision of commercial credit in the economic activities can reduce the immediate payment of cash accordingly. Usually, other receivables and other accounts payable account for the vast majority of related-party or non-operational transactions; taxes payable and wages payable, etc., mostly incurred in the operation with relatively fast turnover, relatively short delinquency time and in relatively small amount, are assumed at the time of estimation to be kept at the turnover level of the benchmark date. Therefore, the increase in working capital is estimated in principle by considering only the main factors such as cash (minimum cash holdings), inventories, receivables and payables required to be maintained for normal operations. The increase in working capital as defined in this report is:

Increase in working capital = current working capital – prior period working capital

Working capital as at the Valuation Benchmark Date = Current assets (excluding cash and non-operating assets) – Current liabilities (excluding interest-bearing current liabilities and non-operating liabilities)

Operating cash = total annual cash costs/cash turnover ratio

Total annual paid costs = total cost of goods sold + total period expenses – total non-cash costs

Cash turnover period = inventory turnover period + receivables turnover period – payables turnover period

Accounts receivable = total operating revenue/accounts receivable turnover ratio

Accounts receivable primarily include accounts receivable, notes receivable, prepayments and other receivables related to business operation.

Inventory = total operating costs/inventory turnover ratio

Accounts payable = total operating costs/accounts payable turnover ratio

Accounts payable include accounts payable, notes payable, advance receipts and other payables related to business operation.

Based on the investigation of the operating conditions of the appraised entity, as well as the audited statistical analysis of assets and profit and loss, revenues, costs and expenses of historical operations and the results of the estimation of revenues and costs for each year during the future operating period, the increase in money funds, inventory, receivables and payables, etc., and the working capitals can be obtained for each of the years during the future operating period according to the above definitions.

In accordance with the principle of consistency between earnings and discount rates, the earnings for this evaluation are based on the enterprise's free cash flow, and the discount rate is the weighted average cost of capital (WACC).

The discount rate (weighted average cost of capital, WACC) is calculated as follows:

$$WACC = R_d \times (1 - T) \times \frac{D}{D + E} + R_e \times \frac{E}{D + E}$$

Where: R_e: cost of equity capital;

R_d: cost of interest-bearing debt capital;

E: market value of equity;

D: market value of interest-bearing debt;

T: income tax rate.

The cost of equity capital is calculated using the Capital Asset Pricing Model (CAPM). The calculation formula is as follows:

$R_e = Rf1 + \beta(R_m - Rf2) + Alpha$

Where: R_e: expected rate of return on equity, i.e. cost of equity capital;

Rf1: risk-free rate of return;

β: Beta coefficient;

R_m: market expected rate of return;

Rf2: long-term market expected return rate;

Alpha: idiosyncratic risk premium;

(R_m–Rf2): Market risk premium, called ERP.

Determination of discount rate

Valuation process of specific parameters:

① Determination of the risk-free rate (Rf).

The yield on treasury bonds is generally considered risk-free as the risk of nonpayment of the debt is remote and negligible. The appraisers queried the yields to maturity of treasury bonds with remaining maturities of 10 years or more to the Valuation Benchmark Date, which were traded in the vicinity of the Valuation Benchmark Date through Flush Financial Terminal, and took the average of the yields as the risk-free rate of return, and the calculated Rf1 was 2.8819%.

② Determination of market risk premium (ERP).

The determination of ERP, i.e., the equity market excess risk return (Rm-Rf2). Generally, the equity market excess risk return rate, i.e. the equity risk premium, is the ratio of the amount of risk compensation received by investors to the amount of risky investment, which exceeds the rate of return that would otherwise have been due on an investment in a risk-free security. Currently in China, publicly available information on the securities market is usually used to study the risk-reward ratio.

The ERP for projects with an income period of over 10 years is calculated to be 6.40%.

③ Determination of beta coefficients

a. Identifying comparable companies

The selection criteria for the comparable companies in this appraisal are as follows:

The industry in which the comparable companies are engaged or their main business being professional services;

The comparable company has been profitable in recent years;

The comparable companies must have been listed for at least three years;

The comparable companies issued A shares only.

Currently in China, Flush Information Company is engaged in the research of beta and gives the formula for calculating beta value. In this appraisal, the appraisers have selected the beta calculator published by the company to calculate the beta values of comparable companies. The said beta values contain the comparable companies' own capital structure. After screening and selecting 7 listed companies, which are similar in business content and others to the appraised company, as comparable companies, the weekly index calculates the imputed risk factor β relative to the Shanghai and Shenzhen markets (using the CSI 300 Index), and excludes the β coefficient after financial leverage of each comparable company to calculate the average value thereof as the β coefficient after excluding financial leverage of the appraised company. The beta coefficient after excluding financial leverage is 0.5561.

④ Determination of capital structure ratio of the appraised entity

Taking into account the operating characteristics of the industry, the average target capital structure for this time has been selected as the own capital structure (D/E) of the appraised entity, i.e. 8.28%.

⑤ Estimation of the β coefficient of the appraised entity under the capital structure ratio determined above

The income tax rate implemented on the Valuation Benchmark Date of the appraised entity is 15%.

With financial leverage β = Without financial leverage β × [1 + D/E × (1 – T)]

The calculated beta coefficient was determined to be 0.5952.

⑥ Blume adjustment of the β coefficient

The idea and method of the adjustment proposed by Blume are as follows:

$a = 0.35 + 0.65\ \beta L$

Where: a is the adjusted beta and βL is the measured historical beta.

The adjusted risk factor β for the appraised entity is 0.7369.

⑦ Determination of the special risk premium ε

The specific risk reward ratio ε is the reward rate for non-systematic risks caused by the factors specific to the appraised enterprise. The comprehensive analysis method is adopted in this appraisal to determine the specific risk reward rate ε, i.e. to determine a reasonable specific risk reward rate by taking into account the appraised enterprise's asset size, operation stage, market competition, reliance on major customers and suppliers, corporate governance, capital structure and other factors.

The specific risk-based reward ratio is determined to be 3.00% after taking into account factors such as the appraised entity's asset size, operation stage, market competition, reliance on major customers and suppliers, corporate governance and capital structure.

⑧ Determination of the cost of equity capital

Based on the above analytical calculations, the appraisers determined that the expected return on equity used for this appraisal, i.e., the after-tax equity capital cost, was 10.60%.

⑨ Determination of the cost of debt capital

Considering the target capital structure of comparable companies, the one-year LPR rate of 3.45% published on the benchmark date was used as the cost of debt capital in this case.

⑩ Determination of the weighted cost of capital

The WACC model was used to calculate the weighted average cost of capital (WACC) by substituting the above parameters into the WACC model, resulting in a WACC of 10.01%.

3. Value of interest-bearing liabilities of non-operating assets and liabilities

Non-operating assets and liabilities refer to assets and liabilities that are not related to the production and operation of the assessed unit and are not involved in the free cash flow forecast of the enterprise after the Valuation Benchmark Date. The valuation method and results of non-operating assets and liabilities are consistent with the asset-based method. For details, please refer to the corresponding sections of the description of the asset-based method.

1) Determination of the value of excess assets

Excess assets refer to the excess cash over the business operations required on the Valuation Benchmark Date, which is the difference between the monetary funds on the base date and the cash holdings required for daily operations.

2) Determination of the value of unconsolidated subsidiaries

Unconsolidated subsidiaries refer to corresponding subsidiaries that are not valued on a consolidated basis this time; the value of the unconsolidated subsidiaries is determined through reasonable analysis after an overall assessment using appropriate valuation methods.

3) Determination of the value of other non-operating assets and liabilities

Other non-operating assets and liabilities refer to assets and liabilities that are not related to the production and operation of the appraised entity (such as working capital and long-term effective assets), except for – excess assets and unconsolidated subsidiaries.

4) Value of interest-bearing liabilities

Interest-bearing liabilities refer to debts on the books that require interest payments on the base date, the unit under appraisal has no interest-bearing liabilities on the benchmark date.

(IV) Method for determining the evaluation results

The preliminary conclusions of the two valuation methods are compared and analyzed, and the rationality of the different valuation methods and preliminary value conclusions as well as the quality and quantity of the data used are comprehensively considered to form the final valuation results. This time, the conclusion of the income method is determined as the final valuation results.

IX. Valuation Assumptions

The assumptions adopted in analysing the estimates in this asset valuation report are as follows:

A. Assumptions applied to both the asset-based approach and the income approach

(I) Basic Assumptions

1. Open market assumption assumes that the assets to be valued are traded or intended to be traded on the open market, and both of the parties to the transaction of the assets are in equal position and have enough opportunities and time to obtain market information so as to make reasonable and rational judgment on the functions, purpose and considerations of the assets;

2. Transaction assumption assumes that all the assets to be valued are already in the process of transaction, and the appraisal carries out the valuation based on a simulated market which involves the transaction conditions of the assets to be valued. Transaction assumption is the most basic assumption for asset valuation;

3. Going concern assumption assumes that the appraised entity will not cease operation for any reason in the foreseeable future, but will continue to operate lawfully with its existing assets and resources;

4. Assumption of continuous use of assets assumes that the appraised assets will continue to be used legally and effectively in accordance with their current use, methods of use, scale, frequency, environment and other conditions, and there will be no significant changes during the foreseeable period of use.

(II) General Assumptions

1. It is assumed that there are no material changes in the relevant prevailing laws, regulations and policies, and the macroeconomic situation of the country, and that there are no material changes in the political, economic and social environment of the regions where the parties to the transaction are located;

2. It is assumed that the business continues as a going concern in view of the actual status of assets as at the Valuation Benchmark Date;

3. It is assumed that there are no substantial changes in such indicators as interest rates, exchange rates, tax bases, tax rates and policy based levies related to the appraised entity after the Valuation Benchmark Date;

4. It is assumed that the management of the appraised entity after the Valuation Benchmark Date is responsible, stable and capable of performing their duties;

5. Unless otherwise specified, it is assumed that the Company is fully in compliance with all relevant laws and regulations;

6. It is assumed that the values of various parameters estimated in this valuation are determined in accordance with the current price system, without taking into account the impact of inflation factors after the date of valuation;

7. It is assumed that there will be no force majeure and unforeseeable factors having a material adverse impact on the appraised entity after the Valuation Benchmark Date.

(III) Special assumptions

1. It is assumed that the accounting policies to be adopted by the appraised entity after the Valuation Benchmark Date and the accounting policies adopted at the time of preparing the valuation reports are consistent in material aspects;

2. It is assumed that the appraised entity's scope and mode of operation after the Valuation Benchmark Date are consistent with current orientation on the basis of the existing management method and management standard;

3. The companies are able to continue to use the existing self-owned real estate and purchased equipment, and will not bear any costs caused by changes in asset ownership in the future;

4. It is assumed that the transfer of China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. to Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy by the principal can be carried out smoothly.

B. Assumptions applicable only to the income approach based on above assumptions

1. It is assumed that the cash inflow and cash outflow of the appraised entity after the Valuation Benchmark Date are uniform;

2. It is assumed that the principal businesses of the appraised entity remain unchanged;

3. It is assumed that the appraised entity's existing qualification certificates can be extended upon expiration;

4. It is assumed that the R&D expenses of the appraised entity are collected accurately, and can be deducted in accordance with relevant policies in the upcoming forecast years;

5. It is assumed that the high-tech certificates of the appraised entity can continue to be extended upon expiration, and the enterprise can continue to enjoy the preferential income tax rate of 15%;

6. It is assumed that the enterprise's judgment on future markets and its associated revenue costs are realized as planned currently.

The valuation conclusion in this asset valuation report was effective as at the Valuation Benchmark Date on the aforesaid assumptions. We and the signing valuers disclaim any responsibility for any different valuation conclusion arising from any significant change in any assumption.

X. Valuation Conclusion

(I) Valuation result under asset-based approach

The book value of total assets of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy on the Valuation Benchmark Date was RMB2,412,171,100, the appraised value was RMB2,978,904,900, representing an appreciation in value of RMB566,733,900 or 23.49%; the book value of total liabilities was RMB1,077,863,600, the appraised value was RMB1,077,863,600, representing no appreciation or depreciation; the book value of the entire shareholders' equity was RMB1,334,307,500, the appraised value of the entire shareholders' equity was RMB1,901,041,300, representing an appreciation in value of RMB566,733,900 or 42.47%.

The book value and appraised value of major assets and liabilities are as follows:

	Items	Book value A	Appraised value B	Increase or decrease C=B-A	Appreciation rate % D=C/A×100%
1	Current assets	128,005.40	128,898.98	893.58	0.70
2	Non-current assets	113,211.71	168,991.52	55,779.81	49.27
3	Including: Debt investments	–	–	–	–
4	Available-for-sale financial assets	–	–	–	–
5	Other debt investments	–	–	–	–
6	Held-to-maturity investments	–	–	–	–
7	Long-term receivables	–	–	–	–
8	Long-term equity investments	61,532.16	84,196.84	22,664.68	36.83
9	Other equity instrument investments	–	–	–	–
10	Other non-current financial assets	–	–	–	–
11	Investment properties	7,302.47	25,966.80	18,664.33	255.59
12	Fixed assets	39,670.41	46,562.15	6,891.74	17.37
13	Construction in progress	–	–	–	–
14	Construction materials	–	–	–	–
15	Fixed assets liquidation	–	–	–	–
16	Productive biological assets	–	–	–	–
17	Oil and gas assets	–	–	–	–
18	Intangible assets	568.95	8,128.01	7,559.06	1,328.60
19	Development expenditure	–	–	–	–
20	Goodwill	–	–	–	–
21	Right-of-use assets	–	–	–	–
22	Long-term deferred expenses	–	–	–	–
23	Deferred income tax assets	4,137.72	4,137.72	–	–
24	Other non-current assets	–	–	–	–
25	**Total assets**	241,217.11	297,890.49	56,673.39	23.49
26	Current liabilities	98,049.46	98,049.46	–	–
27	Non-current liabilities	9,736.90	9,736.90	–	–
28	**Total liabilities**	107,786.36	107,786.36	–	–
29	**Net assets (owners' equity)**	133,430.75	190,104.13	56,673.39	42.47

The book value and appraised value of major assets and liabilities and the reasons for the differences:

1. Long-term equity investments

The book value of long-term equity investments was RMB615,321,600, the appraised value is RMB841,968,400, the appraised appreciation was RMB226,646,800, and the appraised appreciation rate was 36.83%. The reason for the appraised appreciation was that when the long-term equity investment was a holding company, the book value of the enterprise's financial accounting was the historical cost of the long-term equity investment, and the future profit generated by the enterprise in the course of operation was not reflected in the book value of the long-term equity investment. This assessment uses the appraised net assets of the investee multiplied by the equity ratio as the appraised value of the long-term equity investment, thereby assessing the appreciation.

2. Investment Properties

The book value of investment properties was RMB73,024,700, the appraised value was RMB259,668,000, the appraised appreciation was RMB186,643,300, and the appraised appreciation rate was 255.59%. The main reason for the appraised appreciation of investment properties was the increase in real estate market prices, which led to an increase in appraised value.

3. Intangible assets

Intangible assets was RMB5,689,500, the appraised value was RMB81,280,100, the appraised appreciation was RMB75,590,600, and the appraised appreciation rate was 1,328.60%. The reason for the appraised appreciation was that the intangible assets declared by the enterprise – intellectual property rights and intangible assets – trademarks have no book value, and the appraised value was based on the evaluation of intellectual property rights from the perspective of profitability, resulting in appraised appreciation.

(II) Valuation result under the income approach

As of the Valuation Benchmark Date on 31 December 2023, under the premise of going concern and as appraised under the income approach, the value of the entire shareholders' equity of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy was RMB1,997,243,300, representing an appreciation in value of RMB662,935,800 or 49.68%.

(III) Determination of the valuation conclusion

Upon comparison of the appraisal results of the asset-based approach and the income approach, the difference in valuation between the income approach and the asset-based approach amounted to RMB96,202,000, representing a difference of 4.82% based on the conclusion of the income-based approach.

1. Main reasons for the difference in results under the two valuation approaches

The two valuation approaches consider different perspectives. The asset-based approach considers the re-acquisition of assets and reflects the replacement value of the existing assets of the enterprise whereas the income approach considers the enterprise's future profitability and reflects the comprehensive profitability of the assets of the enterprise. It is normal for the two valuation approaches to have different results.

2. Reasons for selected the valuation result under the income approach

The income approach not only considers the value of all tangible assets, intangible assets and liabilities presented on the balance sheet of the enterprise, but also covers the value of intangible assets such as customer resources, human resources, technical and business capabilities, etc. The appraised entities are light-asset enterprises, and the sources of future income are the existing stable customer base, the service capacity of the business, the industry status, the reputation among customers for new customers and new business development, etc. The results of the income approach could better reflect the overall enterprise value of the appraised entities.

According to the above analysis, the income method can better reflect the corporate value of the unit under appraisal. Therefore, the conclusion of this asset appraisal report adopts the appraisal result of the income method, that is, the appraised value of the entire shareholders' equity of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy was RMB1,997,243,300.

The result of this valuation did not take into account the impact of special transactions such as equity liquidity on equity value.

XI. Special Matters

(III) This valuation report is based on the information in relation to asset valuation provided by the client and related parties of the appraised entity. It is the responsibility of the client and the related parties to provide the necessary information and ensure the truthfulness, legality and completeness of such information and legality of the operation. The responsibility of asset valuation professionals is to analyse, estimate and express professional view on the value of valuation target as at the Valuation Benchmark Date for the specific purpose. Asset valuation professionals conduct the necessary verification and disclosure on such information and its sources, which does not represent any guarantee provided as to the truthfulness, legality and completeness of the information mentioned above beyond the scope of practice for asset valuation professionals to ascertain or express opinions on such information and its sources.

(IV) Citation of conclusions from reports issued by other institutions

The financial data within the scope of this valuation was audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report was issued.

Apart from the above-mentioned reports, no other reports were cited.

(V) Incomplete or defective information on main ownership

① Unlicensed parking spaces

The unit under appraisal has not obtained real estate certificates for the 1st and 2nd items declared in "Investment properties – land use rights", namely the right to use of the underground parking spaces in Changsha Hongfei Building (2 parking spaces), the 4th item declared in "Fixed assets – houses and buildings", namely the underground garage of the No. 9 Qingxichuan New Campus Office Building (417 parking spaces), and the 1st item declared in "Intangible assets – land use rights", namely the right to use the underground parking spaces in Building No. 2, 39 Jinqiao Road, Chengdong District, Xining City (5 parking spaces). This time, the unit under appraisal has issued a letter of commitment, promising that the above-mentioned parking spaces belong to it and that there are no disputes in relation to property rights and debts.

② Unlicensed collateral properties

According to the Enforcement Decision of the Intermediate People's Court of Zhangjiajie City, Hunan Province ((2020) Xiang 08 Zhi Hui No. 22), the unit under appraisal acquired the 18th real estate building of Zhangjiajie Future City by way of offsetting the debt in kind on 15 July 2020, and the court ruled that the 18th real estate building of Zhangjiajie Future City shall belong to Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy. As the real estate management department would not handle the registration of the debt-offsetting houses, no real estate right certificate has yet been issued for the aforesaid property. The unit under appraisal declared a floor area of 20,107.36 square meters and the use of the real estate is residential.

As at the Valuation Benchmark Date, such residential building had obtained the ownership right according to the court's enforcement decision and had not yet applied for the certificate of real estate rights, and the unit under appraisal has issued a letter of undertaking that the said property is owned by it and that there are no disputes in relation to property rights and debts.

(VI) Restrictions on valuation procedures

None.

(VII) Incomplete information in the valuation

None.

(VIII) Nature and amount of the pledges, guarantees, leases and contingent liabilities (contingent assets) and their relationship with the subject of valuation

None.

(IX) Matters that may have potential impact on the valuation conclusion from the Valuation Benchmark Date to the date of valuation report

1. The principal, China Aluminum International Engineering Corporation Limited, is the current shareholder of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy. According to the principal's description, China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. will be transferred to become a subsidiary of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy, the specific time for industrial and commercial changes is yet to be determined. At the request of the

principal, it will be simulated and merged on the Valuation Benchmark Date this time.

2. On 20 February 2024, the 5-year LPR rate changed from 4.2% to 3.95%. This valuation did not take into account the impact of this change on the valuation result.

(X) Other conditions that may have material impact on the valuation conclusion

1. Subsidiaries have not yet made full capital contribution

As of the Valuation Benchmark Date, the paid-in capital of certain subordinate subsidiary (sub-subsidiary) companies such as Huachu Intelligent Technology (Hunan) Co., Ltd., Shenzhen Changkan Surveying and Design Co., Ltd., and Chalco Intelligent (Hangzhou) Safety Science Research Institute Co., Ltd. has not been fully paid.

The current appraisal does not take into account the possible impact that the failure to fully pay the above-mentioned paid-in capital may have on the appraisal conclusion.

2. Patents with co-owners

The unit under appraisal has a total of 410 patents, of which 73 have co-owners. Among the 73 items, only 16 co-owners include units outside the Group. It is understood that the unit under appraisal has not signed relevant revenue sharing contracts and profit distribution contracts with the co-owners. Considering that there are fewer co-ownership patents, the intellectual property rights were calculated based on the entire asset group, and the patent value of the co-owners was not taken into account.

Users of the asset valuation report should pay attention to the impact of the above special matters on the valuation conclusion.

XII. Date of the asset valuation report

This asset valuation report is dated 15 August 2024.

Summary of the Asset Valuation Report on the Entire Shareholders' Equity of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry Involved in the Proposed Introduction of Strategic Investors to the Subsidiaries by China Aluminum International Engineering Corporation Limited

Guo Rong Xing Hua Ping Bao Zi [2024] No. 010497

China Aluminum International Engineering Corporation Limited:

As engaged by the Company, Beijing Guorongxinghua Assets Appraisal Co., Ltd. has, in accordance with the laws, administrative regulations and asset valuation standards, and carried out necessary valuation procedures, appraised the market value of the entire shareholders' equity of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry as at the Valuation Benchmark Date in the principles of independence, objectivity and impartiality. The asset valuation report is summarised as follows:

Purpose of valuation: China Aluminum International Engineering Corporation Limited proposed to introduce strategic investors to its subsidiaries. In this regard, it is necessary to assess the value of the entire shareholders' equity of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry involved in order to provide reference for the value of the above economic behaviour.

Subject of valuation: the value of the entire shareholders' equity of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry.

Scope of valuation: All audited assets and liabilities of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry, including current assets, non-current assets, current liabilities and non-current liabilities.

Valuation benchmark date: 31 December 2023.

Type of value: market value.

Valuation method: asset-based approach and income approach.

Valuation conclusion: this valuation adopted the income approach in concluding the valuation result. The valuation result is set out as follows:

As of the Valuation Benchmark Date on 31 December 2023, under the premise of going concern and as appraised under the income approach, the value of the entire shareholders' equity of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry was RMB850,724,700, representing an appreciation in value of RMB407,698,000 or 92.03%.

As of the Valuation Benchmark Date on 31 December 2023, the net assets attributable to the parent company of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry in the consolidated financial statements was

RMB455,167,000, and the value of the entire shareholders' equity appraised under the income approach was RMB850,724,700, representing an appreciation in value of RMB395,557,700 or 86.90%. The reason for such appreciation is that the income approach considers the enterprise's future profitability and represents a stronger comprehensive profitability of the assets of the enterprise.

This asset valuation report is issued for the sole purpose of providing value reference for the economic behaviour described herein, and the valuation conclusion shall be valid for one year from the Valuation Benchmark Date.

Users of the asset valuation report shall fully consider the assumptions, limiting conditions and notes on special matters set out in the asset valuation report and their impacts on the valuation conclusion.

The above has been extracted from the full text of the asset valuation report. For details of this valuation, and in order to properly understand and use the valuation conclusion, you should carefully read the full text of the asset valuation report.

(II) Overview of the Appraised Entity

1. Industrial and Commercial Registration Information

Company Name:	Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (hereinafter referred to as "**Kunming Survey and Design Institute**")
Unified social credit code:	91530000216525578C
Legal representative:	Zou Guofu
Type of enterprise:	limited liability company (sole proprietorship of legal person not invested or controlled by natural persons)
Registered capital:	RMB208,500,000
Registered address:	No. 1, Dongfeng Lane, Dongfeng East Road, Kunming City, Yunnan Province
Date of establishment:	19 September 2000
Term of operation:	19 September 2000 to indefinite term

Business scope:	General items: basic geological exploration; engineering and technology research and experimental development project management services; satellite remote sensing application system integration; special equipment repair; instrument repair; computer and office equipment maintenance; business training (excluding education training, vocational skills training and other training that requires permission); engineering and technical services (except planning and management, survey, design and supervision); earthwork construction; mining machinery sales; mechanical and electrical equipment sales; geographic remote sensing information service; software development; information system integration services; soil and site restoration equipment manufacturing; mining machinery manufacturing; soil and site restoration equipment sales; municipal facilities management; urban greening management; landscaping engineering construction; planning and design management; road cargo transport of general trucks with a total mass of 4.5 tons and less (except network freight and dangerous goods); loading, unloading and handling; engineering cost consulting business; technical service, technology development, technology consultation, technology exchange, technology transfer, technology dissemination; metal ore sales; building materials sales; mining rights evaluation services; geological survey technical services; land consolidation services; sales of special instruments for geological survey and earthquake; general mechanical equipment installation services; machinery and equipment leasing (except for items subject to approval according to law, business activities are independently carried out according to law with the business license). Permitted items: construction engineering design; construction works; construction project survey; surveying and mapping services; mineral resources exploration; geological exploration of metallic and nonmetallic mineral resources; geological hazard risk assessment; geological disaster control engineering survey; geological disaster control engineering design; geological disaster control engineering construction; construction project supervision; road transport of goods (excluding dangerous goods); construction professional work. (For items subject to approval according to law, business activities can only be carried out after being approved by relevant departments, and the specific business items shall be subject to the approval documents or licenses of relevant departments.)

2. *Overview of the Company*

① *Business Overview*

Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry has 24 professional qualification certificates and 7 qualification certifications in engineering survey, engineering consulting, architectural design, metallurgical industry design, municipal design, urban and rural planning, geological disaster assessment, survey, design, construction, geological survey, foundation and foundation engineering construction, mining engineering general contracting, environmental protection engineering professional contracting, municipal public utilities general contracting, construction engineering general contracting, surveying and mapping, groundwater resource development, environmental protection and pollution control, geotechnical testing, construction drawing review, etc., involving 70 majors. Among them, there are 14 Class A (first level, first category) qualifications and qualification certificates.

② *Business layout*

Kunming Surveying and Design Institute continues to deepen its "1+7+X" business layout:

"1": "Based in Yunnan" means taking Kunming as the center to achieve full coverage of business in Yunnan region.

"7": "Facing the whole country" means giving full play to the entity + window role of regional companies, consolidating and developing key regional business markets such as the Chengdu-Chongqing area, Guangxi and Guizhou (Guangxi -Guizhou area), the Greater Bay Area, Hainan Free Trade Port, the Yangtze River Delta, Tibet, and the Northwest.

"X": "Exploiting overseas" is to use the African Congo (Kinshasa) Company as the implementing entity to deeply cultivate the African market; relying on the platform advantages of the "Yunnan Radiation Center", we will continue to expand the neighboring Southeast Asian market; relying on the Toromocho Copper Mine Project, we will develop the Peruvian market and enter the South American market.

③ *Business composition*

Fully implement the overall goal of Chinalco to build a world-class excellent nonferrous metal group, accurately grasp the overall requirements of Chinalco International's "Technology + International", thoroughly implement the "11321" development strategy of Kunming Exploration and

Development Institute, create the “3+N” business structure of Kunming Exploration and Development Institute, highlight the comprehensive advantages of the “3 Integration” businesses of geotechnical engineering, mining engineering, and environmental engineering, and enhance market competitiveness; highlight the differentiated advantages of “N Specialization” businesses such as resource exploration, geological disaster prevention and control, digital intelligence, spatial information, testing and inspection, overseas business, hydrogeology, etc., and use the point to lead the whole, and combine the point and the whole.

Geotechnical Engineering Integration: Providing “integrated one-stop” services including geotechnical engineering consultation, investigation, design, construction, testing, and monitoring. The company has developed more than ten key core technologies, including deep foundation pit and high slope stability evaluation and management, complex geotechnical engineering problem handling at construction sites, and large geotechnical digital intelligence systems. It has built the first key laboratory for geotechnical engineering and geological disasters in Yunnan Province, and fully implemented high-quality requirements of advanced technology, economic rationality, safety and reliability, becoming a world-class leader in geotechnical engineering technology.

Mining Engineering Integration: Providing full life cycle and full business chain services including geological prospecting, mining consulting and design, engineering construction, production and operation services, ecological environment restoration and management, and resource redevelopment and utilization. It has created key technologies such as comprehensive mineral resource exploration technology, tailings dam investigation and stability evaluation, goaf area investigation and management, and mine ecological restoration, becoming a first-class promoter of overall mining engineering solutions in the industry.

Environmental Engineering Integration: Forming an ecological and environmental protection business chain of green technology research and development, green consulting and design, green exploration and construction, and green operation and maintenance, creating key technologies such as pollution site management and restoration, and vegetation restoration in ecologically fragile areas at high altitudes and cold regions, accelerating the green transformation of development methods, and promoting harmonious economic and social development.

Specialization in resource exploration: The company has formed a new prospecting idea of “one selection, three determinations and two evaluations” with the characteristics of Kunming Exploration and Development Institute, independently developed internationally leading “air-ground-well” geophysical exploration equipment, created key core technologies such as comprehensive exploration and evaluation of mineral resources and deep-earth resource drilling, and built the main force of mineral resource exploration of Chalco to safeguard national resource security.

Specialization in geological disaster prevention and control: The company has innovated key technologies such as the "water-solid separation" control of underground debris flows, which have contributed to the safety of mine production and the safety of life and property of local people.

Specialization in architectural design: The company has developed key technologies such as full-process engineering consulting, prefabricated building design, and BIM forward design. It focus on quality, continuously innovate design concepts, and strive to build a new pattern of consulting and design leading the transformation and development.

Specialization in hydrogeology: The company has developed key technologies such as groundwater risk assessment and control, geothermal water resource assessment and development, and undertaken projects such as the drought relief and water search in Yunnan, and received a visit from the then Premier of the State Council.

3. Equity structure of the company on the benchmark date

As of the Valuation Benchmark Date, the equity structure of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry is as follows:

Serial number	**Name of investor**	**Subscription amount** *(RMB0'000)*	**Amount paid** *(RMB0'000)*	**Percentage of shareholding** *(%)*
1	China Aluminum International Engineering Corporation Limited	20,850.00	20,850.00	100.00
	Total	20,850.00	20,850.00	100.00

5. The assets, liabilities, equity and operating performance of the assessed entity in recent years

Financial position of the assessed entity in recent years
(based on the parent company)

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	123,259.68	123,606.69	131,766.39
Total liabilities	83,248.77	81,855.04	87,463.72
Total equity of shareholders	40,010.91	41,751.65	44,302.67

Operating performance	2021	2022	2023
Operating income	122,963.80	105,310.33	119,156.91
Total profit	4,717.27	4,162.75	3,888.36
Net profit	4,048.17	4,013.56	3,505.74

The 2021 financial data within the scope of this assessment has been audited by WUYIGE Certified Public Accountants LLP and an audit report Daxin Gui Shen Zi [2022] No. 00099 with an unqualified opinion was issued; the 2022 financial data has been audited by and an audit report Daxin Gui Shen Zi [2023] No. 00006 with an unqualified opinion was issued; the 2023 financial data has been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report Zhi Tong Shen Zi [2024] 110C012530 with an unqualified opinion was issued.

Financial position of the assessed entity in recent years (consolidated basis)

Amount unit: RMB0'000

Financial indicators	31 December 2021	31 December 2022	31 December 2023
Total assets	124,453.20	124,805.83	135,586.22
Total liabilities	84,131.41	82,579.72	90,069.51
Shareholders' equity	40,321.80	42,226.11	45,516.70
Operating performance	**2021**	**2022**	**2023**
Operating income	125,779.18	108,338.14	125,015.81
Total profit	4,878.44	4,339.54	4,658.25
Net profit	4,219.58	4,175.00	4,231.76

The 2021 financial data within the scope of this assessment has been audited by WUYIGE Certified Public Accountants LLP and an audit report Daxin Gui Shen Zi [2022] No. 00099 with an unqualified opinion was issued; the 2022 financial data has been audited by WUYIGE Certified Public Accountants LLP and an audit report Daxin Gui Shen Zi [2023] No. 00006 with an unqualified opinion was issued; the 2023 financial data has been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report Zhi Tong Shen Zi [2024] 110C012530 with an unqualified opinion was issued.

6. *Overview of long-term equity investments*

(1) Kunming Survey Institute Technology Development Co., Ltd.

1) Industrial and commercial situation

Name:	Kunming Survey Institute Technology Development Co., Ltd.
Unified social credit code:	915301037097204354
Type:	Limited Liability Company (sole proprietorship of a legal person invested or controlled by a non-natural person)
Registered address:	B01-243, Kunming Science and Technology Innovation Park, No. 3, Jingkai Road, Changhong Community, Ala Subdistrict Office, Economic Development Zone, Kunming Area, China (Yunnan) Pilot Free Trade Zone
Legal representative:	Du Lili
Registered capital:	RMB2 million
Paid-in capital:	RMB2 million
Date of establishment:	3 September 1992
Business period:	3 September 1992 to 2 September 2042

Business scope:	General projects: engineering and technical research and experimental development; highway and water transport engineering testing and inspection services; geological exploration technical services; engineering management services; municipal facilities management; environmental protection monitoring; environmental protection consulting services; new material technology research and development; new material technology promotion services; wind power generation technical services; technical services, technology development, technical consulting, technical exchanges, technology transfer, technology promotion; information technology consulting services; software development; geographic remote sensing information services; general machinery and equipment installation services; machinery and equipment leasing; domestic trade agency; trade brokerage; labor services (excluding labor dispatch); procurement agency services; import and export of goods; import and export agency; technology import and export; ecological resource monitoring; construction project fire acceptance on-site assessment technical services; information system integration services; mineral resource reserve estimation and report preparation services; basic geological exploration; land survey and evaluation services. (Except for projects that require approval according to law, business activities can be carried out independently according to law with a business license) Licensed projects: inspection and testing services; construction project quality inspection; water conservancy project quality inspection; indoor environment inspection; production safety inspection and testing; construction project survey; geological disaster control project survey; geological disaster risk assessment; surveying and mapping services; safety evaluation business; mineral resource exploration; lightning protection device inspection; agricultural product quality and safety inspection; cultural relics protection project survey; judicial appraisal services; general aviation services; forestry product quality inspection and testing. (For projects that require approval according to law, business activities can only be carried out after approval by relevant departments. The specific business projects shall be subject to the approval documents or licenses of relevant departments.)

2) Shareholding structure

As of the Valuation Benchmark Date, the company's shareholding structure is as follows:

Shareholder Name	Subscribed capital *(RMB0'000)*	Percentage of subscribed capital	Paid-in capital *(RMB0'000)*	Percentage of paid-in capital
Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry	200.00	100.00%	200.00	100.00%
Total	200.00	100.00%	200.00	100.00%

3) The company's assets, liabilities, equity and operating performance in recent years

The financial position of the assessed unit in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	31 December 2021	31 December 2022	31 December 2023
Total assets	1,272.18	1,194.83	1,078.00
Total liabilities	884.31	735.72	511.58
Total equity of shareholders	387.87	459.11	566.42
Operating performance	**2021**	**2022**	**2023**
Operating income	3,504.37	1,306.77	990.74
Total profit	150.21	83.87	118.47
Net profit	161.20	71.24	107.31

The above-mentioned financial data for 2021 has been audited by WUYIGE Certified Public Accountants LLP and an audit report with an unqualified opinion has been issued; the financial data for 2022 has been audited by WUYIGE Certified Public Accountants LLP and an audit report with an unqualified opinion has been issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report with an unqualified opinion has been issued.

(2) China Nonferrous Metals Kunming Exploration and Design Institute Africa Congo (Kinshasa) Company

1) Company Overview

According to the "going overseas" development strategy deployed by Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (hereinafter referred to as "**Kunming Survey and Design Institute**"), Kunming Survey and Design Institute closely follow the pace of the country's "Belt and Road" and increase the efforts to explore overseas markets, on 1 August 2018, the Congo (Kinshasa) Company Project Department was established. On 29 May 2019, China Aluminum International officially approved the establishment of "China Nonferrous Metals Kunming Survey and Design Institute Congo (Kinshasa) Company" by Kunming Survey and Design Institute. China Nonferrous Metals Kunming Survey and Design Institute Congo (Kinshasa) Company (hereinafter referred to as "**Congo (Kinshasa) Company**") was registered and established in Lubumbashi, Haut-Katanga Province, Congo (Kinshasa) on 17 October 2019, with a registered capital of US$10,000, and Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry holds 100% of its shares.

Due to local laws and regulations requiring the completion of subcontracting qualifications, on 28 March 2022, Chalco International approved the equity transfer of the Congo (Kinshasa) company. On 9 February, the company was changed to China Nonferrous Kunming Exploration and Research Institute Congo (Kinshasa) Simple Co., Ltd., and the equity transfer was completed on 1 March. Kunming Exploration and Design Institute holds 49% of the shares, and two Congolese nationals hold 46.1% and 4.9% of the shares respectively. On 20 May, the company obtained the local subcontracting qualification certificate.

2) Business scope

① Mineral geological survey and exploration (excluding petroleum and natural gas minerals) and exploration engineering construction;

② Hydrogeological, engineering geological and environmental geological surveys;

③ Analysis, testing, identification and testing of rocks, minerals, soil and water quality, and water, soil and rock testing;

④ Geological disaster risk assessment, geological disaster control project investigation, design and construction;

⑤ Technical consultation, technical services and related new technology development and application for geotechnical engineering (design, investigation, construction and monitoring);

⑥ Mining technology management, mining design management, construction, mining production scheduling, and general contracting of mining engineering construction;

⑦ Mining infrastructure geological engineering construction, technical consultation; production geological technical services, resource management and comprehensive research;

⑧ Engineering surveying and technical consultation;

⑨ Architectural design, metallurgical industrial design.

3) The company's assets, liabilities, equity and operating performance in recent years

The financial status of the assessed unit in recent years and on the Valuation Benchmark Date is as follows:

Amount unit: RMB0'000

Financial indicators	**31 December 2021**	**31 December 2022**	**31 December 2023**
Total assets	935.72	1,002.55	3,641.19
Total liabilities	882.90	850.22	2,863.77
Total equity of shareholders	52.81	152.33	777.41
Operating performance	**2021**	**2022**	**2023**
Operating income	1,171.49	2,271.77	5,040.31
Total profit	10.97	100.10	644.24
Net profit	10.21	97.38	611.54

The above-mentioned financial data for 2021 have been audited by WUYIGE Certified Public Accountants LLP and an audit report with an unqualified opinion has been issued; the financial data for 2022 have been audited by WUYIGE Certified Public Accountants LLP and an audit report with an unqualified opinion has been issued; the financial data for 2023 have been audited by Grant Thornton Zhitong Certified Public Accountants LLP and an audit report with an unqualified opinion has been issued.

(3) Yunnan Miyu Expressway Investment and Development Co., Ltd.

1) Industrial and commercial situation

Name:	Yunnan Miyu Expressway Investment and Development Co., Ltd.
Unified social credit code:	91530000MA6K66U301
Type:	Other Limited Liability Company
Registered address:	Shengshilinhu, Huancheng South Road, Ningzhou Subdistrict Office, Huaning County, Yuxi City, Yunnan Province
Legal representative:	Yang Jiahui
Registered capital:	RMB700 million
Date of establishment:	19 May 2016
Business period:	19 May 2016 to indefinite period
Business scope:	investment, financing, construction, and operation of company projects; operation of service facilities and advertising business in the designated areas along the project; development of facilities along the highway, leasing of machinery and equipment; breakdown cleaning, accident towing; vehicle maintenance, car washing; warehousing services (excluding hazardous chemicals). (Projects that require approval according to law can only be carried out after approval by relevant departments.)

2) Shareholding structure

As of the Valuation Benchmark Date, the company's shareholding structure is as follows:

Name of Shareholders	Subscribed capital *(RMB0'000)*	Actual investment amount *(RMB0'000)*	Investment ratio
Yunnan Infrastructure Investment Co., Ltd.	61,390.00	61,390.00	87.70%
Yunnan Communications Investment & Construction Group Co., Ltd.	6,300.00	6,300.00	9.00%
Yunnan Transportation Development Investment Co., Ltd.	700.00	700.00	1.00%
Yunnan Construction and Investment Holding Group Co., Ltd.	700.00	700.00	1.00%
Chinalco Southwest Construction Investment Co., Ltd.	700.00	700.00	1.00%
Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry	70.00	70.00	0.10%
Henan Road and Bridge Construction Group Co., Ltd.	70.00	70.00	0.10%
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	70.00	70.00	0.10%
Total	70,000.00	70,000.00	100.00%

(III) The relationship between the Principal and the assessed entity

The Principal is China Aluminum International Engineering Corporation Limited, and the assessed entity is Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry, which is a wholly-owned subsidiary of the Principal.

(IV) Other users of asset valuation report as agreed upon in the asset appraisal entrustment contract

Except for the Principal and its superior administrative unit, the asset appraisal entrustment contract does not stipulate other users of the valuation report; unless otherwise provided by national laws and regulations, any organization or individual that has not been confirmed by the appraisal institution cannot become a user of the valuation report by virtue of obtaining the valuation report.

II. Purpose of appraisal

China Aluminum International Engineering Corporation Limited proposes to introduce strategic investors to its subsidiary, and needs to evaluate the relevant total equity value of shareholders of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry to provide a value reference for the above economic behavior.

The above economic behavior has been reviewed and approved by a resolution of the seventh board of directors of China Aluminum Corporation in 2024.

III. Target and scope of appraisal

(I) Target of appraisal

The target of the appraisal is the total equity value of shareholders of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry.

(II) Scope of appraisal

The scope of the appraisal is all assets and liabilities of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (parent company individual calibration) as of the Valuation Benchmark Date Valuation Benchmark Date of 31 December 2023. The total assets amounted to RMB1,317,663,900, of which: current assets amounted to RMB1,154,199,800 and non-current assets amounted to RMB163,464,100; the total liabilities amounted to RMB874,637,200, of which: current liabilities amounted to RMB809,723,000 and non-current liabilities amounted to RMB64,914,200; the total owner's equity amounted to RMB443,026,700.

The target and scope of the entrusted appraisal are consistent with the object and scope of the appraisal involved in the economic activity.

The Valuation Benchmark Date, the book value of assets and liabilities of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry within the scope of appraisal has been audited by Grant Thornton Zhitong Certified Public Accountants LLP, and a standard unqualified audit report Zhi Tong Shen Zi [2024] No. 110C012530 has been issued.

(III) Status of major assets within the scope of appraisal

The main physical assets included in this appraisal include: building assets and equipment assets. The types and characteristics of the assets are as follows:

1. Building and structure assets

The houses and buildings included in the scope of this appraisal were built successively between 1983 and 2021, mainly including the 7th floor of Block C of Kantai Building and 25 underground parking spaces of Kantai Building, Building 38 of Gejiu Yunxi New Village (9 floors), Building 38 of Gejiu Yunxi New Village (1.2 floors), and the basement-1st floor F storage room of Guanlan Garden, Cultural Space, No. 429 Xinwen Road, Lujiaying Community, Jinbi Sub-district Office, Xishan District, Kunming City, etc. They are located in Kunming City, Guiyang City, Nanning City, Shenzhen City, Pu'er City, Gejiu City and other places.

2. Equipment assets

Equipment assets included in the scope of appraisal include machinery and equipment, vehicles and office equipment.

There are 262 machines and equipment in total, mainly including digital mapping equipment, computer-controlled rock triaxial equipment and dynamic and static true triaxial testing machine systems, etc. As of the Valuation Benchmark Date, all of them are in normal use.

There are 33 vehicles in total, including Lufang-2023 2.5L HEV, Hongqi CA7186HA6T, Jiangling JX1033TSC6 and Buick SGM6522UBA6, etc. As of the Valuation Benchmark Date, all vehicles were in normal use.

There are 1,254 items of office equipment in total, mainly including projectors, printers, notebooks, switches, etc. As of the Valuation Benchmark Date, all of them are in normal use.

(IV) Intangible assets reported by enterprises

The intangible assets included in the scope of appraisal are mainly land, software, intellectual property rights and trademarks.

1. Intangible assets – land

The intangible assets recorded in the books – land, the unit being appraised owns a total of 9,372.9 square meters of land, with a total original recorded value of RMB26,709,520.99 and a book value of RMB26,668,134.30.

2. Intangible assets – software

Intangible assets – software are 44 items of office software purchased by the unit being appraised, with a book value of RMB1,170,948.24. As of the Valuation Benchmark Date, all of them were in normal use.

3. Intangible assets – intellectual property

The intangible assets and intellectual property rights declared by the enterprise are 170 patents and 3 software copyrights owned by Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry. There is no pledge of the above intangible assets.

4. Intangible assets – trademarks

The intangible assets – trademarks declared by the enterprise are 2 trademarks owned by Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry There is no pledge of the above intangible assets.

(V) Other off-book assets declared by the enterprise

The off-balance sheet intangible assets declared by the enterprise are two trademarks owned by Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry, and these intangible assets are not pledged.

(VI) The asset types, quantities and book values (or appraised values) involved in the conclusions of reports issued by other institutions

The financial data within the scope of this appraisal was audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report was issued.

Apart from the above-mentioned reports, no other reports were cited.

IV. Value Type

According to the purpose of the current appraisal, the value type of the target of appraisal is determined to be market value.

Market value refers to the estimated value of the subject of appraisal in a normal and fair transaction on the Valuation Benchmark Date between a willing buyer and a willing seller, each acting rationally and without any coercion.

V. Valuation benchmark date

(I) The Valuation Benchmark Date of this report is 31 December 2023.

(II) The Valuation Benchmark Date is determined by the principal based on economic behavior.

(III) In the current asset appraisal, the definition of the scope of appraisal, the selection of appraisal parameters, the determination of the appraisal value, etc. are all determined based on the internal financial statements of the enterprise, the external economic environment and the market conditions on the Valuation Benchmark Date. All pricing standards in this report are the price standards effective on the Valuation Benchmark Date.

VI. Basis of appraisal

(I) Economic behavior basis

1. "The Resolution of the Seventh Session of Board of Directors of China Aluminum Corporation in 2024".

(II) Legal and regulation basis

1. Securities Law of the People's Republic of China (revised for the second time at the 15th meeting of the Standing Committee of the 13th National People's Congress on 28 December 2019);

2. Asset Appraisal Law of the People's Republic of China (adopted at the 21st meeting of the Standing Committee of the 12th National People's Congress on 2 July 2016);

3. Civil Code of the People's Republic of China (adopted at the third session of the 13th National People's Congress on 28 May 2020);

4. Company Law of the People's Republic of China (revised at the 6th meeting of the Standing Committee of the 13th National People's Congress on 26 October 2018);

5. Measures for the Financial Supervision and Administration of the Asset Appraisal Industry (Order No. 97 of the Ministry of Finance of the People's Republic of China);

6. Enterprise Income Tax Law of the People's Republic of China (amended at the 7th Session of the Standing Committee of the 13th National People's Congress on 29 December 2018);

7. Regulations for the Implementation of the Enterprise Income Tax Law of the People's Republic of China (State Council Order No. 714, 23 April 2019);

8. "Law of the People's Republic of China on State-owned Assets in Enterprises" (adopted at the fifth meeting of the Standing Committee of the Eleventh National People's Congress on 28 October 2008);

9. "Interim Regulations on the Supervision and Administration of State-owned Assets of Enterprises" (revised by State Council Order No. 709 on 2 March 2019);

10. "Measures for the Supervision and Administration of Enterprise State-owned Assets Transactions" (State-owned Assets Supervision and Administration Commission of the State Council and Ministry of Finance Order No. 32);

11. "Measures for the Administration of State-owned Assets Appraisal" (issued by State Council Order No. 91, revised by State Council Order No. 732);

12. "Interim Measures for the Administration of Enterprise State-owned Assets Appraisal" (State-owned Assets Supervision and Administration Commission of the State Council Order No. 12);

13. "Notice on Strengthening the Management of Enterprise State-owned Assets Appraisal" (Guo Zi Wei Chan Quan [2006] No. 274);

14. "Notice on Matters Concerning the Review of Enterprise State-owned Assets Valuation Reports" (Guo Zi Chan Quan [2009] No. 941);

15. "Guidelines for the Record-filing of Enterprise State-owned Assets Appraisal Projects" (Guo Zi Fa Chan Quan [2013] No. 64);

16. "Enterprise Accounting Standards – Basic Standards" (Ministry of Finance Order No. 33), "Ministry of Finance's Decision on Amending the Enterprise Accounting Standards – Basic Standards" (Order of the Ministry of Finance No. 76);

17. "Notice of the Ministry of Finance and the State Administration of Taxation on Several Issues Concerning the Implementation of the Value-Added Tax Transformation Reform Nationwide [Amendment of Articles]" (Finance and Taxation [2008] No. 170);

18. Provisional Regulations of the People's Republic of China on Value Added Tax (State Council Decree No. 691);

19. "Detailed Rules for the Implementation of the Provisional Regulations of the People's Republic of China on Value Added Tax" (Order No. 50 of the Ministry of Finance and the State Administration of Taxation);

20. Announcement on Policies Concerning Deepening Value-Added Tax Reform (Announcement No. 39 of 2019 by the Ministry of Finance, the State Administration of Taxation, and the General Administration of Customs);

21. "Notice on Comprehensively Launching the Pilot Program of Replacing Business Tax with Value-Added Tax" (Cai Shui [2016] No. 36);

22. Vehicle Purchase Tax Law of the People's Republic of China (adopted at the 7th Session of the Standing Committee of the 13th National People's Congress on 29 December 2018);

23. Urban Real Estate Management Law of the People's Republic of China (Decree of the President of the People's Republic of China No. 72);

24. Land Administration Law of the People's Republic of China (Decree No. 28 of the President of the People's Republic of China, amended for the second time in 2004);

25. Regulations for the Implementation of the Land Administration Law of the People's Republic of China (revised on 29 July 2014);

26. "Provisional Regulations of the People's Republic of China on Urban Land Use Tax" (Decree No. 645 of the State Council of the People's Republic of China);

27. Other relevant laws, regulations, notification documents, etc.

VII. *Valuation Methodology*

(I) Selection of valuation method

The "Asset Valuation Practice Standards – Enterprise Value" stipulates that when performing enterprise value valuation business, the applicability of the three basic methods of income method, asset-based method and market method should be analyzed according to the valuation purpose, valuation object, value type, data collection, etc., and the valuation method should be selected. For enterprise valuation that is suitable for different valuation methods, asset valuation professionals should use more than two valuation methods for valuation. The valuation methods selected for this valuation are: asset-based method and income method. The reasons for selecting the valuation method are as follows:

Due to the limited channels for obtaining transaction information in the domestic property rights trading market and the large differences in business composition among similar enterprises, it is extremely difficult to select market references of the same type. Therefore, the market method was not used in this appraisal.

The entity being appraised in this report has the prerequisite of going concern, and the selection of economic and technical parameters involved in the application of the asset-based method has sufficient data as the basis and foundation. Combined with the asset appraisal object, value type, appraisal purpose and the information collected by the appraiser, it is determined to use the asset-based method for appraisal.

The income present value method evaluates assets from the perspective of their expected profitability, which can fully reflect the overall value of the enterprise. That is, for investors, the value of the enterprise lies in the expected future earnings that the enterprise can generate. Although the income present value method does not directly use reference objects in the real market to illustrate the current fair market value of the evaluation object, it evaluates assets from the perspective of the expected profitability of assets, which is the basic basis for determining the current fair market value of assets. It can fully reflect the overall value of the enterprise, and its evaluation conclusion has good reliability and persuasiveness. After interviewing the company's management and conducting research and analysis, the appraiser believes that the conditions for income present value method evaluation are met.

(II) Introduction to the asset-based method

The asset-based method, also known as the cost-plus method, uses the amount of investment required to rebuild an enterprise or an independent profit-making entity identical to the subject of the appraisal on the

Valuation Benchmark Date as the basis for judgment of the overall asset value. Specifically, it refers to a method of calculating the enterprise value by adding up the assessed values of the various element assets that constitute the enterprise and subtracting the assessed value of liabilities.

1. Current assets

The scope of current asset appraisal includes cash, notes receivable, accounts receivable, receivables financing, prepaid expenses, other receivables, contract assets and other current assets.

(1) Monetary funds: including bank deposits and other monetary funds. The valuation is determined by checking the cash inventory, verifying bank statements, bank confirmations, checking general ledgers, detailed ledgers, vouchers, etc. The value of foreign currency is determined by converting it into RMB at the foreign currency midpoint rate announced by the People's Bank of China on the Valuation Benchmark Date.

(2) Notes receivable: The appraiser first verifies the correctness of the declared amount, checks the general ledger, detailed ledgers and original vouchers, and the review results are consistent with the actual situation, and the declared amount is correct. The note has strong liquidity and good credit, and is expected to be fully recovered. The appraised value of notes receivable is determined by the verified book value.

(3) Accounts receivable: including accounts receivable, accounts receivable financing and other receivables. The appraiser first checks the declaration form, general ledger, detailed ledger, and original vouchers to verify the correctness of the amounts listed in the declaration form. After verifying that the accounts receivable is correct, the appraiser talks with the company's financial personnel and related personnel based on the customer business content, occurrence date, and amount listed in the detailed accounts receivable table reported by the unit being appraised. The financial personnel and relevant personnel gave a detailed introduction to the actual situation of the debtor unit. The appraiser analyzes the reasons for the formation of accounts receivable, the time of occurrence of the payment, and the credit status of the debtor in accordance with the provisions of the Enterprise Accounting Standards and relevant laws and regulations, and determines the recoverability of the outstanding balances of each account. For those where there are sufficient reasons to believe that all accounts receivable

can be recovered, the valuation is calculated based on the total amount of accounts receivable; for those where it is very likely that part of the money will not be recovered, with the assistance of historical data and on-site investigations, the time and reason for the arrears, the recovery of the money, the debtor's funds, credit, and business management status are analyzed in detail to determine the amount of money that may not be recovered, and the valuation amount is confirmed by deducting the amount of money that may not be recovered from the book balance; for general customers, sufficient discussions are held with relevant personnel of the unit being appraised and the auditor to estimate the part of the money that may not be recovered, and the aging analysis method is used to determine the valuation risk loss, and at the same time, the bad debt provision for accounts receivable set aside on the Valuation Benchmark Date is assessed to be zero.

(4) Prepaid Accounts: The appraiser first checks the declaration form, general ledger, detailed ledger and original vouchers to verify the correctness of the amount listed in the declaration form. After verifying that the prepaid amount is correct, the appraiser talks with the company's financial personnel and related personnel based on the customer business content, date of occurrence and amount listed in the detailed list of prepaid amounts declared by the unit being appraised. The financial personnel and related personnel gave a detailed introduction to the actual situation of the debtor unit. The appraiser analyzes the reasons for the formation of prepaid amounts in detail in accordance with the requirements of relevant laws and regulations on asset appraisal, and determines the appraised value based on the assets or rights formed by the corresponding goods that can be recovered.

(5) Contract assets: Contract assets refer to the right of an enterprise to receive consideration for goods or services transferred to a customer, and such right depends on factors other than the passage of time. Contract assets should be impaired based on expected credit losses. The unit being appraised shall determine the credit impairment loss model for contract assets based on historical experience data analysis and make provisions.

According to the above determination principles, a certain gross profit has been included in the process of determining the book value of contract assets. The appraiser checked the general contract, subcontract, performance progress and settlement vouchers, and referred to the credit impairment loss model of the contract assets determined by the enterprise to determine the risk loss. The valuation is determined based on the verified book value, and the credit impairment loss accrued by the enterprise is assessed to be zero.

(6) Other current assets: The appraiser checked relevant documents and vouchers and talked with the company's financial personnel and related personnel. The financial personnel and related personnel gave a detailed introduction to the actual financial accounting situation of the unit being appraised, and the appraisal value was determined based on the verified book value.

2. Non-current assets

The scope of appraisal of non-current assets includes long-term equity investments, investment properties, fixed assets, intangible assets, development expenditures, right-of-use assets, long-term deferred expenses, deferred income tax assets, and other non-current assets.

(1) Long-term equity investment

According to the long-term equity investment details table, relevant investment agreements, business licenses of corporate legal persons of invested units, capital verification reports, articles of association, financial statements on the Valuation Benchmark Date and other information are collected and compared with the contents listed in the asset valuation declaration form. After verification, there are no adjustments. The appraiser learns from the enterprise about the accounting method of long-term equity investment and the operating conditions of the invested unit, focusing on the actual control of the invested unit, and adopts the following valuation methods based on the actual control of the invested unit:

1) Holding long-term investment company

Companies appraised using the asset-based approach and the income approach.

Based on the information that the assessed company can provide and the appraiser can collect from outside to meet the requirements of the asset-based method, the asset-based method can be used to conduct a comprehensive inventory and appraisal of the assets and liabilities of the assessed company; the income method can be used for companies that have had normal historical operations, have business occurring, and is able to provide future operating plans, development plans and profit forecasts.

The appraised value of long-term equity investments is determined by multiplying the value of all shareholders' equity after overall appraisal of the investee by the percentage of shareholding.

2) Equity participated long-term investment companies

The participated company determines the valuation of the long-term equity investment by multiplying the net asset value of the investee on the Valuation Benchmark Date by the percentage of shareholding.

(2) Investment properties

Due to the active transactions of residential and commercial real estate, buildings for which we could obtain similar housing and building transaction cases in the same area are appraised using the market comparison method; for properties with poor market reference, we use the income method to discount and calculate based on their market rental net income. The real estate appraisal value calculated by the market method and the income method includes the value of land use rights.

The calculation steps of the market method are as follows:

(1) Based on the substitution principle, the price of real estate transaction examples with the same or similar uses in the same area or the same supply and demand circle is used as the reference. By comparing the regional conditions, physical conditions, equity conditions, transaction timing and transaction conditions of the real estate to be appraised with those of the transaction examples, the real estate price of the transaction examples is corrected for regional conditions, physical conditions, equity conditions, transaction date and transaction conditions, and the price of the real estate as at the Valuation Benchmark Date is obtained.

(2) Determination of correction coefficient

Transaction condition correction factor = normal market price condition index/actual transaction price condition index

Transaction date correction factor = valuation timing factor condition index/transaction date factor condition index

Regional condition correction factor = appraisal target regional condition factor condition index/comparable instance regional condition factor condition index

Physical condition correction factor = physical condition factor condition index of the assessed object/physical condition factor condition index of the comparable example

Equity status correction factor = equity status factor condition index of the evaluation object/equity status factor condition index of comparable examples

The calculation steps of the income method are as follows:

The income method uses the principle of expected income to calculate the normal future net income of the real estate to be appraised, selects an appropriate discount rate (reduction rate) to discount it to the timing of the Valuation Benchmark Date, and then accumulates it to obtain the sum of the present values of the net income of each year, thereby estimating the objective and reasonable price or value of the real estate to be appraised.

The basic formula of the income approach is as follows:

$$V = \sum_{i=1}^{t} \frac{A_i}{(1+R)^i} + P$$

In which: V equals the assessed value of real estate;

A_i equals the net income in the future i-th year;

R equals the discount rate (%);

t equals the number of years in which future benefits can be obtained (years);

P equals The discounted value of the residual value of land or property at the end of the period.

When using the income method for valuation, we first determine the effective gross income of the valuation target for each period, then deduct the annual operating expenses to calculate the net income (net cash flow) for each period, and further determine the market value of the assets to be appraised.

The specific evaluation steps of this income method evaluation are as follows:

① Determine the remaining income period of the assets to be appraised;

② Forecast the effective gross income for each period within the income-earning period, mainly rental income;

③ Forecast annual operating expenses, management expenses and taxes;

④ Calculate the annual net income.

An appropriate discount rate is selected to discount the annual net income to the Valuation Benchmark Date and then add them up to get the sum of the present value of the net income of each year, which is the appraised value.

(3) Building (structure) category fixed assets

The same valuation method as investment real estate.

(4) Equipment category fixed assets

We check the equipment list provided by the enterprise to ensure that the accounts are consistent with the table, and confirm the ownership by reviewing and verifying the relevant contracts, legal ownership certificates and accounting vouchers. On this basis, we conduct necessary on-site investigation and verification of the principal equipment.

Based on the characteristics of various types of equipment, the type of appraised value, data collection conditions and other relevant conditions, the cost method is mainly used for evaluation, and the market method is partially used for evaluation.

1. Machinery and equipment

(1) Determination of the full replacement price

Full replacement price = equipment purchase costs + freight and miscellaneous expenses + installation engineering costs + basic costs + pre-construction and other expenses + capital costs – deductible VAT input tax

1) Equipment purchase costs

The purchase cost of machinery and equipment is mainly determined by market inquiry, or by reference to the 2023 China Mechanical and Electrical Products Price Manual, or by reference to the contract price of similar equipment purchased recently. For equipment whose purchase price cannot be found, the purchase price is estimated by using the price change rate or relevant price index of equipment of the same generation and category.

2) Freight and miscellaneous expenses

Freight and miscellaneous expenses refer to the transportation fees, loading and unloading fees and other relevant miscellaneous expenses during the transportation of equipment. It is determined according to the distance between the origin and destination of the equipment, and with reference to the "Handbook of Common Data and Parameters for Asset Valuation". The calculation formula for freight and miscellaneous expenses is as follows:

Freight and miscellaneous expenses = Equipment purchase price × rate of freight and miscellaneous expenses

If the contract price includes transportation costs, they will not be calculated again.

3) Installation engineering costs

According to the seller's quotation conditions, if the quotation includes installation engineering costs, no installation engineering costs will be charged; if the quotation does not include installation engineering costs, the actual installation and commissioning costs will be calculated based on the budget data, and the unreasonable costs caused by abnormal factors will be eliminated to reasonably determine the costs; if there are no budget data, the actual installation engineering costs expenditure of the enterprise will be used, with reference to the installation engineering costs rate level of similar equipment with the same purpose, the "Manual of Common Data and Parameters for Asset Valuation" will be referred to and carry out reasonable determination after comprehensive calculation.

For small equipment that does not require installation, installation fees are not considered.

4) Basic costs

For large equipment, if the equipment foundation is independent, refer to the Manual of Common Data and Parameters for Asset Valuation and make a reasonable determination after comprehensive calculation.

For small and general equipment, no separate foundation is required and the equipment foundation fee is not considered; for foundation projects that have been recorded as separate buildings, the equipment foundation fee is not considered.

5) Preliminary and other expenses

The preliminary and other expenses include project construction management fees, production preparation fees, scientific research and testing fees, survey and design fees, and soil and water conservation facility compensation fees. The calculation of each fee shall refer to the relevant charging standards formulated by various state ministries and commissions.

According to the document "Cai Shui [2016] No. 36", the pilot program of replacing business tax with value-added tax will be fully implemented nationwide from 1 May 2016. The rate of the preliminary fees within the scope of the business tax-to-value-added tax reform shall be deducted from the corresponding value-added tax rate.

6) Capital costs

The capital costs is determined based on the reasonable construction period of the project, the quoted interest rate of the corresponding period on the Valuation Benchmark Date, and the sum of equipment purchase costs, installation project costs, and preliminary and other costs.

7) Deductible input VAT

For those who meet the conditions for VAT deduction, the deductible VAT input tax amount will be calculated and then deducted.

8) Determination of comprehensive newness rate

The determination is made through on-site inspection of the equipment usage (engineering environment, maintenance, appearance, start-up rate, and intact rate), and review of necessary records of equipment operation, accidents, repairs, performance assessments, etc., and corrections.

Mainly based on the economic life of the equipment and the years of use, through on-site investigation and understanding of the equipment's usage and technical conditions, its remaining service life is determined, and then its comprehensive newness rate is determined according to the following formula.

Comprehensive newness rate = remaining useful life/(remaining useful life + used life) × 100%

9) Determination of evaluation value

Equipment evaluation value = equipment replacement price × comprehensive new rate

2. Vehicles

(1) Replacement cost method

1) Determination of replacement cost

Based on the local automobile market sales information and other recent vehicle market price data, the current tax-inclusive purchase price of the transport vehicle is determined. On this basis, the vehicle purchase tax, license and other fees are included in accordance with the provisions of the Vehicle Purchase Tax Law of the People's Republic of China. At the same time, according to the "Cai Shui [2016] No. 36" and "Announcement No. 39 of the Ministry of Finance, State Administration of Taxation and General Administration of Customs in 2019", the value-added tax on the purchase of vehicles can be deducted. The replacement cost is determined, and the calculation formula is as follows:

Replacement cost = purchase price including tax + vehicle purchase tax + license fee and other fees – deductible value-added tax

2) Determination of comprehensive renewal rate

For vehicles, reference is made to the Provisions on Compulsory Scrapping Standards for Historical Motor Vehicles and the "Handbook of Common Data for Asset Valuation": the theoretical newness rate is determined based on the lower of the vehicle mileage and service life. Finally, the lower of the two methods, the ageing method rate and the mileage method newness rate is used, and then the comprehensive adjustment coefficient is determined based on the on-site investigation to finally determine the comprehensive renewal rate. The calculation formula is as follows:

Ageing method rate = (economic useful life – used life)/economic useful life × 100%

Mileage method newness rate = (prescribed mileage – mileage travelled)/prescribed mileage × 100%

The theoretical value for newness is determined based on the lower of the ageing method rate or the mileage method newness rate.

Comprehensive renewal rate = theoretical renewal rate × adjustment coefficient

3) Determination of evaluation value

Vehicle evaluation value = replacement cost × comprehensive renewal rate

(2) Market approach

For vehicles which were purchased a long time ago and are still usable even though no new vehicles of the same model available in the market, we can obtain similar second-hand vehicles transaction cases through investigation or inquiry, and correct the evaluation value of such vehicles. The details are as follows:

Through market research and price inquiries, we collected three recent market transaction examples of used vehicles similar to the appraisal object. Based on the substitution principle, we corrected the market price (excluding tax) of the comparison case according to differences in factors such as brand model, vehicle condition, appearance, year of use, mileage, etc., to determine the price of the entrusted vehicle.

Corrected price = reference vehicle transfer price × transaction time correction factor × vehicle model correction factor × vehicle configuration correction factor × engine correction factor × manufacturer correction factor × purchase time correction factor × mileage correction factor × usage correction factor × exterior maintenance correction factor × interior maintenance correction factor × transaction location correction factor

3. Office equipment

(1) Replacement cost method

1) Determination of replacement cost

For office equipment, the replacement cost is determined based on local market information and recent online transaction prices excluding tax.

2) Determination of comprehensive renewal rate

For office equipment, its comprehensive ageing rate is determined mainly based on its economic life using the ageing method.

Yearly renewal rate = (economic life – years in use)/economic life × 100%

3) Determination of evaluation value

Office equipment valuation = replacement cost × comprehensive renewal rate

(2) Market approach

For office equipment that was purchased at an earlier date and is not available in the market but is still usable, the valuation was conducted by adopting the market approach based on the second-hand market price as at the valuation date.

(5) Intangible assets

1) Land use rights

(1) Market comparison method: In the recent period, the information on the bidding, auctioning and listing of storage land in this area is easy to obtain, but there are few transaction cases, so it is not appropriate to use the market comparison method for evaluation.

(2) Cost approximation method: Since the local government and relevant departments of the land to be appraised have published relevant land acquisition compensation standard documents, the land acquisition cost and development cost can be determined, and it is appropriate to use the cost approximation method for evaluation.

(3) The hypothetical development method is not suitable for evaluation because the land to be appraised has no clear planning indicators, development intentions, insufficient market transaction price data for similar land plots in the region after real estate development, and development cost data is not easily collected.

(4) Income capitalization method: Since it is impossible to find a land rental transaction case similar to the one in the area where the land to be appraised is located, the income capitalization method was not used for evaluation.

(5) Benchmark land price coefficient correction method: Since the land to be appraised is outside the coverage of the new benchmark land price announced by the local government, the benchmark land price coefficient correction method cannot be used for evaluation.

The cost approximation method is a method of determining the land price based on the sum of various objective costs spent on land development, plus a certain amount of profit, interest, and taxes payable. The basic calculation formula is:

Land price = land acquisition fee + taxes + land development fee + investment interest + land development profit.

2) Software

According to the characteristics of the software, the type of valuation, the data collection and other relevant conditions, the market method is used for valuation. Specifically, for purchased software that is sold in the market on the Valuation Benchmark Date, the market price on the Valuation Benchmark Date is used as the valuation; for purchased software that is sold in the market on the Valuation Benchmark Date but has been upgraded, the market price on the Valuation Benchmark Date minus the software upgrade fee is used as the valuation value; for customized software, the price inquired from the software developer is used as the valuation; for software that has been discontinued and has no use value after verification with the enterprise, the valuation is zero.

3) Intellectual Property

For intangible assets and intellectual property rights, according to the operational specifications of intangible asset valuation, the valuation of intangible assets and intellectual property rights can adopt the cost method, income method or market method according to the prerequisites for their use and the specific circumstances of the valuation.

It is generally believed that the value of intangible assets, especially the value of high-tech achievements, is difficult to reflect by replacement cost, because the value of such assets is usually mainly reflected in the creative intellectual labor of high-tech talents, and it is difficult to measure the results of such labor in terms of labor cost. Based on the above factors, the replacement cost method is not used for this valuation.

The market comparison method can be used in asset valuation, whether it is for the valuation of tangible assets or intangible assets. The prerequisite for using the market comparison method is that there are identical or similar transaction cases, and the transaction be conducted at arm's length. In combination with the characteristics of the intellectual property rights entrusted for valuation and the market transaction situation, according to our search and review of papers in related fields, there are currently no similar intellectual property transfer cases in China. Since this valuation cannot find comparable historical transaction cases and transaction price data, the market method is not applicable to this valuation.

The income approach is a method of estimating the budgeted income of the intangible asset during its technical and economic lifespan and converting it into present value at a certain discount rate to obtain the valuation price of the intangible asset. The theoretical basis of the income approach is the theory of utility value. It is the main valuation method in intangible asset transactions such as intangible asset transfer and investment. It can reflect the potential value and excess returns of intangible assets, especially high-tech intangible asset portfolios, and reflects the increasingly significant role of intangible asset factors in output.

Applicable conditions: To use the income method to evaluate intangible assets, the following two conditions must be met: Firstly, the future income of intangible assets can be predicted and measured in monetary terms. Technology itself cannot directly generate income. It is an intangible asset. It can only be used by enterprises in product development or technical services. It combines various factors such as enterprise management, capital, and labor to form the profitability of the enterprise. Intangible assets are one of the indispensable and important factors. Therefore, when predicting the future income of intangible assets, it is necessary to first predict the sales revenue, after-tax profit or net cash flow of the enterprise that uses the intangible assets. Then determine the corresponding technology contribution rate to calculate the assessed value of the technology. Secondly, the risks of intangible assets in future commercial applications can be predicted and quantified. Risk factors are a determining factor in determining the size of the assessed value of intangible assets.

In accordance with the provisions of the "Asset Valuation Standards – Intangible Assets", combined with the purpose and object of the asset valuation and the relevant information that can be collected for the valuation, this asset valuation mainly uses the income method for valuation.

The asset value determined when using the income approach to evaluate an asset refers to the total amount of money paid to acquire the right to obtain the expected income from the asset. That is, the assessed value of an asset is closely related to the utility or usefulness of the asset. The greater the utility of the asset, the stronger its profitability, and the greater its value. The specific evaluation process is as follows:

According to the above evaluation ideas, the following evaluation model is used to estimate the evaluation value of intellectual property rights:

$$P = \sum_{t=1}^{n} \frac{kR_t}{(1+i)^t}$$

Where: P — intellectual property technology value;

R_t — the expected revenue of the technology product in the t-th year in the future;

k — sharing rate;

i — discount rate;

t — the t-th year. This is the mid-term discount. The corresponding discount period is adjusted according to the mid-term discount;

n — economic benefit period of technological products.

(6) Development costs

The appraisers investigated the reasons for the development costs, reviewed the relevant accounting regulations for confirming the development costs, verified the basis and relevant vouchers for recording the development costs on the Valuation Benchmark Date, and used the verified book value of the development costs as the valuation value for this valuation.

(7) Right-of-use assets

The appraiser checked the lease contract, verified the initial measurement of the right-of-use assets, the accounting depreciation policy, etc., and found no abnormalities. The appraiser conducted a market survey and found that the difference between the rent agreed in the contract and the market rent was small, so the appraisal value was determined based on the verified book value.

(8) Long-term deferred expenses

The appraiser investigated and understood the reasons for the long-term deferred expenses, reviewed the accounting vouchers for the long-term deferred expenses, communicated with the personnel of the assessed unit, and used the verified book value as the valuation. For the renovation and upgrading costs of fixed assets, this valuation was 0.

(9) Deferred tax assets

Based on the audited book value, the appraiser investigated and verified the rationality and correctness of the reasons for the various deductible temporary tax differences of the enterprise. After verification, the amount of deferred income tax assets was calculated correctly, and the appraisal value was confirmed based on the verified book value.

(10) Other non-current assets

The appraisers investigated and verified the status of the assets by querying relevant vouchers, account books and scrapping documents. The appraisal value was confirmed based on the disposal price of the scrapped assets.

3. Liabilities

The assessment of corporate liabilities mainly involves review and verification. Appraisers verify the relevant documents, account books and related vouchers. After confirming their authenticity, the appraisal value is determined based on the verified book value or the actual liabilities that should be borne.

(III) Introduction to the Income Approach

This time, the cash flow discounting method in the present value of income method is used to evaluate the overall value of the enterprise to indirectly obtain the value of all shareholders' equity. The overall value of the enterprise is composed of the value of operating assets generated from normal business activities and the value of non-operating assets unrelated to normal business activities. The enterprise free cash flow discounting model is used to determine the value of operating assets, that is, the free cash flow of the enterprise in the next few years is used as the basis, and the calculation is obtained by summing up after discounting with an appropriate discount rate.

The basic model for this assessment is:

$$E = B - D$$

Where: E: the value of all shareholders' equity (net assets) of the valuation object;

B: the enterprise value of the valuation object;

D: the value of the interest-bearing debt of the valuation object.

Among them, B: The model of the enterprise value of the valuation object is:

$$B = P + \sum C_i$$

Where:

P: the operating asset value of the valuation object;

$$P = \sum_{i=1}^{n} \frac{R_i}{(1+r)^i} + \frac{R_{i+1}}{r(1+r)^i}$$

R_i : the expected income (free cash flow) of the valuation object in the i-th year in the future;

r: discount rate (this time mid-term discount is adopted, and the discount period is adjusted accordingly);

n: the future operating period of the valuation object. The future operating period for this assessment is indefinite.

ΣC_i: the value of non-operating and surplus assets and long-term equity investment existing on the base date of the valuation object.

$$\sum C_i = C_1 + C_2$$

C_1: the value of other non-operating assets and surplus assets existing on the base date of the valuation object;

C_2: long-term equity investment value.

1. Determination of the income period

This income method valuation is made under the premise of the enterprise's continuing operation. Therefore, the income period is determined to be indefinite. According to the company's operating history, industry development trends and other information, a two-stage model is adopted, that is, five years after the Valuation Benchmark Date, a reasonable forecast of the enterprise's income, costs, expenses, profits, etc. is made based on the enterprise's actual situation and policies, market and other factors. After the sixth year, each year will remain the same as the fifth year.

2. Correlation between income subject and caliber

In this evaluation, the free cash flow of the enterprise is used as the income indicator of the operating assets of the valuation object. The basic formula is:

Free cash flow of the enterprise = net profit + depreciation and amortization + interest on interest-bearing debt after tax – additional capital

Forecast of free cash flow of the enterprise

A. Forecast of operating revenue

The operating revenue of each appraised entity for the historical years primarily consisted of engineering survey, design and general contracting. The revenue is projected by analyzing the revenues for the historical years and with reference to the market demand, industry competition, orders on hand and future development plans of the enterprise.

B. Forecast of operating cost

The major operating costs of the enterprise are outsourcing project payments, outsourcing and subcontracting costs, outsourced labor costs, raw materials, personnel costs, and other costs. Outsourcing cost is the cost required for subcontracting part of the construction project to other construction units for construction, outsourced labor cost refers to the labor cost in the construction of the project, raw material cost is the cost of purchasing construction materials, employee compensation is the salary of the project personnel, and other costs are the indirect costs of the construction project and so on.

Each cost and expense is forecasted primarily on the basis of the ratio of each cost and expense to revenue for the historical years, taking into account the future development of the enterprise.

C. Forecast of taxes and surcharges

Taxes and surcharges include urban construction tax, education surcharge, property tax, vehicle and vessel use tax, land use tax, stamp duty, and so on.

The urban construction tax, education surcharge and local education surcharge are calculated at 7%, 3% and 2% of the value-added tax payable, respectively; the property tax is calculated at 70% of the original value of the property at a tax rate of 1.2%; the land use tax is calculated on the basis of the land area and the fee rate for the corresponding grade to the land; and the stamp duty is measured as a percentage of revenue.

The VAT output tax is 9% and 6% of sales revenue. The input tax includes input tax arising from subcontracting costs, raw materials and staff expenses in operating costs; input tax arising from office expenses, travel expenses, property expenses and bidding fees in administrative expenses; and deductible input tax in capital expenditures.

D. Forecasts of sales expenses

Sales expenses primarily include employee compensation, depreciation and amortisation, operating expenses, travel and transportation expenses, and other expenses.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the enterprise's current depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the enterprise's current amortisation policy to measure the amortisation amount for each period.

Forecast of other sales expenses: operating expenses, travel and transportation expenses, etc., are measured based on the actual amount incurred in historical years as a percentage of revenue.

E. Forecast of administrative expenses

Administrative expenses primarily include employee compensation, depreciation, amortisation, office expenses, business hospitality expenses, intermediary agency fees and other expenses.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the enterprise's current depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the enterprise's current amortisation policy to measure the amortisation amount for each period.

Forecast of other administrative expenses: office expenses, business hospitality expenses, and fees are measured based on the actual amounts incurred in historical years as a percentage of revenues or by considering an appropriate growth rate based on the actual amount incurred for 2023.

F. Forecast of R&D expenses

Research and development expenses comprise employee compensation, depreciation and amortisation, consumed materials, fuel and power costs, outsourced development costs, and so on.

Forecast of employee compensation: employee compensation is the wages, social security provident funds and employee benefits paid by the enterprise to its employees. Determination of the rate of wage increase: this forecast is determined based on the forecast of the enterprise's management with reference to the wage level at the Valuation Benchmark Date, the future revenue scale of the enterprise, and the growth rate of future wages in the region where the enterprise is located.

Forecast of depreciation and amortisation expenses: depreciation expense is the amortisation on the enterprise's existing and renewed vehicles and electronic equipment, and this forecast is based on the current enterprise's depreciation policy to measure the depreciation amount for each period; amortisation of intangibles is the amortisation of the enterprise's long-term amortisation expense, and this forecast is based on the current enterprise's amortisation policy to measure the amortisation amount for each period.

Other expenses are projected for R&D with reference to historical levels.

G. Forecast of finance expense

① Interest expense

The after-tax cash flow before interest is used in this case and no interest expense is forecasted;

② Interest income

Due to the random occurrence and small amount of this component, it will not be forecasted for this time;

③ Handling fee

Due to the random occurrence and small amount of this component, it will not be forecasted at this time;

H. Forecast of depreciation and amortisation

① Forecast of depreciation

Depreciation includes depreciation of inventory fixed assets, and depreciation of renewed or new fixed assets.

Depreciation of inventory assets is measured at the original book value of fixed assets as at the Valuation Benchmark Date based on a reasonable depreciation policy.

Depreciation of renewed assets is where only the depletion (depreciation) of existing assets is renewed in future years, provided that the current scale of operations is maintained. That is, an asset is assumed to be fully depreciated when the accumulated depreciation of the asset is close to its original value or when the net value of the asset is close to its estimated residual value; upon the end of its economic life, the asset needs to be renewed in accordance with its original value. At the same time as the asset renewal expenditure is incurred, the original asset is written off at its residual value and depreciation is provided on the original value of the renewed asset until the end of the operating period.

Depreciation of renewed and new assets is measured by asset class by allocating the capital expenditure over the forecast period in accordance with the existing depreciation policy.

② Forecast of amortisation

Amortisation of assets in the future is primarily the amortisation of software in intangible assets, and measured for each period in accordance with the enterprise's current amortisation policy.

Housing buildings	20 years
Machinery and equipment	10 years
Transportation equipment	6 years
Furniture and office equipment	5 years
Land use rights	40-50 years

I. Forecast of income tax

Currently the company enjoys the corporate income tax standard of national high-tech enterprises at an income tax rate of 15%.

Income tax for future years is calculated on the basis of total profits, adjusted for significant tax adjustments in accordance with the Enterprise Income Tax Law and its supplemental regulations, making up for the operating losses of the previous five years starting from the year of profitability, and then multiplied by the flat corporate income tax rate.

J. Estimation of additional capital

Additional capital refers to the increase in working capital and long-term capital investment over more than one year, which are required to maintain continuing operations without changing the conditions of the current business operations. Additional working capital is required for changes in the scale of operations and the renewal of assets necessary for continuing operations.

In this appraisal, it is assumed that the enterprise will not make any further capital investment in its existing operating capacity, and that the additional capital in the future operating period will primarily consist of the renewal of assets and the increase in working capital required for continuing operations. That is, the additional capital as defined in this report is:

Additional capital = investment in asset renewal + investment in asset additions + increase in working capital

① Investment in asset renewal and additional investment

On the premise and basis of income estimation, the renewal and addition of input fixed assets are considered for this time. With reference to the company's asset renewal expenditures in previous years and the planning of new assets to be added by the appraised entity in the next five years and by forecasting the future capital expenditures, the asset renewal expenditures for the perpetuity period equal the aggregation of depreciation and amortisation.

② Estimation of increase in working capital

Working capital equals current assets other than cash less interest-free current liabilities. Current assets other than cash include notes receivable, accounts receivable, accounts receivable financing, other receivables, prepayments, inventories, contract assets, and other non-current assets used or required for the company's operations, etc. Non-interest-bearing current liabilities include notes payable, accounts payable, contract liabilities, other payables, taxes payable, other current liabilities and long-term payables, etc.

Working capital = current assets other than cash – interest-free current liabilities

Increase in working capital refers to the additional working capital that an enterprise needs to invest in order to maintain normal operations without changing the conditions of its current main business, i.e., the additional funds needed to maintain the enterprise's ability to continue operations, such as the cash required to maintain normal operations, inventory purchases, receivables owed by customers and other basic funds required and payables. The increase in working capital refers to the cash occupied to gain others' commercial credit with the change of business activities of the enterprise, the cash required to be maintained for normal operations, inventory, etc.; meanwhile, the provision of commercial credit in the economic activities can reduce the immediate payment of cash accordingly. Usually, other receivables and other accounts payable account for the vast majority of related-party or non-operational transactions; taxes payable and wages payable, etc., mostly incurred in the operation with relatively fast turnover, relatively short delinquency time and in relatively small amount, are assumed at the time of estimation to be kept at the turnover level of the benchmark date. Therefore, the increase in working capital is estimated in principle by considering only the main factors such as cash (minimum cash holdings), inventories, receivables and payables required to be maintained for normal operations. The increase in working capital as defined in this report is:

Increase in working capital = current working capital – prior period working capital

Working capital as at the Valuation Benchmark Date = Current assets (excluding cash and non-operating assets) – Current liabilities (excluding interest-bearing current liabilities and non-operating liabilities)

Operating cash = total annual cash costs/cash turnover ratio

Total annual paid costs = total cost of goods sold + total period expenses – total non-cash costs

Cash turnover period = inventory turnover period + receivables turnover period – payables turnover period

Accounts receivable = total operating revenue/accounts receivable turnover ratio

Accounts receivable primarily include accounts receivable, notes receivable, prepayments and other receivables related to business operation.

Inventory = total operating costs/inventory turnover ratio

Accounts payable = total operating costs/accounts payable turnover ratio

Accounts payable include accounts payable, notes payable, advance receipts and other payables related to business operation.

Based on the investigation of the operating conditions of the appraised entity, as well as the audited statistical analysis of assets and profit and loss, revenues, costs and expenses of historical operations and the results of the estimation of revenues and costs for each year during the future operating period, the increase in money funds, inventory, receivables and payables, etc., and the working capitals can be obtained for each of the years during the future operating period according to the above definitions.

In accordance with the principle of consistency between earnings and discount rates, the earnings for this evaluation are based on the enterprise's free cash flow, and the discount rate is the weighted average cost of capital (WACC).

The discount rate (weighted average cost of capital, WACC) is calculated as follows:

$$WACC = R_d \times (1 - T) \times \frac{D}{D + E} + R_e \times \frac{E}{D + E}$$

Where: R_e: cost of equity capital;

R_d: cost of interest-bearing debt capital;

E: market value of equity;

D: market value of interest-bearing debt;

T: income tax rate.

The cost of equity capital is calculated using the Capital Asset Pricing Model (CAPM). The calculation formula is as follows:

R_e=Rf1+β(R_m–Rf2)+Alpha

Where: R_e: expected rate of return on equity, i.e. cost of equity capital;

Rf1: risk-free rate of return;

β: Beta coefficient;

R_m: market expected rate of return;

Rf2: long-term market expected return rate;

Alpha: idiosyncratic risk premium;

(R_m–Rf2): Market risk premium, called ERP.

Determination of discount rate

Valuation process of specific parameters:

① Determination of the risk-free rate (Rf).

The yield on treasury bonds is generally considered risk-free as the risk of nonpayment of the debt is remote and negligible. The appraisers queried the yields to maturity of treasury bonds with remaining maturities of 10 years or more to the Valuation Benchmark Date, which were traded in the vicinity of the Valuation Benchmark Date through Flush Financial Terminal, and took the average of the yields as the risk-free rate of return, and the calculated Rf1 was 2.8819%.

② Determination of market risk premium (ERP).

The determination of ERP, i.e., the equity market excess risk return (Rm-Rf2). Generally, the equity market excess risk return rate, i.e. the equity risk premium, is the ratio of the amount of risk compensation received by investors to the amount of risky investment, which exceeds the rate of return that would otherwise have been due on an investment in a risk-free security. Currently in China, publicly available information on the securities market is usually used to study the risk-reward ratio.

The ERP for projects with an income period of over 10 years is calculated to be 6.40%.

③ Determination of beta coefficients

a. Identifying comparable companies

The selection criteria for the comparable companies in this appraisal are as follows:

the industry in which the comparable companies are engaged or their main business being professional services;

The comparable company has been profitable in recent years;

The comparable companies must have been listed for at least three years;

The comparable companies issued A shares only.

Currently in China, Flush Information Company is engaged in the research of beta and gives the formula for calculating beta value. In this appraisal, the appraisers have selected the beta calculator published by the company to calculate the beta values of comparable companies. The said beta values contain the comparable companies' own capital structure. After screening and selecting 7 listed companies, which are similar in business content and others to the appraised company, as comparable companies, the weekly index calculates the imputed risk factor β relative to the Shanghai and Shenzhen markets (using the CSI 300 Index), and excludes the β coefficient after financial leverage of each comparable company to calculate the average value thereof as the β coefficient after excluding financial leverage of the appraised company. The beta coefficient after excluding financial leverage is 0.5561.

④ Determination of capital structure ratio of the appraised entity

Taking into account the operating characteristics of the industry, the average target capital structure for this time has been selected as the own capital structure (D/E) of the appraised entity, i.e. 8.28%.

⑤ Estimation of the β coefficient of the appraised entity under the capital structure ratio determined above

The income tax rate implemented on the Valuation Benchmark Date of the appraised entity is 15%.

With financial leverage β = Without financial leverage β × [1 + D/E × (1 – T)]

The calculated beta coefficient was determined to be 0.5952.

⑥ Blume adjustment of the β coefficient

The idea and method of the adjustment proposed by Blume are as follows:

$a = 0.35 + 0.65\ \beta L$

Where: a is the adjusted beta and βL is the measured historical beta.

The adjusted risk factor β for the appraised entity is 0.7369.

⑦ Determination of the special risk premium ε

The specific risk reward ratio ε is the reward rate for non-systematic risks caused by the factors specific to the appraised enterprise. The comprehensive analysis method is adopted in this appraisal to determine the specific risk reward rate ε, i.e. to determine a reasonable specific risk reward rate by taking into account the appraised enterprise's asset size, operation stage, market competition, reliance on major customers and suppliers, corporate governance, capital structure and other factors.

The specific risk-based reward ratio is determined to be 3.00% after taking into account factors such as the appraised entity's asset size, operation stage, market competition, reliance on major customers and suppliers, corporate governance and capital structure.

⑧ Determination of the cost of equity capital

Based on the above analytical calculations, the appraisers determined that the expected return on equity used for this appraisal, i.e., the after-tax equity capital cost, was 10.60%.

⑨ Determination of the cost of debt capital

Considering the target capital structure of comparable companies, the one-year LPR rate of 3.45% published on the benchmark date was used as the cost of debt capital in this case.

⑩ Determination of the weighted cost of capital

The WACC model was used to calculate the weighted average cost of capital (WACC) by substituting the above parameters into the WACC model, resulting in a WACC of 10.01%.

3. Value of interest-bearing liabilities of non-operating assets and liabilities

Non-operating assets and liabilities refer to assets and liabilities that are not related to the production and operation of the assessed unit and are not involved in the free cash flow forecast of the enterprise after the Valuation Benchmark Date. The valuation method and results of non-operating assets and liabilities are consistent with the asset-based method. For details, please refer to the corresponding sections of the description of the asset-based method.

1) Determination of the value of excess assets

Excess assets refer to the excess cash over the business operations required on the Valuation Benchmark Date, which is the difference between the monetary funds on the base date and the cash holdings required for daily operations.

2) Determination of the value of unconsolidated subsidiaries

Unconsolidated subsidiaries refer to corresponding subsidiaries that are not valued on a consolidated basis this time; the value of the unconsolidated subsidiaries is determined through reasonable analysis after an overall assessment using appropriate valuation methods.

3) Determination of the value of other non-operating assets and liabilities

Other non-operating assets and liabilities refer to assets and liabilities that are not related to the production and operation of the appraised entity (such as working capital and long-term effective assets), except for excess assets and unconsolidated subsidiaries.

4) Value of interest-bearing liabilities

Interest-bearing liabilities refer to debts on the books that require interest payments on the base date, including short-term loans.

(IV) Method for determining the evaluation results

The preliminary conclusions of the two valuation methods are compared and analyzed, and the rationality of the different valuation methods and preliminary value conclusions as well as the quality and quantity of the data used are comprehensively considered to form the final valuation results. This time, the conclusion of the income method is determined as the final valuation results.

IX. Valuation Assumptions

The assumptions adopted in analysing the estimates in this asset valuation report are as follows:

A. Assumptions applied to both the asset-based approach and the income approach

(I) Basic Assumptions

1. Open market assumption assumes that the assets to be valued are traded or intended to be traded on the open market, and both of the parties to the transaction of the assets are in equal position and have enough opportunities and time to obtain market information so as to make reasonable and rational judgment on the functions, purpose and considerations of the assets;

2. Transaction assumption assumes that all the assets to be valued are already in the process of transaction, and the appraisal carries out the valuation based on a simulated market which involves the transaction conditions of the assets to be valued. Transaction assumption is the most basic assumption for asset valuation;

3. Going concern assumption assumes that the appraised entity will not cease operation for any reason in the foreseeable future, but will continue to operate lawfully with its existing assets and resources;

4. Assumption of continuous use of assets assumes that the appraised assets will continue to be used legally and effectively in accordance with their current use, methods of use, scale, frequency, environment and other conditions, and there will be no significant changes during the foreseeable period of use.

(II) General Assumptions

1. It is assumed that there are no material changes in the relevant prevailing laws, regulations and policies, and the macroeconomic situation of the country, and that there are no material changes in the political, economic and social environment of the regions where the parties to the transaction are located;

2. It is assumed that the business continues as a going concern in view of the actual status of assets as at the Valuation Benchmark Date;

3. It is assumed that there are no substantial changes in such indicators as interest rates, exchange rates, tax bases, tax rates and policy based levies related to the appraised entity after the Valuation Benchmark Date;

4. It is assumed that the management of the appraised entity after the Valuation Benchmark Date is responsible, stable and capable of performing their duties;

5. Unless otherwise specified, it is assumed that the Company is fully in compliance with all relevant laws and regulations;

6. It is assumed that the values of various parameters estimated in this valuation are determined in accordance with the current price system, without taking into account the impact of inflation factors after the date of valuation;

7. It is assumed that there will be no force majeure and unforeseeable factors having a material adverse impact on the appraised entity after the Valuation Benchmark Date.

(III) Special assumptions

1. It is assumed that the accounting policies to be adopted by the appraised entity after the Valuation Benchmark Date and the accounting policies adopted at the time of preparing the valuation reports are consistent in material aspects;

2. It is assumed that the appraised entity's scope and mode of operation after the Valuation Benchmark Date are consistent with current orientation on the basis of the existing management method and management standard;

3. The companies are able to continue to use the existing self-owned real estate and purchased equipment, and will not bear any costs caused by changes in asset ownership in the future.

B. Assumptions applicable only to the income approach based on above assumptions

1. It is assumed that the cash inflow and cash outflow of the appraised entity after the Valuation Benchmark Date are uniform;

2. It is assumed that the principal businesses of the appraised entity remain unchanged;

3. It is assumed that the appraised entity's existing qualification certificates can be extended upon expiration;

4. It is assumed that the R&D expenses of the appraised entity are collected accurately, and can be deducted in accordance with relevant policies in the upcoming forecast years;

5. It is assumed that the high-tech certificates of the appraised entity can continue to be extended upon expiration, and the enterprise can continue to enjoy the preferential income tax rate of 15%;

6. It is assumed that the enterprise's judgment on future markets and its associated revenue costs are realized as planned currently.

The valuation conclusion in this asset valuation report was effective as at the Valuation Benchmark Date on the aforesaid assumptions. We and the signing valuers disclaim any responsibility for any different valuation conclusion arising from any significant change in any assumption.

X. Valuation Conclusion

(I) Valuation result under asset-based approach

The book value of total assets of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry on the Valuation Benchmark Date was RMB1,317,663,900, the appraised value was RMB1,451,802,100, representing an appreciation in value of RMB134,138,200 or 10.18%; the book value of total liabilities was RMB874,637,200, the appraised value was RMB874,637,200, representing no appreciation or depreciation; the book value of the entire shareholders' equity was RMB443,026,700, the appraised value of the entire shareholders' equity was RMB577,164,900, representing an appreciation in value of RMB134,138,200 or 30.28%.

The book value and appraised value of major assets and liabilities are as follows:

Items		Book value A	Appraised value B	Increase or decrease C=B-A	Appreciation rate % D=C/A×100%
1	Current assets	115,419.98	115,419.98	–	–
2	Non-current assets	16,346.41	29,760.24	13,413.83	82.06
3	Including: Debt investment	–	–	–	–
4	Available-for-sale financial assets	–	–	–	–
5	Other debt investments	–	–	–	–
6	Held-to-maturity investments	–	–	–	–
7	Long-term receivables	–	–	–	–
8	Long-term equity investment	199.80	4,654.62	4,454.82	2,229.64
9	Other equity instrument investments	–	–	–	–
10	Other non-current financial assets	–	–	–	–
11	Investment properties	3,308.27	5,253.11	1,944.84	58.79
12	Fixed assets	7,199.98	14,359.28	7,159.30	99.43
13	Construction in progress	–	–	–	–
14	Engineering materials	–	–	–	–
15	Fixed assets liquidation	–	–	–	–
16	Productive biological assets	–	–	–	–
17	Oil and gas assets	–	–	–	–
18	Intangible assets	2,811.14	2,757.98	(53.16)	(1.89)
19	Development expenditure	86.00	86.00	–	–
20	Goodwill	–	–	–	–
21	Right-of-use assets	433.39	433.39	–	–
22	Long-term deferred expenses	231.25	177.79	(53.46)	(23.12)
23	Deferred tax assets	2,031.62	2,031.62	–	–
24	Other non-current assets	44.96	6.45	(38.51)	(85.65)
25	**Total assets**	131,766.39	145,180.21	13,413.82	10.18
26	Current liabilities	80,972.30	80,972.30	–	–
27	Non-current liabilities	6,491.42	6,491.42	–	–
28	**Total liabilities**	87,463.72	87,463.72	–	–
29	**Net assets (owners' equity)**	44,302.67	57,716.49	13,413.82	30.28

The book value and appraised value of major assets and liabilities and the reasons for the differences:

1. Long-term equity investment

The book value of long-term equity investment was RMB1,998,000, the appraised value was RMB46,546,200, the appraised appreciation was RMB44,548,200, and the appraised appreciation rate was 2,229.64%. The reason for the appraised appreciation was that when the long-term equity investment was a holding company, the book value of the enterprise's financial accounting was the historical cost of the long-term equity investment, and the future profit generated by the enterprise in the course of operation was not reflected in the book value of the long-term equity investment. This assessment uses the appraised net assets of the investee multiplied by the equity ratio as the appraised value of the long-term equity investment, thereby assessing the appreciation.

2. Investment Properties

The book value of investment properties was RMB33,082,700, the appraised value was RMB52,531,100, the appraised appreciation was RMB19,448,400, and the appraised appreciation rate was 58.79%. The reason for the appraised appreciation of investment properties was the increase in real estate market prices, which led to an increase in appraised value.

3. Fixed assets

The book value of fixed assets was RMB71,999,800, the appraised value was RMB143,592,800, the appraised appreciation was RMB71,593,000, and the appraised appreciation rate was 99.43%. The main reason for the appraised appreciation of fixed assets was the increase in real estate market prices, which led to an increase in appraised value.

(II) Valuation result under the income approach

As of the Valuation Benchmark Date on 31 December 2023, under the premise of going concern and as appraised under the income approach, the value of the entire shareholders' equity of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry was RMB850,724,700, representing an appreciation in value of RMB407,698,000 or 92.03%.

(III) Determination of the valuation conclusion

Upon comparison of the appraisal results of the asset-based approach and the income approach, the difference in valuation between the income approach and the asset-based approach amounted to RMB273,559,800, representing a difference of 32.16% based on the conclusion of the income-based approach.

1. Main reasons for the difference in results under the two valuation approaches

   The two valuation approaches consider different perspectives. The asset-based approach considers the re-acquisition of assets and reflects the replacement value of the existing assets of the enterprise whereas the income approach considers the enterprise's future profitability and reflects the comprehensive profitability of the assets of the enterprise. It is normal for the two valuation approaches to have different results.

2. Reasons for selected the valuation result under the income approach

   The income approach not only considers the value of all tangible assets, intangible assets and liabilities presented on the balance sheet of the enterprise, but also covers the value of intangible assets such as customer resources, human resources, technical and business capabilities, etc. The appraised entities are light-asset enterprises, and the sources of future income are the existing stable customer base, the service capacity of the business, the industry status, the reputation among customers for new customers and new business development, etc. The results of the income approach could better reflect the overall enterprise value of the appraised entities.

   Based on the above analysis, the valuation result under the income approach was selected as the valuation conclusion. Therefore, the appraised value of the entire shareholders' equity of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry was RMB850,724,700.

   The result of this valuation did not take into account the impact of special transactions such as equity liquidity on equity value.

XI. Special Matters

(III) This valuation report is based on the information in relation to asset valuation provided by the client and related parties of the appraised entity. It is the responsibility of the client and the related parties to provide the necessary information and ensure the truthfulness, legality and completeness of such information and legality of the operation. The responsibility of asset valuation professionals is to analyse, estimate and express professional view on the value of valuation target as at the Valuation Benchmark Date for the specific purpose. Asset valuation professionals conduct the necessary verification and disclosure on such information and its sources, which does not represent any guarantee provided as to the truthfulness, legality and completeness of the information mentioned above beyond the scope of practice for asset valuation professionals to ascertain or express opinions on such information and its sources.

(IV) Citation of conclusions from reports issued by other institutions

The financial data within the scope of this valuation was audited by Grant Thornton Zhitong Certified Public Accountants LLP and an unqualified audit report was issued.

Apart from the above-mentioned reports, no other reports were cited.

(V) Incomplete or defective information on main ownership

The total area of the properties and buildings within the scope of this valuation is 15,473.84 square metres, of which 37.05 square metres have not obtained the building ownership certificates, in particular, the Apartment 2308, Block B, Building A2-2, Cultural Plaza (文化空間廣場A2-2幢B座2308號公寓).

The company committed that there are no disputes on property rights and liabilities regarding that part of the assets, and committed to assuming any corresponding legal liability.

(VI) Restrictions on valuation procedures

As of the date of the valuation report, due to the outbreak of monkeypox virus and social unrest in the Democratic Republic of the Congo and considering that the total assets of China Nonferrous Metals Kunming Prospecting Design Institute African Congo (Kinshasa) Company accounted for only 0.03% of the total assets of the parent company on a consolidated basis, no on-site investigation procedure was performed this time. Under the coordination of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry, the appraisal personnel adopted alternative procedures to conduct remote inventory checking and collection of on-site equipment and data. China Nonferrous Metals Kunming Prospecting Design Institute African Congo (Kinshasa) Company committed to being responsible for the authenticity, completeness and accuracy of the remote data collection and assume any corresponding legal liability legal.

(VII) Incomplete information in the valuation

None.

(VIII) Nature and amount of the pledges, guarantees, leases and contingent liabilities (contingent assets) and their relationship with the subject of valuation

None.

(IX) Matters that may have potential impact on the valuation conclusion from the Valuation Benchmark Date to the date of valuation report

None.

(X) Other conditions that may have material impact on the valuation conclusion

There are co-owners for certain patents and software copyrights within the scope of this valuation as specified in the Asset Valuation Declaration Form. Given that there is no requirement to pay usage fees to other owners under the relevant contracts, this valuation did not take into account the potential impact of the co-ownership of the assets mentioned above on the evaluation conclusion.

As of the Valuation Benchmark Date, Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry held 0.1% equity interest in Yunnan Miyu Expressway Investment and Development Co., Ltd. After verification, the purpose of holding the shares was to undertake some projects as a shareholder, and the investment agreement drafted by China Aluminum International stipulated that the 0.1% shares invested by the minority shareholders will be withdrawn after completion and acceptance of the contracted projects, which will not enjoy the right to dividends. Therefore, the appraised value of this valuation is confirmed at book value.

Users of the asset valuation report should pay attention to the impact of the above special matters on the valuation conclusion.

XIII. Date of the asset valuation report

This asset valuation report is dated 15 August 2024.

Grant Thornton
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REPORT ON THE CALCULATIONS OF THE DISCOUNTED CASH FLOWS IN RELATION TO THE VALUATION OF WHOLLY-OWNED SUBSIDIARIES

Auditors' assurance report on the calculations of the disclosures of the discounted future estimated cash flows in connection with the valuation of Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy ("**CINF**", 長沙有色冶金設計研究院有限公司), Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. ("**SAMI**", 瀋陽鋁鎂設計研究院有限公司), Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (Kunming Survey and Design Institute, 中國有色金屬昆明勘察設計研究院有限公司) (hereinafter the "**Target Companies**")

*To the Board of Directors of China Aluminum International Engineering Corporation Limited (the "**Company**")*

We have completed our assurance engagement to report on the calculations of the discounted future estimated cash flows on which the valuation (the "**Valuation**") dated 15 August 2024 prepared by Beijing Guorong Xinghua Asset Appraisal Co., Ltd. (北京國融興華資產評估有限責任公司) in respect of the appraisal of the fair value of the Target Companies. The Valuation is based on the discounted future estimated cash flows of the Target Companies. At the same time, the participation of Chinalco Suihe Nonferrous Metals Green and Low-carbon Innovation Development Fund (Beijing) Partnership (Limited Partnership)* (Chinalco Suihe, 中鋁穗禾有色金屬綠色低碳創新發展基金(北京)合夥企業(有限合夥)) in the capital increase transactions of CINF, Kunming Survey and Design Institute and SAMI constitutes a connected transaction of the Company. The Valuation is regarded as a profit forecast under Chapter 14 and 14A of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "**Listing Rules**").

Directors' Responsibilities

The directors of the Company are responsible for the preparation of the discounted future estimated cash flows of the Target Companies in accordance with the bases and assumptions determined by the directors of the Company and as set out in the Valuation. This responsibility includes carrying out appropriate procedures relevant to the preparation of the discounted future estimated cash flows for the Valuation and applying an appropriate basis of preparation; and making estimates that are reasonable in the circumstances.

Our Independence and Quality Management

We comply with the independence and other ethical requirements under the Quality Control Standards of Accounting Firms No. 5101 – Business Quality Control (《會計師事務所質量控制準則第5101號—業務質量控制》), which are formulated based on the fundamental principles of integrity, objectivity, professional competence, prudence, confidentiality and compliance with professional code of ethics.

Reporting Accountants' Responsibilities

It is our responsibility to report, as required by Rule 14.60A(2) of the Listing Rules, on the calculations of the discounted future estimated cash flows of the Target Companies on which the Valuation is based. We are not reporting on the appropriateness and validity of the bases and assumptions on which the discounted future estimated cash flows are based and our work does not constitute any valuation of the Target Companies. We performed the procedures in accordance with the Standards on Other Assurance Engagements for Certified Public Accountants of China No. 3111 – Review of Forecasted Financial Information (《中國註冊會計師其他鑒證業務準則第3111號—預測性財務信息的審核》). This standard requires that we plan and perform the assurance engagement to obtain reasonable assurance on whether the discounted future estimated cash flows, so far as the calculations are concerned, has been properly compiled in accordance with the bases and assumptions as set out in the Valuation. We reviewed the arithmetical calculations and the compilation of the discounted future estimated cash flows in accordance with the bases and assumptions. This audit is substantially less in scope than that specified in the Auditing Standards for the Certified Public Accountants of China. Accordingly, we do not express an audit opinion. As the Valuation relates to discounted future cash flows, the preparation of discounted future cash flows does not involve in the adoption of any accounting policies of the Company. The discounted cash flows depend on future events and on a number of assumptions which cannot be confirmed and verified in the same way as past results and not all of which may remain valid throughout the period. Our work has been undertaken for the purpose of reporting solely to you under Rule 14.60A(2) of the Listing Rules and for no other purpose. We accept no responsibility to any other person in respect of our work, or arising out of or in connection with our work.

Opinion

In our opinion, based on the foregoing, so far as the calculations are concerned, the discounted future estimated cash flows of the Target Companies, has been properly compiled in all material respects in accordance with the bases and assumptions made by directors of the Company as set out in the Valuation.

Other Matters

Furthermore, the Statement is based on the Company's forecasts and estimation of future transactions and cash flows and other assumptions about the future. Actual cash flows are likely to be different from those estimated or forecast since anticipated events frequently do not occur as expected and unforeseen events may arise, and their impact on estimates and forecasts may be material.

Yours faithfully
Grant Thornton Zhitong Certified Public Accountants LLP
Certified Public Accountants

China

中鋁國際工程股份有限公司

China Aluminum International Engineering Corporation Limited

(A joint stock limited company incorporated in the People's Republic of China with limited liability)

(Stock Code: 2068)

LETTER FROM THE BOARD

To the Shareholders

Dear Sir or Madam,

DISCLOSEABLE TRANSACTION AND CONNECTED TRANSACTION — THE INTRODUCTION OF INVESTORS TO IMPLEMENT CAPITAL INCREASE THROUGH PUBLIC TENDER BY WHOLLY-OWNED SUBSIDIARIES

Reference is made to (1) the valuation report dated 15 August 2024 prepared by Beijing Guo Rong Xing Hua Asset Appraisal Co., Ltd. (the "**Independent Valuer**") in relation to the valuation of all shareholders' equity in Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy ("**CINF**") with 31 December 2023 as the Valuation Benchmark Date; (2) the valuation report dated 15 August 2024 in relation to the valuation of all shareholders' equity in Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (the "**Kunming Survey and Design Institute**") with 31 December 2023 as the Valuation Benchmark Date; and (3) the valuation report dated 15 August 2024 in relation to the valuation of all shareholders' equity in Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. (the "**SAMI**") with 31 December 2023 as the Valuation Benchmark Date (item 1, 2 and 3 together, the "**Valuation**"). As the Independent Valuer has adopted the income method for the valuation of the book value of CINF, Kunming Survey and Design Institute and SAMI, the Valuation constitutes an earnings forecast under Rule 14.61 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "**Hong Kong Listing Rules**"), and therefore Rules 14.60A and 14.62 of the Hong Kong Listing Rules apply.

We have discussed all aspects with the Independent Valuer, including the basis and assumptions on which the estimates are based, and have reviewed the estimates for which the Independent Valuer is responsible. We have also considered the report issued by Grant Thornton Zhitong Certified Public Accountants LLP, our reporting accountant, on the proper preparation of the assessment in terms of the way it is calculated.

In accordance with Rule 14.62(3) of the Hong Kong Listing Rules, the Board confirms that the profit forecast has been made by the Directors after careful and thorough enquiry.

By order of the Board
China Aluminum International Engineering Corporation Limited
TAO Fulun
Joint Company Secretary

Beijing, the PRC, 22 November 2024

CHALIECO
中铝国际

中 鋁 國 際 工 程 股 份 有 限 公 司
China Aluminum International Engineering Corporation Limited

(A joint stock limited company incorporated in the People's Republic of China with limited liability)

(Stock Code: 2068)

NOTICE OF THE FIRST EXTRAORDINARY GENERAL MEETING IN 2024

NOTICE IS HEREBY GIVEN that the first extraordinary general meeting (the "**EGM**") of 2024 of China Aluminum International Engineering Corporation Limited (the "**Company**") will be held at Conference Room 312 of China Aluminum International Engineering Corporation Limited, Building C, No. 99 Xingshikou Road, Haidian District, Beijing, the People's Republic of China at 9:30 a.m. on Friday, 13 December 2024 for the purpose of considering and, if thought fit, passing the following resolution. Unless the context otherwise requires, capitalized terms used in this notice shall have the same meanings as those defined in the circular of the Company dated 22 November 2024 (the "**Circular**").

ORDINARY RESOLUTION

1. To consider and approve the resolution in respect of the Capital Increase of RMB2.29 billion in aggregate by Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy (長沙有色冶金設計研究院有限公司), Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (中國有色金屬工業昆明勘察設計研究院有限公司) and Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. (瀋陽鋁鎂設計研究院有限公司) by way of introducing investors through public tendering on GuangDong United Assets and Equity Exchange and the connected transactions to be contemplated thereunder; and the capital increase agreement, and that China Aluminum International Engineering Corporation Limited to take and do all steps, as well as to do all such acts and things considered necessary or appropriate to give effect or implement the transactions to be contemplated under the capital increase agreement.

By order of the Board
China Aluminum International Engineering Corporation Limited
Tao Fulun
Joint Company Secretary

Beijing, the PRC, 22 November 2024

Notes:

1. For the convening of the EGM, the register of members of H Shares of the Company will be closed from Tuesday, 10 December 2024 to Friday, 13 December 2024 (both days inclusive), during which no transfer of H Shares will be registered.

   In order to be eligible to attend and vote at the EGM, all H Share transfer documents together with the relevant share certificates must be lodged with the Company's H Share registrar, Computershare Hong Kong Investor Services Limited at Shops 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong (for H Shareholders), not later than 4:30 p.m. on Monday, 9 December 2024.

   Shareholders whose names appear on the register of members of H Shares at the close of business on Monday, 9 December 2024 are entitled to attend and vote at the EGM.

2. Votes on the resolutions to be proposed at the EGM shall be taken by way of poll.

3. Shareholders who are entitled to attend and vote at the EGM may appoint one or more proxies to attend and vote on their behalf. A proxy need not be a shareholder of the Company.

4. The instrument appointing a proxy must be in writing under the hand of a shareholder or its/his/her attorney duly authorized in writing. If the shareholder is a legal person, the instrument shall be affixed with the common seal of the legal person or signed by its legal representative or the proxy authorized by a resolution of its board or other decision-making bodies.

5. For holders of H Shares, in order to be valid, the proxy form must be deposited at the Company's H Share registrar, Computershare Hong Kong Investor Services Limited, at 17M Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong, not less than 24 hours before the time appointed for convening the EGM. If the form of proxy is signed by another person under a power of attorney or other authority, a notarized copy of the power of attorney or other authority shall be deposited at the same time at the same place as stated in the proxy form. Completion and return of the form of proxy will not preclude shareholders from attending and voting in person at the EGM or any adjournment thereof should they so wish.

6. Shareholders shall present proof of identity and proof of shareholding when attending the EGM. If a shareholder who is a legal person appoints authorized representative(s) to attend the EGM, the authorized representative(s) shall present his/her proof of identity and a notarized copy of the relevant authorization document signed by the board of directors or other authority of the legal person shareholder or such other notarized copy as permitted by the Company. A proxy attending the EGM shall present a proof of identity and a form of proxy signed by the shareholder or by an authorized representative of the shareholder.

7. The EGM is expected to take less than half a day. Shareholders or their representatives attending the EGM shall be responsible for their own travel and accommodation expenses.

8. The contact details of the Company's H share registrar in Hong Kong, Computershare Hong Kong Investor Services Limited, are set out below:

   Address: 17M Floor, Hopewell Centre, 183 Queen's Road East, Wan Chai, Hong Kong
   Telephone: (+852) 2862 5555
   Fax: (+852) 2865 0990

9. The address and contact details of the Company's registered office in the PRC are set out below:

   Address: Building C, No. 99 Xingshikou Road, Haidian District, Beijing
   Telephone: 010-82406806
   Email: IR-zlgj@chinalco.com.cn

As at the date of this notice, the non-executive Directors are Mr. ZHANG Decheng and Mr. YANG Xu; the executive Directors are Mr. LI Yihua, Mr. LIU Jing, Mr. LIU Dongjun and Ms. ZHAO Hongmei; and the independent non-executive Directors are Mr. ZHANG Tingan, Mr. SIU Chi Hung and Mr. TONG Pengfang.