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中国通号

中國鐵路通信信號股份有限公司

China Railway Signal & Communication Corporation Limited*

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

(Stock Code: 3969)

**ANNUAL RESULTS ANNOUNCEMENT
FOR THE YEAR ENDED 31 DECEMBER 2021**

The board of directors (the “**Board**”) of China Railway Signal & Communication Corporation Limited* (中國鐵路通信信號股份有限公司) (the “**Company**”) hereby announces the audited annual results of the Company and its subsidiaries for the year ended 31 December 2021. This announcement is in compliance with the relevant requirements of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Hong Kong Stock Exchange**”) in relation to information to accompany the preliminary announcement of annual results.

PUBLICATION OF THE ANNUAL RESULTS ANNOUNCEMENT AND ANNUAL REPORT

This results announcement will be published on the HKExnews website of the Hong Kong Stock Exchange at www.hkexnews.hk and the website of the Company at www.crsc.cn.

The 2021 annual report will be dispatched to the Company's H shareholders in due course and will be published on the aforesaid websites of the Company and the Hong Kong Stock Exchange.

By order of the Board

China Railway Signal & Communication Corporation Limited*

ZHOU Zhiliang

Chairman

Beijing, the People's Republic of China

25 March 2022

As at the date of this announcement, the executive directors of the Company are Mr. ZHOU Zhiliang, Mr. XU Zongxiang and Mr. YANG Yongsheng, the non-executive director of the Company is Mr. GUO Yonghong, and the independent non-executive directors of the Company are Mr. YAO Guiqing, Mr. YAO Cho Fai Andrew and Mr. FU Junyuan.

* For identification only.

IMPORTANT NOTICE

I. THE BOARD AND THE SUPERVISORY COMMITTEE OF THE COMPANY AND THE DIRECTORS, SUPERVISORS AND MEMBERS OF THE SENIOR MANAGEMENT WARRANT THE TRUTHFULNESS, ACCURACY AND COMPLETENESS OF THE CONTENTS HEREIN AND CONFIRM THAT THERE ARE NO MISREPRESENTATIONS OR MISLEADING STATEMENTS CONTAINED IN, OR MATERIAL OMISSIONS FROM, THIS ANNUAL REPORT, AND ACCEPT SEVERAL AND JOINT LEGAL RESPONSIBILITIES.

II. THE COMPANY MADE NO PROFIT AT THE TIME OF LISTING AND HAS NOT BEEN YET PROFITABLE

☐ Yes ☒ No

III. WARNING OF SIGNIFICANT RISKS

For the description of relevant risks, please refer to “Management Discussion and Analysis” under Section IV of this report.

IV. ALL DIRECTORS OF THE COMPANY ATTENDED THE BOARD MEETING.

V. ERNST & YOUNG HUA MING LLP ISSUED A STANDARD UNQUALIFIED AUDIT REPORT FOR THE COMPANY.

VI. ZHOU ZHILIANG, PERSON-IN-CHARGE OF THE COMPANY, HU SHAOFENG, CHIEF FINANCIAL OFFICER, AND ZHANG SHIHU, HEAD OF THE FINANCIAL DEPARTMENT (PERSON IN CHARGE OF ACCOUNTING), CONFIRM THAT THE FINANCIAL REPORT IN THIS ANNUAL REPORT IS TRUE, ACCURATE AND COMPLETE.

VII. PROFIT DISTRIBUTION PLAN OR RESERVES-TO-EQUITY TRANSFER PLAN DURING THE REPORTING PERIOD AS CONSIDERED BY THE BOARD

As considered by the 2nd meeting of the fourth session of the Board of the Company, the Company plans to distribute cash dividend of RMB1.7 (including tax) to all Shareholders for every 10 shares based on the total share capital of 10,589,819,000 shares on 31 December 2021, totaling RMB1,800,269,230. The profit distribution plan needs to be considered and approved by the Company’s 2021 annual general meeting.

VIII. WHETHER THERE ARE IMPORTANT MATTERS SUCH AS SPECIAL ARRANGEMENTS FOR CORPORATE GOVERNANCE

☐ Applicable ☒ Not applicable

IMPORTANT NOTICE

IX. DISCLAIMER OF FORWARD-LOOKING STATEMENTS

☒ Applicable ☐ Not applicable

This report contains forward-looking statements that are based on some subjective judgements and prospective assumptions with precedent conditions to the domestic and overseas economic trends and macro policies in the future. The judgements and assumptions may change under the influence of constraints. The final results or trends may differ from these forward-looking statements.

The forward-looking statements included in this report in relation to future plans, development strategies, etc. do not constitute any substantive commitment to investors by the Company. Investors should be aware of investment risks.

X. WHETHER THE CONTROLLING SHAREHOLDER OR ITS RELATED PARTIES HAVE MISAPPROPRIATED THE COMPANY'S FUNDS FOR PURPOSES OTHER THAN FOR BUSINESS

No

XI. WHETHER THE COMPANY HAS PROVIDED EXTERNAL GUARANTEES IN VIOLATION OF ANY PRESCRIBED DECISION-MAKING PROCEDURES

No

XII. WHETHER THE COMPANY HAS MORE THAN HALF OF THE DIRECTORS THAT CAN NOT GUARANTEE THE TRUTHFULNESS, ACCURACY AND COMPLETENESS OF THE ANNUAL REPORT DISCLOSED BY THE COMPANY

No

XIII. OTHERS

☐ Applicable ☒ Not applicable

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Documents Available for Inspection	The financial report signed and stamped by the person in charge of the Company, chief financial officer and person in charge of accounting. Original copies of all documents and announcements of the Company disclosed on websites designated by the CSRC during the reporting period.	

SECTION I

DEFINITIONS

I. DEFINITIONS

Unless otherwise stated in the context, the following terms should have the following meanings in this report:

Definitions of Common Words

CRSC or our Company or Company	China Railway Signal & Communication Corporation Limited* (中國鐵路通信信號股份有限公司)
CRSC Group, the controlling shareholder of the Company	China Railway Signal and Communication (group) Corporation Limited (中國鐵路通信信號集團有限公司)
SASAC	the State-owned Assets Supervision and Administration Commission of the State Council (國務院國有資產監督管理委員會)
CSRC	China Securities Regulatory Commission (中國證券監督管理委員會)
SSE	the Shanghai Stock Exchange
Hong Kong Stock Exchange	The Stock Exchange of Hong Kong Limited
CNRG	China National Railway Group Co., Ltd. (中國國家鐵路集團有限公司)
CAM	China Association of Metros (中國城市軌道交通協會)
TACS	Train Autonomous Circumambulation System, the automatic train operation system, a signal system for a train to realize autonomous resource management and active interval protection based on the operation plan and real-time location of the train
CTCS	Chinese Train Control System, developed by China for ensuring the safe operation of trains, which is divided into 0 to 4 levels based on function and equipment configuration according to the operational requirements of different lines. The higher the level, the faster the train speed applied and the higher the technical difficulty
CIPS	Computer Integrated Processing System, automation system of the freight marshalling yard, a system for centralized supervision and control of marshalling yard operations

SECTION I DEFINITIONS

ITCS	Incremental Train Control System, an enhanced train control system, which is currently applied to the Qinghai-Tibet Railway
MATC	Magnetic Automatic Train Control, medium and low speed maglev control system, an automatic control system for moving block trains based on cross induction loops, suitable for medium and low speed maglev trains
ATO	Automatic Train Operation, the automatic train operation system, a system that automatically adjusts the speed and operation status of trains to automatically control a train's operation
CBTC	Communication Based Train Control System, train control system for urban transit, the wireless communication-based automatic train control system, a wireless communication system for urban transit that enables bidirectional communication between vehicle and ground facilities to control the operation of trains
RBC	Radio Blocking Center, the ground core equipment of the CTCS-3 system to generate control information on the driving permission, line description and temporary speed limit for the controlled train according to the train status provided by the train ATP, the interlock path status provided by the interlock device, the track occupation status, and the temporary line speed limit command provided by the TSRS and transmit such information to the on-board ATP through the GSM-R network to control the driving status of the train
ATP	Automatic Train Protection, the automatic train protection equipment that automatically brakes train when it exceeds speed limits
EPC	Engineering Procurement Construction, the whole process or certain stages of the contract entrusted by the owner to the Company to carry out the design, procurement, construction, and trial operation of the construction project in accordance with the contract

SECTION II

CHAIRMAN'S STATEMENT

Dear shareholders:

2021 was a game-changing year for China. The Communist Party of China (CPC) celebrated its 100th birthday while China achieved its first centenary goal of building a moderately prosperous society in all respects and embarked on a new journey toward realizing the second centenary goal. Over the past year, with a determined effort to implement the decisions and plans of the CPC Central Committee and the State Council, CRSC conformed with the work requirements of the Party Committee of SASAC, actively addressed the complex situation where the once-in-a-century pandemic, unprecedented global changes and profound changes in the industry intertwined. CRSC attained a steady and sound start of the 14th Five-Year Plan by overcoming difficulties with strenuous efforts and hewing to ongoing innovation, deep reform and the bottom line.

In 2021, the Company led the development of the industry with in-house innovation and hardcore technologies. Focusing on world-level cutting-edge technologies, the main economic fields, the country's critical needs, and the people's health, the Company accelerated the process to make breakthroughs in core technologies, deepened the reform of the systems and mechanisms in relation to technology, and quickened the pace of collaboration in technological innovation, while prioritizing consolidating its leading position in the industry, ensuring safety and quality, supporting business expansion, and promoting the transformation of internationalization. The Company completed the matching test of the C3 autonomous train control system for Hefei-Anqing High-speed Railway; the TACS system became the first case for commercial application in China; and a host of major achievements such as ETCS-2 level train control system, fully automatic operation (FAO) system for underground train and integrated video surveillance system for urban transit were commercially applied for the first time. The Company's technology system reform achieved significant effects with steadily increased investment in research and development. In particular, RMB1.902 billion was utilized for R&D purposes last year; orderly progress was made in respect of the open competition mechanism to select the best candidates to undertake key research projects (“揭榜掛帥”), fulfilling major tasks with united forces (“集中攻關”), commercialization (“成果孵化”) and fund guarantee provided by operators and employees (“風險抵押”); the Company explored a special list-based management system in connection with total amount of payroll and separated the payroll expenses as an item. The Company earnestly filed an application for the title of national key laboratory. In addition, one state-accredited enterprise technology center and five provincial- and ministerial-level innovation platforms were launched, and three overseas laboratories were constructed. CRSC CASCO and CRSC Xi'an Industry Group were accredited under a national program named “Making Champions in Specific Manufacturing Areas (製造業單項冠軍)”, and Beixin was recognized as a “Demonstration Unit Piloting Integrated Development of Manufacturing and the Internet (製造業與互聯網融合發展試點示範)” by the Ministry of Industry and Information Technology.

In 2021, fighting against the headwind, the Company steadily improved the quality of its business operations in the market. Confronting to the declining mileage under construction of high-speed railway and fierce market competition, the Company rapidly adjusted its deployment to fully boost the enthusiasm for marketing at all levels. In the railway market, the Company kept making simultaneous endeavors in multiple aspects. Specifically, it contracted eight engineering projects from Guangzhou-Shanwei High-speed Railway, Huzhou-Hangzhou High-speed Railway and Kunming Hub, etc., which represented the lion's share of the market. And it also contracted major engineering projects including a local railway engineering project of Lianjie-Leshan Section, general contracting of the EPC project of special railway line for logistics port in central Henan and a renovation project of Shouzhou-Huanghua

SECTION II

CHAIRMAN'S STATEMENT

Railway, and the contract value of the railway market maintaining a stable trend. In the urban rail transit market, the Company maintained its leadership in the industry. By continuously improving the systems in terms of products, technologies, and services, CRSC CASCO, Urban Rail Transit, CRSCS and CRSCC together dominated half of China's urban rail transit control system market, further enhancing the Company's leading advantages in the industry. In the overseas market, the Company made a breakthrough. Despite an adverse impact due to the spread of COVID-19 pandemic, the Company contracted engineering projects of the Stara Pazova – Novi Sad section and the Novi Sad – Subotica section of the Hungary-Serbia Railway, which contributed to the entry of China's high-speed railway services into Europe. Furthermore, the Company also contracted a subway project in Mexico, establishing its presence in a new regional market.

In 2021, the Company played a vanguard role in serving major national development strategies. With an eye on the coordinated development of the Beijing-Tianjin-Hebei region, the development of the Yangtze River Economic Belt, the construction of the Guangdong-Hong Kong-Macau Greater Bay Area, the integrated development of the Yangtze River Delta, the development of the Chengdu-Chongqing Economic Circle and other major national development strategies, the Company proactively catered to regional needs, gave play to its own advantages, and participated in the construction of major national engineering projects. In 2021, the launch and operation of 1,500 km high-speed railway were ensured, such as Lianyungang-Xuzhou High-speed Railway, Ganzhou-Shenzhen High-speed Railway, Lunan High-speed Railway, Hangzhou-Shaoxing-Taizhou High-speed Railway and Chaoyang-Linghai High-speed Railway; the Company delivered 2,309 km of main railway lines covering Yuxi-Mohan Railway, Lhasa-Nyingchi Railway, Jinhua-Taizhou Railway and Nansha Port Railway. 29 urban rail transit lines (totaling 625 km) were put into operation, including the northern section of Beijing Metro Line 8 Phase III, Chongqing Metro Line 5 Phase I and southern section of Tianjin Metro Line 4, among which, 21 lines (totaling more than 400 km) were equipped with the core control system provided by the Company, with automated driving lines amounting to more than 170 km. The Company also took part in the construction of major national engineering projects such as Zhangjiajie-Jishou-Huaihua High-speed Railway (known as the most picturesque high-speed railway built under the poverty alleviation campaign), Yuxi-Mohan Railway, a symbol of the friendship between China and Laos, Lhasa-Nyingchi Railway, the most beautiful course for pilgrims etc. The Company won its bids for urban rail transit projects in key cities in China, including Tianjin Metro Line 11, Xi'an Metro Line 16 and Suzhou Metro Line 8, etc. The Company was awarded the contract for the construction of the signaling and communications system for the Hungary-Serbia Railway in Serbia, completed the construction of the rail transportation control system laboratory in Serbia, and steadily promoted the key engineering projects under the Belt and Road Initiative such as the construction of the Jakarta-Bandung High Speed Railway and China-Laos Railway and reconstruction of the double-track railway in Thailand. The Company fully functioned as a main force of central government-owned enterprises.

In 2021, strictly conforming with the bottom line, the Company continuously maintained sound safety and quality. The Company always ensured that its philosophy of safety and quality was embodied in the entire process of all fields in production and development to maintain stable safety and quality. The Company improved the relevant systems and mechanisms and thoroughly implemented the safety and quality accountability system by breaking the objectives down into tasks assigned to all levels, intensifying assessment and evaluation, stepping up efforts to hold the personnel involved accountable, and forming a clear accountability hierarchy. The Company kept optimizing the systems in relation to safety and quality, occupational health and standardization, with 53 enterprises receiving the occupational health and safety management system certification and 23 enterprises completing their establishment of safety production standardization. The Company reinforced rigorous process control, enforced full life-cycle

SECTION II

CHAIRMAN'S STATEMENT

management from the source of product design and development, and widely applied safety information-based management system, real-time monitoring system for operating railway lines under construction, and intelligent warning system. The product automated testing and automated production line construction were steadily advanced. The supervision and examination of secondary enterprises were implemented in all respects. The Company continued to strengthen emergency management, promoted emergency system construction, intensified emergency drills and assessments, and fortified emergency supplies storing so that its support capacity in emergency cases was gradually improved. The goals of “three eliminations, two upgrades, and two declines (三杜絕, 兩提升, 雙下降)” were fully realized and therefore the Company effectively guaranteed the safe and stable operation of 150,000 km of railways and over 40,000 km of high-speed railways in China. The Company won one Tien-yow Jeme Civil Engineering Prize and its six projects were recognized as national prime-quality projects and 21 projects were recognized as provincial and ministerial prime-quality projects.

In 2021, the Company sweated over the further promotion of the three-year campaign for the reform of state-owned enterprises. The Company established a reform promotion mechanism featuring vertical coherence, horizontal synergy, system integration and efficient operation, which set off a new round of reform that demanded capability, quality, and effectiveness. The Company deepened the construction and practice of corporate governance system by conducting an overhaul and building headquarters managing and controlling strategies and operations, strengthened the leadership of the CPC in all respects while improving corporate governance, and promoted the board of directors to be a more complete and practical system, thus effectively improving the efficiency of its operations. As going further into optimizing deployment and structurally adjusting systems, the Company accelerated internal reorganization and integration, drove centralized production capacity, fostered the production capability vertically integrating R&D, design with manufacturing, the capability integrating design with construction, and the service capability integrating investment, construction with operation, as well as bolstered the efficiency of resource allocation. Three system reforms achieved extensive and in-depth breakthroughs, that is, full coverage of the tenure system and contractual management of managers ahead of schedule, group-wide implementation of competition mechanism for the posts of managers and the up-or-out system, deeper reform of “one enterprise, one policy” in terms of the remuneration allocation system, steady execution of the incentive mechanisms for scientific research such as risk mortgage, project bonuses and co-investment rights, general implementation of the three mechanism characterized with flexible adjustment for positions of managerial staff, elastic employment of staff, and adjustable salary for the first time, and these results significantly boosted the awareness of competition, sense of responsibility and enthusiasm of the leaders and employees.

SECTION II

CHAIRMAN'S STATEMENT

The 20th National Congress of the CPC will be held in 2022 which is a crucial year that serves as a connected link for the implementation of the 14th Five-Year Plan. In the new year and even during the 14th Five-Year Plan period, opportunities coexist with challenges for CRSC's high-quality development. Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Company will take developing the national industry of train control technology, leading the global progress on rail transit technology, and escorting people's travel as its vision and mission, adhere to the general work principle of seeking progress while maintaining stability, fulfil its main responsibilities, enable innovation-driven development, highlight the principal businesses, and foster diverse synergy. The Company will concentrate on implementing the business strategy featuring "Six Centers, One Core and Two Wings (六核一體兩翼)", construct the "Rail Transit + N (軌道交通+N)" industrial pattern, and work tirelessly to promote high-quality development with courage and grit, so as to celebrate the convening of the CPC's 20th National Congress with excellent performance and create greater wealth and value for the communities and shareholders!

On behalf of the Board of Directors, I hereby would like to express our sincerest thanks to the shareholders who champion the Company's reform and development, as well as friends from all ranks of life who concern and root for the Company!

ZHOU Zhiliang
Chairman

Beijing, the PRC
25 March 2022

SECTION III BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

I. CORPORATE INFORMATION

Chinese name of the Company	中國鐵路通信信號股份有限公司
Chinese abbreviation	中國通號
English name of the Company	China Railway Signal & Communication Corporation Limited
English abbreviation	CRSC
Legal representative of the Company	ZHOU Zhiliang
Registered office of the Company	20/F, CRSC Building A 1 Compound, Automobile Museum South Road Fengtai District Beijing
Postal code of registered office of the Company	100070
Historical changes to the registered office of the Company	In November 2017, the registered office of the Company was changed from No. 49, Xi Sihuan South Road B, Fengtai District, Beijing to 20/F, CRSC Building A, 1 Compound, Automobile Museum South Road, Fengtai District, Beijing.
Principal place of business	CRSC Building 1 Compound, Automobile Museum South Road Fengtai District Beijing
Postal code of principal place of business	100070
Principal place of business in Hong Kong	40th Floor, Dah Sing Financial Centre, No. 248 Queen's Road East, Wanchai, Hong Kong
Website of the Company	www.crsc.cn
E-mail	ir@crsc.cn

II. CONTACT PERSONS AND CONTACT METHODS

	Secretary to the Board(domestic representative for information disclosure)
Name	HU Shaofeng
Correspondence address	19/F, CRSC Building A 1 Compound, Automobile Museum South Road Fengtai District Beijing
Telephone	010-50809286
Fax	010-50809075
E-mail	ir@crsc.cn

SECTION III BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

III. INFORMATION DISCLOSURE AND PLACE OF INSPECTION

Media and website designated by the Company for annual report disclosure	China Securities Journal, Shanghai Securities News, Securities Times and Securities Daily
Website designated by the CSRC for publishing the A share annual report of the Company	www.sse.com.cn
Website designated by the Hong Kong Stock Exchange for publishing the H share annual report of the Company	www.hkexnews.hk
Place of inspection of the annual report of the Company	Board Office of the Company
Index to changes during the reporting period	None

IV. BASIC INFORMATION OF SHARES/DEPOSITARY RECEIPTS OF THE COMPANY

☒ Applicable ☐ Not applicable

(I) Basic information of shares of the Company

Basic information of shares of the Company

Class of share	Place of listing and sector	Stock abbreviation	Stock code	Stock abbreviation before change
A share	SSE STAR Market	CRSC	688009	None
H share	Hong Kong Stock Exchange Main Board	CRSC	03969	None

(II) BASIC INFORMATION OF DEPOSITARY RECEIPTS OF THE COMPANY

☐ Applicable ☒ Not applicable

SECTION III BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

V. OTHER RELEVANT INFORMATION

Accounting firm engaged by the Company (domestic)	Name	Ernst & Young Hua Ming LLP ^{Note}
	Office address	No. 3 Building, East Zone, No.1 East Chang'an Avenue Dongcheng District, Beijing ZHANG Xiaoliang, HE Qiongyi
Sponsor institution performing the duty of continuous supervision during the reporting period	Name of signing accountants	
	Name	China International Capital Corporation Limited
	Office address	27th and 28th Floor, China World Office 2, 1 Jianguomenwai Avenue, Chaoyang District, Beijing MA Qinghai, WU Jiaqing
	Name of signing sponsor representative	
	Term of continuous supervision	From the listing date to 31 December 2022

Note: Pursuant to the amendments to the Hong Kong Stock Exchange Listing Rules and relevant requirements of the Ministry of Finance and the CSRC, a company incorporated in mainland China and listed on the Hong Kong Stock Exchange is permitted to adopt the PRC GAAP Standards to prepare its financial statements and to engage a domestic accounting firm recognized by the Ministry of Finance and the CSRC to provide relevant services according to the PRC auditing standards since 15 December 2010. Therefore, the Company appointed one accounting firm as its external major auditor starting from the financial year of 2019 (no division of domestic and overseas).

SECTION III BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

VI. KEY ACCOUNTING DATA AND FINANCIAL INDICATORS IN THE PAST THREE YEARS

(I) Key accounting data

Unit: Yuan Currency: RMB

Key accounting data	2021	2020	Change as compared with the corresponding period of last year (%)	2019
Revenue	38,358,297,108.78	40,124,476,710.76	-4.40	41,646,286,792.57
Net profit attributable to shareholders of the listed company	3,274,672,689.28	3,819,046,319.02	-14.25	3,815,874,901.39
Net profit deducting non-recurring profit or loss attributable to shareholders of the listed company	3,123,863,726.28	3,578,794,910.78	-12.71	3,501,282,304.33
Net cash flow generated from operating activities	2,768,701,491.06	3,007,375,953.08	-7.94	3,371,360,784.87
	At the end of 2021	At the end of 2020	Change as compared with the end of last year (%)	At the end of 2019
Net assets attributable to shareholders of the listed company	43,554,652,753.64	42,563,468,050.40	2.33	41,119,607,362.50
Total assets	108,942,588,838.30	105,328,082,320.59	3.43	97,512,591,304.36

SECTION III BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

(II) Key financial indicators

Key financial indicators	2021	2020	Change as compared with the corresponding period of last year (%)	2019
Basic earnings per share (RMB/share)	0.30	0.34	-11.76	0.38
Diluted earnings per share (RMB/share)	0.30	0.34	-11.76	0.38
Basic earnings per share after deduction of non-recurring profit or loss (RMB/share)	0.28	0.32	-12.50	0.35
Weighted average rate of return on net assets (%)	7.57	9.09	Decreased by 1.52 percentage points	12.77
Weighted average rate of return on net assets after deduction of non-recurring profit or loss (%)	7.22	8.52	Decreased by 1.30 percentage points	11.72
R&D investment as a percentage of revenue (%)	4.96	4.32	Increased by 0.64 percentage point	3.85

Key accounting data and financial indicators of the Company in the past three years as at the end of the reporting period

☐ Applicable ☒ Not applicable

VII. DIFFERENCES IN ACCOUNTING DATA UNDER DOMESTIC AND OVERSEAS ACCOUNTING STANDARDS

- (I) Differences in net profit and net assets attributable to shareholders of the listed company in financial reports disclosed in accordance with international accounting standards and Chinese accounting standards

☐ Applicable ☒ Not applicable

SECTION III BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

- (II) Differences in net profit and net assets attributable to shareholders of the listed company in financial reports disclosed in accordance with overseas accounting standards and Chinese accounting standards

☐ Applicable ☒ Not applicable

- (III) Explanation of differences between domestic and overseas accounting standards:

☐ Applicable ☒ Not applicable

VIII. MAIN QUARTERLY FINANCIAL DATA FOR 2021

Unit: Yuan Currency: RMB

	The first quarter (January to March)	The second quarter (April to June)	The third quarter (July to September)	The fourth quarter (October to December)
Revenue	6,571,740,629.36	11,293,006,659.94	7,469,946,018.59	13,023,603,800.89
Net profit attributable to shareholders of the listed company	586,246,461.93	1,254,258,285.45	568,711,108.42	865,456,833.48
Net profit deducting non-recurring profit or loss attributable to shareholders of the listed company	574,915,960.28	1,196,666,289.11	562,545,287.34	789,736,189.55
Net cash flow generated from operating activities	-1,276,606,868.03	850,666,876.62	771,379,524.34	2,423,261,958.13

Explanation of differences between quarterly data and data disclosed in the periodic report

☐ Applicable ☒ Not applicable

SECTION III BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

IX. NON-RECURRING PROFIT OR LOSS ITEMS AND AMOUNTS

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Non-recurring profit or loss items	Amount of 2021	Amount of 2020	Amount of 2019
Profit and loss on disposal of non-current assets	35,949,376.07	171,224,991.74	-1,382,312.77
Government grants recognized through profit or loss for the period (other than government grants which are closely related to the Company's normal business operations, which comply with national policies and can be enjoyed continuously based on a fixed amount or a fixed quantity according to a certain standard)	109,073,995.77	117,599,839.57	67,680,990.59
Profit or loss on debt restructuring	13,849,690.16	—	—
Reversal of the impairment provision for receivables and contract assets which are tested individually for impairment	2,755,674.64	2,766,661.64	54,934,954.40
Other non-operating income and expenses apart from the aforesaid items	25,667,778.45	19,375,081.16	43,910,945.85
Other gain or loss items falling within the definition of extraordinary items	—	—	243,017,735.72
Less: Effect of income tax	-35,036,177.88	-65,689,329.87	-93,569,492.27
Effect of minority interest (after tax)	-1,451,374.21	-5,025,836.00	-224.46
Total	<u>150,808,963.00</u>	<u>240,251,408.24</u>	<u>314,592,597.06</u>

Explanations on defining the non-recurring profit and loss items listed in the Explanatory Notice on Information Disclosure of Companies with Public Offering No. 1-Non-recurring Profit and Loss 《公開發行證券的公司信息披露解釋性公告第1號——非經常性損益》 as recurring profit and loss items

☐ Applicable ☒ Not applicable

SECTION III BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

X. ITEMS MEASURED AT FAIR VALUE

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Closing balance	Current change	Amount of impact on current profit
Receivables for financing	2,230,124,457.61	2,142,993,114.00	-87,131,343.61	—
Other equity instrument investments	<u>1,019,867,488.13</u>	<u>1,124,819,159.20</u>	<u>104,951,671.07</u>	—
Total	<u><u>3,249,991,945.74</u></u>	<u><u>3,267,812,273.20</u></u>	<u><u>17,820,327.46</u></u>	—

XI. EXPLANATION OF PERFORMANCE INDICATORS OF NON-ENTERPRISE ACCOUNTING STANDARDS

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

I. DISCUSSION AND ANALYSIS ON BUSINESS OPERATIONS

In 2021, against the background of the adjustment of the national rail transportation construction policy, the decline in the growth of new high-speed railway mileage, the change in the bidding mode of China State Railway Group and the resurgence of COVID-19, the Company witnessed a slowdown in the growth of major economic indicators, but the overall operation remained basically stable. In 2021, the aggregate value of newly-signed contracts of the Company amounted to RMB72.281 billion, representing an increase of 1.16% compared with the same period in 2020, among which, the value of newly-signed contracts in railway sector amounted to RMB23.734 billion, representing a year-on-year decrease of 9.61%; the value of newly-signed contracts in urban transit sector amounted to RMB13.326 billion for urban transits, representing a year-on-year increase of 2.04%; the value of newly-signed contracts in overseas sector amounted to RMB2.198 billion, representing a year-on-year increase of 47.55%; and the value of newly-signed contracts in construction contracting and other sectors amounted to RMB33.023 billion, representing a year-on-year increase of 7.75%. As of the end of 2021, the Company's order in hand amounted to RMB146.301 billion.

Regarding the main business of "Four Electric Systems" integration in high-speed railways, China State Railway Group tried to adjust the bidding mode, resulting in a slump in the bidding amount in the first half of 2021 and intensified market competition. However, the Company overcame many unfavorable objective factors, responded rapidly by reasonably adjusting its deployment, and took full advantage of the second half of 2021, especially the fourth quarter of 2021 when bids are issued in a centralized manner, to successfully undertake several key projects including Guangzhou-Shanwei railway, Huzhou-Hangzhou railway, Xi'an-Yan'an railway, Quzhou-Lishui railway, southern extension of the Guangqing Intercity Railway and Kunming hub. The Company actively made plans with respect of newly constructed normal-speed railways, local railway special lines, reconstruction of existing lines and other markets and successively undertook several key projects including the Lianjie-Leshan Line project of a newly-built local railway, EPC general contracting project of railway special line for inland integrated logistics port in central Henan, railway special line EPC project of Jincheng City Guorui Yuntong Logistics Co., Ltd. (晉城市國睿運通物流有限公司), railway special line project of Huawang Reli, capacity expansion and reconstruction project of Wubei-Jiangjunmiao Railway, renovation project of Zhunchi Railway and renovation project of Shouzhou-Huanghua Railway. The Company has made various efforts to effectively compensate for the adverse factors, with the contract value of the railway market maintaining a stable trend, and the market share continuously ranking first in the industry. In the field of railway signaling control system, the contract value decreased due to the decline of bidding amount, but the core systems still maintained a high market share, with the integrated share of the high-speed railway market staying stable at about 65%. At the same time, the success of bids for RBC renovation project of the part of Wuhan-Guangzhou High-speed Railway under the management of China Railway Wuhan Group and the fiber optic cable reinforcement project of the part of Wuhan-Guangzhou High-speed Railway under the management of China Railway Guangzhou Group also laid a good foundation for subsequent renovation projects of high-speed passenger rail lines.

Note: The monetary amounts set out in this results announcement are all in RMB (unless otherwise stated).

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The competition in the field of urban transit signal system integration became increasingly intense, but CRSC CASCO and CRSC Urban Rail Transit, the subsidiaries of the Company, were firmly in the front rank in the industry of control system and undertook 15 projects in succession, including Tianjin Subway Line 11, Changsha Subway Line 6, Xi'an Subway Line 16, Suzhou Subway Line 8, Taizhou City Railway Line S1, Wuxi Metro Line S1, Zhengzhou Subway Line 7, Zhengzhou Subway Line 8, Lanzhou Subway Line 2, renovation project of Shanghai Subway Lines 3/4, existing and southern extension of Changchun Subway Line 4, etc., securing more than half of the national market share and further expanding the Company's leading advantage in the industry. On that basis, Shanghai Engineering Bureau Group had been awarded the weak current erection projects for key projects such as Hangzhou Subway Line 3, Shenzhen Subway Line 12, Luoyang Subway Line 2, Suzhou Subway Line S1, Wenzhou Subway Line S2, etc., which had solidified the existing market share; Communication Information Group vigorously expanded the communication system integration market, and undertook key projects such as Dalian Subway Line 5, Suzhou Subway Line 8, Taizhou City Railway Line S1, Hangzhou Metro Airport Express, etc., making significant contribution to the improvement of the Company's urban transit business.

In the overseas market, the Company's overseas business team overcame serious impact of COVID-19 worldwide, and leveraged the unique advantages of the "three-in-one" services of design and development, equipment manufacturing and engineering services to provide customized system solutions for the Hungary-Serbia Railway. In 2021, it successively undertook the Stara Pazova – Novi Sad section and the Novi Sad – Subotica section of the Hungary-Serbia Railway, reconstruction project of PCC 1 of Line 1 to Line 6 and communication project of Subway Line 1 of the Mexico City subway system and other key projects, which opened up new regional markets, and as a result, the value of newly-signed external contracts in 2021 staged significant growth year-on-year. On that basis, the Company further improved the overseas business organizational structure and network layout. Up to now, the Company has built more than 10 overseas operating agencies and established the laboratory of rail transport control system in Serbia, which performed DeBo certification in Serbia and Hungary respectively, laying a solid foundation for further development of the overseas market.

Regarding the general contracting business, the Company continued to strengthen the control requirements under which relevant businesses should be strongly related to and vigorously boost main business and generate high returns. On the basis of ensuring the quality of projects undertaken, the Company played its leading role of design and technology, built up its project undertaking capacity, comprehensively improved the resource integration and management and risk prevention and control capacity of the whole industry chain, enhanced the EPC general contracting capacity, and intensified efforts on the construction of intelligent new infrastructure. Besides, it won the bids for the high value-added projects including the Putian New Energy Industry Innovation Demonstration Zone Hanjiang Lingang standardized plant and surrounding supporting infrastructure (including 5G new infrastructure) project, which greatly contributed to its subsequent undertaking of rail transportation and other businesses in related areas.

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At the same time, the Company also noted that the domestic railway construction is still intense to some extent, but the infrastructure investment has slowed down on the whole; the competition in the traditional market of “Four Electric Systems” integration was intensified and market space is squeezed; the investment and construction models of highspeed railway and intercity railway showed a tendency of diversity, and the bidding of large infrastructure projects generally adopts a mode of total professional and overall and total package service. The competition for urban transit equipment is becoming more and more severe; overseas infrastructure remained sluggish due to the impact of the pandemic, significant postponement of the international engineering projects for which bidding was planned and other objective factors affected the further expansion of the Company’s business development to some extent. Therefore, in combination with the three-year reform action plan and the “14th Five-Year Plan”, the Company strived to strengthen the system building, increase the investment in technology, improve the capacity of management and control as well as further consolidate the market foundation and enrich the market power. Beginning with the source, the Company obtained extensive market information, conducted in-depth analysis, and made plans and preparation in advance. According to the information currently available to the Company, in 2022, the market size for “Four Electric Systems” integration for high-speed railways will not be lower than that in 2021, and the bidding progress will basically return to normal level. It is expected that the peak of bidding will concentrate around the second quarter and the fourth quarter, and the Company will make all efforts to increase the contracting value. In the field of rail transportation control system, as there were fewer bidding projects in 2021, it is expected that there will be growth in 2022. The Company will organize relevant subsidiaries to fully ensure further growth in the market share of key projects. In the field of urban transit control system, according to “Rail Transit” and other institutions, there will be 47 new/extended lines of more than 1,000 km in 2022 for the bidding of signal system, with the overall level remaining at as that in 2021. The Company will also spare no effort to strengthen the guidance and resource investment in related business, the Company will increase efforts for the contracting of telecommunications integration and construction business to support the reasonable growth of urban transit business. In the field of overseas business, based on the prevention and control of pandemic, the Company will start from the renovation market of the existing line and the new line market in the key regions and countries along “the Belt and Road” to drive the professional contracting of the “Four Electric Systems” with the core advantages of the train control system, explore the municipal and information business, and develop the EPC business, so as to further improve the contracting ability of overseas businesses. In the field of general contracting, the Company will continue to adhere to the existing management and control requirements, shift the market focus and market resources to economically developed areas, and appropriately improve the contracting level while ensuring project quality with an aim to promote the urban transit, information technology and other core businesses. The Company will endeavor to achieve significant growth in the overall contracting ability in 2022, and the growth rate in core business areas such as railways, urban transit and overseas business will exceed that in 2021.

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II. MAJOR BUSINESSES AND OPERATION MODE, INDUSTRY INFORMATION AND RESEARCH AND DEVELOPMENT INFORMATION OF THE COMPANY DURING THE REPORTING PERIOD (OPERATION CENTER)

(I) Major Businesses, Major Products or Services

The Company has undertaken the important mission of developing national industry and national technology since its establishment and has been focusing on the research and exploration of rail transportation control system technology and its derivative applications. As a core enterprise to ensure the safe operation of national rail transportation, the Company continuously strengthens its own capacity building, adheres to the dominant business of rail transportation, actively integrates into the new development pattern, improves and upgrades a “three-in-one” industrial chain integrating the industry-leading rail transportation control system design and development, equipment manufacturing and engineering services, and build a modern industrial chain of rail transportation to continuously provide high-quality integrated services throughout the industrial chain of rail transportation control system to global customers. While providing safe and efficient core technical support for the operation of national rail transportation, the Company continues to utilize profound technological accumulation to expand new market, and support the national modernization and digital development construction.

The core businesses of the Company's rail transportation cover: 1) Design and integration, mainly includes provision of system integration services for related products of rail transportation control system and provision of design and consultancy services mainly for construction of rail transportation projects; 2) Equipment manufacturing, mainly includes producing and selling signal system, communication information system products and other related products; 3) System implementation, mainly includes construction, equipment installation and maintenance services for rail transportation control system projects.

While continuing to lead the business in the field of rail transit control systems, the Company also implements the “Six Cores, One Body Two Wings” business strategy, and builds a “rail transit + N” industrial pattern, striving to build an industrial group featuring rail transit, with global leading system technology and world-class comprehensive strength. The Company attaches great importance to the accumulation of technology and continuous innovation, and takes innovation as the eternal theme and the first driving force for the sustainable development of CRSC. In active response to the frontier of world science and technology, the Company accelerates scientific and technological innovation and transformation of achievements, leads the technological development of the industry, and strives to maintain the leading position in the industry. In the future, the Company will grasp the new development stage scientifically: focusing on the advantageous business of rail transportation control system, the Company will extend the core technology to other industrial sectors actively; centering on the national key strategic directions such as digital industry and new infrastructure, the Company will vigorously develop key businesses such as information and communication, power and electrification, etc.; refine and optimize the general contracting business, strive to grow the new pillar industries that support the Company's sustainable development, and form a diversified industrial pattern with reasonable structure, scientific layout and high synergy.

Since its establishment, the Company's main business has remained stable without undergoing any significant changes.

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(II) Major Operating Models

The Company has focused on the field of rail transportation control system in China, and has a deep understanding of China's railway and urban rail transit policy, operating model, market environment and other market elements. The business model adopted is fully adapted to the market environment, which is stable and efficient. The Company mainly obtains orders through public bidding, and mainly obtains raw materials for production through centralized procurement. The Company provides integrated and comprehensive services of rail transportation control system or customizable specialized services to its customers under the mature business model of design and integration, equipment manufacturing and system implementation.

1. *Sales mode*

The Company is active in the purchasing by invitation to bid of domestic users as well as in the purchasing activities of foreign users. The operations division of the Company, as the centralized management department of marketing and sales, is responsible for formulating and revising systems in relation to marketing and sales management, and supervising and inspecting the marketing and sales activities at all levels of the Company. Giving full play to its core technology and brand influence in the industry and adhering to the philosophy of providing safe and highly reliable products and high-efficiency services oriented at customer needs, the Company obtains orders for products and services through market-oriented methods such as bidding and business negotiations.

2. *Production and service mode*

In order to comply with the overall operation mode of railway and urban transit system in the PRC, the Company has established a mature and stable production and service model for design and integration, equipment manufacturing and system implementation etc. Relying on its strong technical strength, it can provide customized production and services according to the specific needs of domestic and foreign owners. The Company provides relevant products and services in strict accordance with the contract requirements on schedule and quality. The operations division of the Company, as the centralized production and service management department for design and integration and system implementation, and the science and technology innovation department, as the centralized production and service management department for equipment manufacturing, are responsible for formulating relevant production and service management systems and for supervising and inspecting production and service activities at all levels of the Company, respectively.

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3. *Purchase mode*

All procurement activities of the Company were conducted in strict compliance with relevant national laws and regulations and the Administrative Measures for the Procurement in China Railway Signal & Communication Corporation Limited* 《中國鐵路通信信號股份有限公司採購管理辦法》. The Company selected procurement methods including public tender, tender invitation and competitive negotiation according to the specific conditions to ensure procurement efficiency. The Company mainly implements a centralized procurement system, under which the Company's materials and equipment division acts as the centralized management department for procurement activities and is responsible for formulating and revising the relevant system of procurement management, monitoring and reviewing the procurement activities at various levels of the Company. The centralized procurement system is carried out at two levels, including two modes, namely the centralized procurement by the Company's headquarters and the centralized procurement by subordinate secondary enterprises. Secondary enterprises also have a sound procurement management system, under which the procurement activities of subordinate enterprises are independently and centrally managed by the specialized procurement department.

4. *Management mode*

The Company implements a market operation and management system with the headquarters of the joint-stock company taking the lead, secondary enterprises responsible for operation and tertiary enterprises responsible for implementation, to build a coherent, coordinated, scientific and efficient internal organization system. By improving the management structure system of "headquarters – secondary enterprises – tertiary enterprises" and realizing the coordination of "strategy leading and control center – business operation and profit center – execution center and cost center", the headquarters highlight the six orientations of strategic decision-making, resource allocation, safety and quality supervision, science and technology innovation coordination, industrial incubation and risk management and control, and give play to strategic control, integration of scientific and technological resources, new industry incubation, etc., to build a stronger headquarters featuring "strategic + operational control"; Positioned at strategy execution, market development, business operation, income and profit, science and technology innovation, safety and quality management, and talent cultivation, secondary enterprises give play to the main role of operation, innovation and industry to achieve common enhancement of business and economic efficiency. Positioned at business execution and cost control, tertiary enterprises provide support for business, level up fine management, and increase efficiency and effectiveness, to create a more optimal input-output ratio.

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(III) Relevant Industry Information

1. *Industrial development stage, basic characteristics and main technical thresholds*

Seen from the perspective of global railway industry, according to Oxford Economics' forecast on investment in infrastructure construction for all regions of the world, total investment amount in railroad around the globe is expected to grow from US\$382 billion in 2020 to US\$565 billion in 2040, at a compound annual growth rate of 1.88%. In terms of cumulative investment amount, cumulative investment in railroad infrastructure is expected to reach US\$5,137 billion during the 21 years from 2020 to 2040 around the globe, excluding China. In addition to China, Europe is still the top destination of future investment in railroad infrastructure. From 2020 to 2040, cumulative investment in railroad in Europe will reach US\$2,385 billion, with Asia (excluding China) ranking the second with an estimated investment of US\$1,602 billion, followed by the Americas with an estimated investment of US\$823 billion, Australia with an estimated investment of US\$169 billion and Africa with an estimated investment of US\$158 billion. Railroad infrastructure construction will maintain a relatively high growth momentum around the globe.

With respect to the railroad industry in China, during the 14th Five-Year Plan period China's mileage of railways in operation increased by about 23,700 kilometers and total investment in the railroad market is expected to reach RMB3.5 trillion, basically flat over the 13th Five-Year Plan period. In the same period, China's inter-city and municipal railways in operation will increase by 3,000 kilometers and total investment in the construction of railway special lines is expected to reach RMB800 billion. Railroad infrastructure construction will also maintain a relatively high growth momentum in China. With the continuous growth of China's railroad mileage, there is a notable tendency that the focus of railroad investment is shifting from new construction to reconstruction, operation and maintenance. More than 5,000 kilometers of high-speed railroads opened to traffic in early stages of the 11th Five-Year Plan and 12th Five-Year Plan have entered the stage of overhaul and renovation. For general speed railroads, focus will be on the electrification, upgrading, capacity expansion and renovation of existing lines. Reconstruction of other railway projects is also underway. Therefore, China's railroad industry is at a stage of attaching equal importance to new construction and upgrading and reconstruction.

Seen from the perspective of the global urban rail transit industry, the structure of urban rail transit varies greatly from region to region in the world due to the stage of urban development and development mode, with subways being the main urban rail transit in Asia and the Americas, and trams being the main urban rail transit in Europe. According to the data of the International Association of Public Transport ("UITP"), during the "14th Five-Year Plan" period, the new mileage of urban rail transit in the world (excluding China) has reached 1,412 kilometers, of which Asia (excluding China) ranked the first to reach 667 kilometers, followed by the Americas, with approximately 520 kilometers. Hence, there is still a certain market space in general.

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Seen from the perspective of the domestic urban rail transit industry, during the “14th Five-Year Plan” period, the new national urban rail transit operation mileage will reach 3,000 kilometers, equivalent to the new operation mileage in the “13th Five-Year Plan”. By 2025, the number of cities operating urban rail transit in mainland China will reach 50, of which Shanghai and Beijing will develop a huge network of over 1,000 kilometers respectively. It is expected to maintain a high level of investment during the “14th Five-Year Plan” period. The market size of urban rail transit communication signal is expected to reach RMB22 billion per year, of which the market size of the signal control system is expected to be about RMB10 billion per year. With the accelerated urbanization process, the rapid growth of traffic flow in second- and third-tier cities, and the increasing demand for encryption of networks in the suburbs of first-tier cities, the development demand for small and medium capacity urban rail systems such as cross-seat monorail, urban (suburban) express rail, tram and auto-oriented rail transit will be gradually released, and domestic urban rail transit industry will be in a period of stable development.

The basic characteristic of the rail transportation control system industry is the high threshold of core technology. There are extremely high requirements for the safety, reliability, stability and sustainability of the products and services provided, which requires relevant providers to have a strong anti-risk ability to consistently provide products and services in the long run. In addition, it also has significant cyclical characteristics in the industry, which is determined by the nature of rail transit construction and maintenance itself and the iterations of the core components of the related product systems. According to the requirements of relevant technical specifications and industry practices, the life cycle of high-speed rail transportation control system is generally about 10 to 15 years, while certain outdoor equipment systems are subject to shorter update cycles due to environmental factors.

2. *Analysis of relevant industrial status and changes thereof*

As a world-class provider of rail transportation control system solutions, the Company continues to maintain the leadership in the industry. As of the end of 2021, the cumulative contracted mileage covered by the Company’s core products and services of high-speed railway control system continued to rank the first in the world. The Company’s market share continued to occupy the leading position in the industry based on the domestic high-speed railway control system integration projects, the core equipment of track circuit, centralized traffic control system, computer interlocking, CTCS-3 on-board ATP system, RBC, train control center and other products. In the field of domestic urban transit, the Company’s core products and services of urban transit control system have covered more than 120 routes in all cities of the PRC which have been in operation and completed the bidding of control system, continuing to be in the leading position of the industry. By accelerating its overseas business layout, continuing to strengthen investment in overseas market resources and making full use of the high-quality advancement of overseas projects such as the Hungary-Serbia High Speed Railway(匈塞高鐵) and the Yawan High Speed Railway(雅萬高鐵), the Company has won a good reputation, so as to strongly enhance its brand power and influence in the global rail transit market, and is gradually becoming an important player in the field of international rail transportation control systems.

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Despite of the changing and more intense market pattern in the field of rail transportation control systems, the Company will continue to grasp the favorable trends and opportunities in the development of the global rail transit industry in the future, insist on the technology-led, innovation-driven, digitally empowered and capital-assisted principle to build an “innovative, technology-based, digitally intelligent and international” enterprise, develop into a rail transit industrial group featuring more advanced technology innovation, more reliable and safe system, more rational industry layout, more optimized business structure, more advanced management, better quality and efficiency, and more trustworthy brand image, and strive to become a world-class enterprise.

3. Development of new technology, new industry, new business type and new mode during the reporting period and future development trend

Firstly, with acceleration of the reform of the competitive links in the railway industry, the main body of railway construction and operation has converted from a “one-dimensional structure” to a “two-dimensional structure”, bringing market opportunities for the Company to participate in the construction of local railways and the development of power supply and electrification business, etc. According to the relevant guidance of the National Development and Reform Commission, intercity railways, urban (suburban) railways, feeder railways and special railway lines are mainly funded by the relevant local governments and enterprises, and the project owners can independently choose the construction and operation mode. In 2021, the investment in railway projects held by local governments has accounted for more than 40% of national railway investment, and the proportion is expected to further increase in the future, which also means that the voice of local governments in bidding and tendering for railway projects will gradually increase. Secondly, the threshold for the construction of metro and light rail has been raised at the national level, requiring all regions to reasonably choose the urban rail system in accordance with the affordable principle and enhance investment efficiency. With the accelerated urbanization process, the rapid growth of traffic flow in second- and third-tier cities, and the increasing demand for encryption of networks in the suburbs of first-tier cities, the development demand for small and medium capacity urban rail systems such as straddle-beam monorail line, urban (suburban) rapid transit, tram and auto-oriented rail transit will be gradually released, and the characteristics of system diversification will gradually appear. Thirdly, during the “14th Five-Year Plan” period, the reform of investment and financing system in the field of urban rail transit will be accelerated, the cooperation between government and social capital will be deepened, and the financing channels and modes will be more and more diversified; PPP, BOT, F+EPC and other modes will be gradually matured and standardized and are expected to be adopted by more urban rail transit owners, the scope of piloted TOD development will be further expanded, and the scale volume and investment strength will gradually become important competitive factors.

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In addition, with the rapid development of economy in the PRC and the acceleration of the development of city clusters, arterial railways, intercity railways, urban (suburban) railways, urban rail transit and other systems have played a major role in the transportation in the city clusters. However, due to the limitation of management model and technological development, the various modes in the region do not link with each other, restricting the improvement of transportation efficiency and service quality. With the rapid development of big data analysis, Internet+, Internet of Things, artificial intelligence, image recognition, network communication and other technologies, the realization of the collaborative transportation in regional rail transportation and the research on integrated service theory and technology have become feasible. Based on various advanced information technologies, the strongest “smart brain (智慧大腦)” for regional rail transportation will be built, which can deduce the situation of passenger flow, train flow, and facilities and equipment in real time, provide coordinated preparation and dynamic adjustment of the entire network transportation plan, and strengthen comprehensive support and linkage response processing so as to achieve new reforms in regional rail transportation, enhance the attractiveness of rail transit, alleviate urban traffic congestion, and promote the high-quality development of city clusters. At present, the Company has independently developed the collaborative transportation and service system of regional rail transportation, and has completed field demonstration application.

The Program of Building National Strength in Transportation stated: By 2035, the building of national strength in transportation in the PRC will have been basically finished. During the period, the transport structure will be optimized, the construction of key “public-to-rail transportation” projects such as port collecting and distributing railway, and special railway lines for logistics parks and large industrial and mining enterprises will be accelerated, and the orderly transfer of bulk cargo and medium and long-distance cargo transportation to railway and water transportation will be promoted in the PRC. The railway transportation industry has ushered in important development opportunities. Railway transportation enterprises need to improve the efficiency of transport organization, expand development space, improve traditional transport organization methods, production operation methods, marketing service methods and information service methods, strengthen transport scheduling and command, enhance business collaborative operation, improve transport organization efficiency, raise freight train transport capacity, compress the whole operation time and ensure the time limit for cargo delivery. At present, the Company has independently developed an integrated dispatching & commanding management system for railway freight, and has completed field application demonstration. Meanwhile, based on China’s high-speed rail control and autonomous driving technology, the Company is independently developing a high-density automatic operation control system for ad-hoc network of heavy-haul freight trains, with the aim of improving transport efficiency, tapping the driving potential, increasing the quality of freight train operation, reducing the labor intensity of drivers and transport energy consumption, significantly enhancing the comprehensive efficiency of freight rail transport, and meeting the growing demand for capacity and volume of heavy-haul railways in China.

The Outline of the 14th Five-Year Plan for National Economic and Social Development and Vision 2035 of the People’s Republic of China put forward the requirement of building modern metropolitan areas: we will improve the coordinated development of one-hour commute circles by relying on

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the central cities with strong capacity to facilitate the development of surrounding areas, and foster several modern metropolitan areas with a high degree of urban integration. With intercity railways, suburban railways, and other rail transits as the backbone, we will eliminate all kinds of “dead end roads” and “bottleneck roads”, promote effective connection of intra-city and inter-city traffic and integration of “the four networks” – trunk, intercity, suburban, and urban railways, and improve the connectivity of infrastructure in metropolitan areas. The share of construction of urban (suburban) railways/intercity railways in the railway infrastructure sector has seen a gradual increase. At present, according to the needs of urban (suburban) railways in different regions, the Company has carried out the integrated research of multi-mode control systems, completed the research and development of compatible on-board equipment, and built a test environment for the train control system in support of the multi-mode integration and interoperability.

(IV) Core Technology and Research and Development Progress

1. Core technology and its leading edges and changes during the reporting period

The Company focuses on technology research & development, and promotes sustainable development of its overall business by technology innovations. Since its establishment, the Company has been working in the field of rail transportation control system, and owned many industry-leading core technologies leveraging on its outstanding technology innovation strength. As of the end of 2021, the Company has 3,202 registered patents to protect its core technologies in the PRC. Meanwhile, the Company signed special confidentiality agreements with relevant technicians regarding core technologies to ensure that core technologies would not be disclosed or spread.

The core technologies owned by the Company primarily include but not limited to the below:

No.	Core technology	Source of technology	Technical level and degree of application
1	Train operation control technology	Independently researched and developed	Train operation control technology has been widely used in HSRs, ICRs and urban transit, which provides core technical guarantee for safe and high-efficient operation of rail transportation. Responding to the demand for highly safe and reliable operation of rail transportation, this technology has addressed certain significant technology issues such as dynamical control curve model of train, precise positioning of train, speed and distance detecting of train, onboard fully functional seamless switch, wireless redundancy coverage of multiple doubling railways, moving blocking and railway network connectivity.

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No.	Core technology	Source of technology	Technical level and degree of application
2	Automatic unmanned train operation technology	Independently researched and developed	Automatic unmanned train operation technology has been successfully applied in the fields of HSRs, ICRs and urban transit. Based on train control system, by using this technology, automatic train operation is realized; through advanced automatic driving control algorithm, certain significant technology issues such as calculation of desired speed curve of train operation, the algorithm of precise stop of train, intelligent control of multiple objects, perception of status in complex operation environment, remote safe control have been addressed, and multiple indicators such as punctuality rate of operation and train parking accuracy and ride comfort and operation consumption have been improved.
3	Integrated automation technology of freight railway	Independently researched and developed	Integrated automation technology of freight railway has been widely used in many marshalling yards in national railway and dispatch centers of railway bureaus, which provides core technology guarantee in improving railway freight efficiency, benefit and safety. The technology has addressed some significant technology issues such as intelligent calculation of freight traffic, intelligent adjustment of running line of railway wagons, intelligent preparation of locomotive usage plan and shunting plan, smart issuance of periodical maintenance and repair plan of vehicles, source control of train operation, as a result, the railway freight efficiency and intellectualization level have been improved.
4	Train traffic control automation technology	Independently researched and developed	Train traffic control automation technology has been widely used in HSRs, ICRs, urban transit and some normal-speed railways. This technology integrates computer technology, network technology and control technology, forms a closed-loop system of train operation dispatch and instruction, addresses technology issues such as train tracing, automatic control for hump rolling routes, prevention and control of mistaken receiving-departure at multi-directional hub station, train dispatch management and control at sectional station and intermediate station and intelligent adjustment of operation plan, as a result, automation level of operation instruction and emergent handling level under fault conditions have been improved.

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No.	Core technology	Source of technology	Technical level and degree of application
5	Intelligent detection, operation and maintenance technology of rail transportation	Independently researched and developed	<p>Intelligent detection, operation and maintenance technology of rail transportation has been successfully used in the fields of HSRs, normal-speed railways, urban transit. This technology has used big data system and cloud service technology to promote the development of rail transit inspection operation and maintenance to the direction of digitization, intelligence and informatization. With the technologies such as diverse integration of intelligent perception, multi-drive engines integration of analysis and judgement, Big Data health assessment analysis as breakthrough points, through expert system, mode identification, trend analysis, comprehensive appraisal, comprehensive positioning and mobile internet, it has realized the advance prediction of rail transit operation risks, active maintenance and health management of key equipment during whole lifetime based on all factors such as personnel, equipment, environment and operation and maintenance processes, improved the maintenance efficiency of equipment, effectively shortened breakdown time, and significantly decreased the failure rate of equipment.</p>
6	Train control integration technology	Independently researched and developed	<p>The train control integration technology has been widely used in the fields of HSRs, ICRs, urban transit. Through the integrated engineering software design platform integrating data platform technology and graphic software technology, the technology has been applied to make engineering design, data allocation, automatic compiling an organic entirety, resulting in the improvement of software integration; by summarizing features of domestic hub and utilization scenario, an integration process of site installation, commissioning, test and construction standardization has been built. This technology is appropriate for the connectivity of different modes of equipment with various operation grades at newly-built routes, reconstructed routes and complex hubs.</p>

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No.	Core technology	Source of technology	Technical level and degree of application
7	Safe computer platform technology	Independently researched and developed	The safe computer platform technology has been widely used at the train operation control system centers, stations, onboard safe control devices, which provides a very safe, reliable, high-performed and expandable basic software and hardware platform for products. This technology has addressed some core technology issues such as safe drive and collection based on electronic components, clock level multi-machine synchronous comparison, operation fault detection and fast redundancy switch, and it has been granted highest grade safety certification of International Functional Safety Standard.
8	Mobile frequency key control signal safety modulation technology	Independently researched and developed	Mobile frequency key control signal safety modulation technology has been widely used in the fields of HSRs, ICRs and normal-speed railways. This technology has built a set of fault-safety rail circuit system with mobile frequency key control signal as power and rail as conductor, addressed contactless safety signal source technology, mobile frequency key control signal digital spectrum analysis technology, all-region at transmission channel detection technology, and realized safe and core functions covering rail section occupancy-idling detection, transmitting information to train through rail, and real-time detection of completeness of rails.
9	Turnout switch technology	Independently researched and developed	Turnout switch technology has been widely used in the fields of HSRs, normal-speed railways, heavy-haul railways and urban transit in the PRC. This technology has addressed the major problems in large-size turnout switch synchronization technology, industrial and electrical interface integration, the switch technology of movable point frog of high-speed turnout, external-locking technology of turnouts, established world-leading high speed turnout switch system technology system, and provided powerful safeguard to the development of railway in the PRC.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Core technology	Source of technology	Technical level and degree of application
10	Rail transportation simulation test technology	Independently researched and developed	<p>Rail transportation simulation test technology has been widely used in the fields of HSRs, ICRs, freight railways, urban transit, which provides support to test and verification processes at various stages of lifetime from plan verification, function development, system integration to engineering execution of train control system, freight and train operation instruction system. This technology has addressed some significant technology issues such as simulation test structure based on distribution semi-physical, modelling approach for complex engineering system, multi-source data at multi-level traceable test management method, automatic test, reappearance of fault and analysis, safe control system interface monitoring, test of optimization deployment of environmental resources, aiming at the requirements of large scale of simulation of tested object, greater isotacticity and strong instantaneity and higher automation, and the utilization of such technology improved the defect remediation rate and quality reliability of tested system.</p>
11	High precision simulation technology based on coupling of multi-physics	Independently researched and developed	<p>High precision simulation technology based on coupling of multi-physics enables ground rail circuit system to work safely and reliably under railway natural conditions, electromagnetic environment and complicated route conditions, including in the circumstances of coupling of multi-physics of high-speed train rails contact electric shunt, high power electrification traction current disturbance, high-frequency transient signal shock caused by lightening, bridge-roadbed-tunnel multispace structure routes, alternating dry-wet ballast bed and parallel running on complex hub multi routes. This technology has been applied to build a high precision simulation analysis platform with error within 0.5%. The platform was used for precise analysis of transmission features of approximately 10,000 typical deployment rail circuits at engineering.</p>

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Core technology	Source of technology	Technical level and degree of application
12	Manufacture technology of rail transportation safety products	Independently researched and developed	The operation control system of rail transportation has a high requirement to safety and reliability. Based on complete identification of product manufacture risk, the manufacture technology of rail transportation safety products targets the control in the whole process from material selection, manufacture equipment, production technology, test and detection, reliability verification to lifetime analysis, thus providing a systematic quality assurance basis for the safety and reliability of products.
13	Application technology in broadband wireless communication industry	Independently researched and developed	Application technology in broadband wireless communication industry is based on broadband wireless communication technology of LTE-M/R, which can actualize data transmission and integration of multiple operations, improve the efficiency and experience of trunking command direction system. This technology can meet the railway operation business's demand of wireless broadband, terminal intellectualization and business mobilization.
14	Comprehensive video monitoring technology for rail transportation	Independently researched and developed	Comprehensive video monitoring technology for rail transportation has been widely used in the transportation fields such as HSRs and ICRs, which provides comprehensive management system containing video monitoring, Big Data display and visualization for safe operation of rail transportation. Aiming at the demand for all-weather and full-coverage monitoring of rail transportation, this technology has addressed the technology issues such as decoding and forwarding of high definition video stream, concurrency of readwrite, unity and connect of railway three-stage platform, massive video retrieval, intelligent face recognition and certification, intelligent operation and maintenance, clustering of platform management, dynamic load balance of storage resource and engineering, thus, leading the development of comprehensive video monitoring technology for rail transportation.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Core technology	Source of technology	Technical level and degree of application
15	Collaborative transportation and service technology of regional rail transportation	Independently researched and developed	Collaborative transportation and service technology of regional rail transportation focuses on the operation and collaborative linkage of trunk railways, ICRs, urban (suburb) railways and urban rail transportation network in city clusters/metropolitan areas to improve the overall regional transportation capacity, and makes breakthroughs in technologies such as refined prediction of passenger flow in composite road networks, preparation and dynamic adjustment of collaborative transportation plans, global safety situation control and emergency linkage command, intelligent station safety management, and passenger information service in the whole trip chain to improve the overall regional transportation capacity, enhance emergency response and operation and maintenance efficiency, and shorten cross-mode travel time of passengers.
16	Intelligent transportation and control technology of light rail transit	Independently researched and developed	With train control as the core, intelligent transportation and control technology of light rail transit, based on cloud computing, sets a unified rail transit cloud platform which is deeply interconnected with and intelligently integrates trains, passengers, environment, facilities, equipment, resources and other information, to realize the functions integrating independent train operation control, comprehensive automation, intelligent travel services, and collaborative transport and emergency command. The intelligent transportation and control system applies to a variety of light rail transit systems such as medium and low speed maglev lines, mountain rail transit, and special tourist lines, presenting the trend of data synthesis and business integration of each professional system equipment and guiding the technical development and application direction of the rail transit systems.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

The Company actively deployed innovation chain surrounding industrial chain, and it was dedicated to transformation and industrialization of core technology achievements. It applied its core technology to rail transportation core systems such as train control system of railway, train control system of ICRs, train control system of urban transit, freight automation system, operation command automation and detection system and communication information system. Newly added collaborative transportation and service technology of regional rail transportation, which can realize the network operation and collaborative linkage of rail transit in urban agglomerations/metropolitan areas, so as to improve the overall transportation capacity of the region; newly added the intelligent transportation and control technology of light rail transit, which is suitable for a variety of light rail transit systems such as medium and low speed maglev lines, tourist lines, so as to realize functions such as integrated train autonomous operation control, comprehensive automation, intelligent travel services, coordinated transportation and emergency command. The development of core businesses such as design and integration, equipment manufacturing, system implementation of rail transportation control system of the Company will fully depend on its core technology.

During the reporting period, no material changes in the core technology occurred.

The details of awards for the National Technology Award

✓ Applicable ☐ Not applicable

Name of Awards	Year of Awards	Name of Project	Level of Awards
National Award for Science and Technology Progress	2002	Integrated technology and equipment for projects related to raising the speed of China's railways	First Prize
National Award for Science and Technology Progress	2006	Model ZPW-2000A jointless frequency shift automatic blocking system	Second Prize
National Award for Science and Technology Progress	2007	Comprehensive Technology and Application of Heavy Haul Transportation for the Datong-Qinhuangdao Railway Line	First Prize
National Award for Science and Technology Progress	2008	Qinghai-Tibet Railway Engineering Project	Grand Prize
National Award for Science and Technology Progress	2009	Key technology and application of onboard safety control system under complex and high-speed conditions	Second Prize

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

Name of Awards	Year of Awards	Name of Project	Level of Awards
National Award for Science and Technology Progress	2010	Research and application of key technology for the Suining-Chongqing ballastless track	First Prize
National Award for Science and Technology Progress	2012	Beijing-Tianjin Intercity Railway Project	First Prize
National Award for Science and Technology Progress	2015	Beijing-Shanghai High-Speed Railway Project	Grand Prize

The Recognition Situation of the National Specialized and New “small-giant” enterprises and the Model Enterprise of the manufacturing industry

✓ Applicable ☐ Not applicable

Title awarded	Year of recognition	Name of products
Single Manufacturing Champion Demonstration Enterprise	2020	Development and integration of complete sets of equipment for rail transportation control system
Single Manufacturing Champion Demonstration Enterprise	2021	Rail transit signal infrastructure
Single Manufacturing Champion Demonstration Enterprise	2021	Train operation control system

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

2. *Research and development achievements during the Reporting Period*

During the Reporting Period, the Company has completed the pilot application of the railway comprehensive dispatching information system in Baoshen line and Shenshuo line of Shenhua Railway; completed on-site verification of various key technologies such as diverse integration positioning and multi-mode integrity check for the new train control system based on Beidou satellite positioning technology; completed a dynamic test for ground equipment of ETCS train control system based on baseline 3 in Beno section of Hungary-Serbia Railway; shipped on-board equipment ATP to Germany which will be tested in Europe; completed the pilot application of the regional coordinative transportation service system in Chongqing Rail Transit Dazhulin Center and South Square of Chongqing North Railway Station completed the development of the Train Autonomous Circumambulate System (TACS) of urban rail train and successfully commenced commercial operation on phase I project of Shenzhen Metro Line 20; completed the field test on the Hangzhou-Haining Intercity Railway of the CBTC system based on full-electronic interlock system and achieved the first delivery of the extension project of Changchun Subway Line 3; developed the signal system oriented to line network fusion and achieved the compatibility between existing moving blocking system and on-board cross-system of extended line CBTC system; completed the improvement development of urban rail intelligent dispatching system function and established the smart operation demonstration in Zhengzhou and Shanghai.

Regarding the Company's core technologies and main products, newly applied patents increased by 1,204, including newly applied overseas patents portfolio increased by 118, newly authorized patents increased by 694, and the total number of accumulative effective authorized patents reached 3,202. The Company has been granted a total of 38 awards at or above the provincial and ministerial levels throughout the year. "A track circuit" was awarded the only special prize in the Sixth Invention Patent Award Ceremony of Beijing. The Key Technologies and Complete Equipment and Demonstration Application of Interconnected CBTC for Network Operation was awarded the Special Award of Science and Technology Progress Award of urban transit system. The Development and Application of Safety Control Technology on Centralized Traffic Control System (CTC3.0) Based on Traffic Control Coordination was awarded the first prize by China Communications and Transportation Association and other awards. The Company has undertaken 11 research projects supported by governmental authorities at national, provincial and ministerial levels and industrial administration organizations and the preparations of 28 standards at national and industrial level. As a sponsor of authoritative journal Railway Signaling & Communication Engineering in the rail transportation control industry, the Company has published R&D and application achievements in those industrial authoritative journals, such as Railway Signaling & Communication sponsored by China State Railway Group, Journal of the China Railway Society and Railway Signaling & Communication Engineering sponsored by China Railway Society.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

List of intellectual property rights obtained during the reporting period:

	Increase for the year		Accumulative number	
	Number of applications	Number of approvals	Number of applications	Number of approvals
Invention patent	886	337	2,985	1,066
Practical novel patent	304	325	2,368	1,975
Appearance design patent	14	32	162	161
Software copyright	249	246	1,654	1,517
Others	0	0	2	1
Total	1,453	940	7,171	4,720

3. Research and development investment

Unit: Yuan Currency: RMB

	This year	Last year	Change (%)
Expensed research and development expenditure	1,638,494,903.20	1,434,273,399.90	14.24
Capitalized research and development expenditure	263,354,737.62	299,935,953.81	-12.20
Total research and development investment	1,901,849,640.82	1,734,209,353.71	9.67
Percentage of total research and development expenditure in revenue (%)	4.96	4.32	Increase by 0.64 percentage point
Percentage of capitalized research and development expenditure (%)	13.85	17.30	Decrease by 3.45 percentage points

Reasons for the material change in total research and development investment as compared to last year

☐ Applicable ☒ Not applicable

Reasons for the material change in percentage of capitalized research and development expenditure and its reasonable explanation

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

4. Projects under development

Unit: 0' 000 Yuan Currency: RMB

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
1	Collaborative transportation and service system of regional rail transportation	7,951.00	1,810.02	7,906.76	Completed the pilot application of Chongqing Rail Transit Dazhulin Center, South Square of Chongqing North Railway Station and project of Jiangtiao Section of Chongqing Suburban Railway, and passed the evaluation by the expert group.	Formed collaborative transportation theory system of regional rail transportation, integration system and equipment; and finished the application on site.	This research achievement will guide the development trend of regional rail transportation, promote industrial development and advancement, and effectively enhance the rail operation and management level, improve safety assurance ability, push the process of information service intellectualization, and further satisfy demand of the public for safe, efficient, economical, convenient and green travelling.	It can be applied to multi-rail collaborative transportation and service of high-speed railway in city cluster and intercity (suburban) railways, and urban transit.
2	Development of train control equipment based on dynamic interval and application demonstration verification	6,605.63	1,655.63	7,739.74	Passed the indoor acceptance test conducted by the expert group; completed the loading and static commissioning of three rail trains on the test line; completed the functional test and performance test of the train control system for three testing trains on site and in the section.	Complete the development of train control equipment based on dynamic interval; completed the application demonstration verification.	This research uses following domestic first technologies: accurate train positioning based on multi-sensor fusion technology; on-board equipment with functions such as vehicle-to-vehicle communication, driving permit calculation and integrity check; multi-mode two-way wireless communication through multi-channels such as satellite, airship and public network; the system satisfies the dynamic configuration of train tracking interval and is able to achieve moving block.	It can be applied to low-density railways as well as local railways

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
3	Research on electromagnetic environmental effects of rail transportation and construction of test platform	3,319.00	1,173.80	1,480.69	Completed the expert review of the platform construction plan, completed the electromagnetic environment evaluation and transformation of the platform construction site, and met the conditions for implementation; completed the construction for cause, mechanism, energy coupling laws, effect research and simulation platform of the pantograph network offline discharge interference.	The research on electromagnetic environmental effects of rail transportation and construction of test platform have been completed with the ability for carrying out simulation tests such as high-speed rail all-digital electromagnetic environment simulation, off-line electromagnetic interference test of pantograph network, and high-speed rail typical electromagnetic interference coupling simulation.	After the completion of the project platform, the testing capability and technical level in the field of electromagnetic environmental effects research of the train control system will reach the domestic leading level.	It can provide technical supports, including real-time collection, simulation analysis, faults reoccurrence and analysis for products electromagnetic interference problems, and it can also provide theoretical and data support for electromagnetic compatibility design.
4	Development and application of network security comprehensive protection platform of industrial enterprises	4,576.00	1,738.06	4,276.82	The development of a comprehensive network security protection platform of industrial enterprises has been completed and the demonstration application of the comprehensive security protection platform has been launched.	To complete the development of a comprehensive network security protection platform of industrial enterprises and launch a demonstration application of the comprehensive security protection platform.	This project research is suitable for the high-speed train control system network's high security, high real-time and high reliability requirements, can enhance the operability and timeliness of the high-speed train control system security protection, and improve the high-speed train control system security protection and early warning capabilities, to ensure the safe and stable operation of the rail transportation control network.	It can be used for network security protection of various rail transportation systems.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
5	Research on "three standardizations" of train control system of urban transit based on full-electronic products	2,430.93	1,184.93	2,228.52	The development of full electronic interlock products has been completed, and relevant achievements have been transformed, and it was applied for the first time in the project of the extension line of Changchun Subway Line 3.	To complete the R&D, production, and construction related to the CBTC system based on full-electronic interlock system and achieve "standardized design, factory commissioning and on-site plugging and splicing" of the full-electronic interlock system of urban rail transit.	Full-electronic interlock system features small size, being convenient for construction, high maintainability and safety, and provides fundamental support for the digitalization, networking, intellectualization and standardization of urban rail transit signal system.	It has won the bidding of the extension and renovation project of Changchun Subway Line 3 and Changsha Subway Line 6 to meet the needs of urban rail transit line construction and renovation.
6	Research and development of a new generation of centralized traffic control system	11,500.00	2,305.06	6,018.19	Combined with the automatic adjustment requirements of high-speed railway operation plan and the demands for line power adjustment and integration, the functions related to intelligent CTC were further optimized and the site deployment was gradually promoted, the opening and application of intelligent CTC in Zhangjiuhai was completed; the technology development related to CTC3.0 shunting route automatic control, and the on-site application of CTC3.0 in Xiangyang station and Ji'nan station were completed.	To complete the research and development of a new generation of centralized traffic control system and apply it in engineering.	The new generation of centralized traffic control system adopts the principle of intelligent decentralized and self-discipline design to realize the unified control of train and shunting operation, and realize the safety management and card control of station-level operation.	It can be applied to national railway, intercity and regional railway, factories and mining enterprises and self-owned railway.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
7	Research and application of high-density automatic operation control technology for ad-hoc network of heavy-haul train	9,180.98	1,411.75	12,892.88	The development of the preliminary version of software for group interlocking equipment, preliminary version of software for group ATP equipment and preliminary version of software for group control center was completed; the building of heavy-duty laboratory was completed; the on-site tests for preparation of ad-hoc network communication equipment and self-powered equipment were completed.	To complete the research and development of equipment for the high-density automatic operation control system for ad-hoc network of heavy-haul train to assemble a full set of model machines, so as to complete on-site phrase tests.	Based on China's high-speed rail control and autonomous driving technology, the project aims to improve the efficiency and safety of heavy-haul freight rail transportation, which is at the leading level in China.	It can be applied to the domestic heavy-haul railways.
8	Development of a new train control system	7,215.61	5,280.44	7,055.13	The development of a complete set of equipment of new train control system was completed, the expert group test and test review have been passed, the on-site tests of roundabouts were completed, and the on-site test of function verification was being carried out.	To complete the development of a complete set of equipment for the new train control system and the demonstration of its application in local railways.	Based on the mature technical application of the existing train control system and combined with the Beidou satellite positioning technology, to build a moving block technical scheme suitable for heavy-haul railway, shortening the train tracking interval and improving the overall transport capacity of heavy-haul railway.	It can be applied to the domestic heavy-haul railways.
9	Development of train fully-autonomous operation and control system	6,054.00	3,489.96	4,158.28	The development of TACS system was completed and operation in phase I of Shenzhen Metro Line 20 was commenced.	To complete the development of automatized general products of TACS system and meet the needs of the phase I project of Shenzhen Metro Line 20 to ensure the stable operation of the system.	The development of the first Train Autonomous Circumambulate System (TACS) based on vehicle-to-vehicle communication in China was completed in this project.	It can be applied to urban rail train operation control system.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
10	Intelligent rail transit integrated video system	1,779.00	1,322.33	1,322.33	The development of video train tracking platform and video data service platform was carried out, and the development of video security management platform, integrated video monitoring management system and video operation and maintenance platform was completed.	To complete the design development and demonstration application of a new generation of video monitoring, train tracking system, video GIS visualization system and video security platform.	Based on artificial intelligence and big data technology, integrated video monitoring system in railway and subway industry has been upgraded in all aspects to enhance diversified application and security of video data.	It can be applied to the field of railway and subway integrated video system.
11	Intelligent passenger traffic analysis system	965.00	490.11	490.11	The encapsulation and integration of eight algorithms for stay detection, abnormal crowd gathering and scattering, passenger flow statistics, etc. was completed; the development of a common detection network has been completed; the basic functions of the container cluster management platform have been completed.	To complete the development of seven algorithms for intelligent passenger analysis system, intrusion detection, crowd density detection, passenger flow statistics, area density estimation, item legacy, person reversal, and abnormal crowd gathering/spreading detection.	Based on the advanced concepts in the field of computer vision AI, a general framework of target detection + weakly supervised semantic segmentation was established, the end-to-end multi-task parallel training approach was optimized and the two-dimensional features of crowd distribution changing with space and time was integrated, to comprehensively improve the performance of algorithms for detection, tracking, legacy, and group behavior prediction; the research and design of distributed deployment and containerized deployment in the system platform were carried out, laying a foundation for upgrading the technology related to video monitoring platform in the future.	It can be applied in many fields such as smart city, smart transportation, and smart government.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
12	Basic technology research	6,084.00	772.26	2,546.95	The simulation analysis and test verification report on the safety and reliability of switch transaction equipment has been completed; the analysis report on the impact of equipment manufacturing and assembly process on the safety and reliability of switch transaction equipment has been completed. A functional safety embedded operating system with independent intellectual property rights has been developed, which meet the requirements of SIL3 as stipulated in IEC61508 and SIL4 as stipulated in EN50128, and was certified. The development of synchronous chips for rail transportation equipment was completed.	To complete the fundamental and deep-level scientific mechanism research on lightning protection and electromagnetic compatibility of signal products in complex environment to provide scientific basis for subsequent product research and development.	The research aims to improve the safety and reliability of rail side signal equipment of railway and has the leading level in the industry.	It can provide basic technical support for the research, development and design of the Company.
13	Research on integrated dispatching & commanding management system for railway freight	1,239.60	422.62	1,090.94	Completed the demonstration application of Baoshen Line and Shenshuo Line on Shenhua Railway.	To complete the development of the integrated dispatching & commanding management system for railway freight, to meet the management needs of domestic freight railway.	By integrating independent innovative technologies such as intelligent preparation of freight railway plans, source control for safety, train life cycle management, and comprehensive dynamic operation diagrams, this system has improved dispatching and commanding management capabilities for freight railway and reaches the leading domestic level.	It can be applied to various railway dispatching stations, freight stations, depots, locomotive depots, local railways, special railway lines, and overseas freight railway markets.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
14	Research on key technology and equipment development of train control system for normal-speed railways	7,420.54	2,241.59	4,420.64	Completed the safety certification of ground equipment and vehicle equipment for motor vehicles and conducted the system test. Completed the prototype of vehicle equipment for locomotive C1, and carried out the research and development of ground equipment.	To form a complete set of CTCS-1 system suitable for normal-speed railways and complete on-road review and field test.	The system can realize the detour of high-speed trains on normal-speed train lines, and the interconnection between high-speed railway network and normal-speed railway network, which has among the leading level in the industry.	It can be applied to the construction and overhaul of normal-speed railways in China.
15	Research on intelligent detection and perception technology of rail transit	1,021.00	573.86	1,853.46	Completed the installation and tooling of sensors and transducers on the rail of the rail breakage inspection system of turnouts; completed the research on crack detection algorithm and the verification of test site; completed the analysis of environmental impact factors.	To carry out the research on intelligent detection and perception technology of rail transit, and complete the research on technology such as rail breakage inspection of turnouts and monitoring of railway disaster intrusion.	Intelligent detection and perception technology of rail transit is helpful to the early warning and protection of various faults and disasters in the field of rail transit, and has the leading technical level in the industry.	It can be applied to national railway, intercity and regional railway, factories and self-owned railway of mining enterprise.
16	Development and application of train control interlocking integration	9,770.80	4,563.48	8,057.15	Completed the equipment development and production and passed the test, type test and circular road test organized by the industry experts; entered into the field test stage and carried out various comprehensive tests as planned.	To complete the development of train control interlocking integration equipment; to complete the field test and application demonstration; to pass the industry test and certification to qualify for promotion.	The existing interlocking and train control system is optimized and integrated into a compact-structured and simplified system from a complex one, thus improving the maintainability and reliability of the signal system with higher cost performance.	It meets the needs of railway construction and development and is applicable to the construction of signal system of normal-speed railway and passenger line at home and abroad.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
17	Development of basic signal equipment	2,390.00	965.13	1,103.91	Completed the trial production of small-sized relay prototype; completed the trial production of some power module prototypes; completed the formulation of the preliminary plan of switch machine in railroad type. Completed the trial production of prototype of locomotive on-board and train-controlled on-board small-sized relays; completed the research and development of high-frequency digital AC power supply module and power supply insulation monitoring unit, and completed the small batch trial production of DC high-frequency switching power supply module; completed the preliminary scheme design of switch-tie switch machine with information output function.	To complete the development of a new generation of rail transit signal basic equipment, such as small-sized relay, light-rail switch machine, safe, light-weighted and intelligent railway signal power supply.	This project aims to improve the technical level of signal basic products and develop a new generation of rail transit signal basic products that meet the international and domestic technical needs.	It can be applied in the fields of HSRs, normal-speed railways, heavy-haul railways and urban rail transit.
18	Integrated development and certification of on-board systems in five European nations	1,148.00	329.12	329.12	The integration scheme of ETCS on-board system has been completed, the prototype and interface test of on-board signal system has been completed, and the indoor thorough test before the test of Czech test loop line and German main line has been completed.	To develop ETCS on-board system applicable to the operation requirements of five European countries, and complete safety certification, NoBo certification and DeBo certification, so as to support the promotion and application of our ETCS on-board products in European core markets.	The ETCS-400T on-board equipment of the project meets the B3R2 technical standard of the highest version of ETCS baseline 3, supports E2 and E1 operation levels, meets the local functional requirements of five European nations and the non-stop operation requirements of transnational interconnection, and boasts the world-class level.	Five European nations (Germany, Austria, Switzerland, Hungary, Slovakia).

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

No.	Project name	Estimated total investment	Investment amount in the current period	Cumulative investment amount	Progress or phased achievements	Intended goal	Technical level	Specific application prospects
19	Development and application of intelligent subway operation and maintenance	5,224.63	1,418.92	3,913.12	The functional research and development of multi-disciplinary regional digital operation and maintenance center of metro has been completed, the indoor acceptance has been passed, the on-site implementation has been completed and put into pilot application.	To realize the condition maintenance based on intelligent operation and maintenance system, comprehensively improve equipment reliability, prolong equipment service life, greatly improve maintenance efficiency and greatly save labor cost.	The proposed digital operation and maintenance theory of the whole life cycle of train control system, adopts technologies such as train control multi-source digital perception, multi engine intelligent analysis and diagnosis, and health management based on cloud platform, which are at domestically and internationally leading level.	It can be applied to the field of subway, high-speed railway, intercity and local railway operation and maintenance.
20	Development of rail side target controller	6,094.27	2,696.10	5,684.43	The development of the rail side target controller has been completed and it has been put into trial use in subway and many local railway stations.	To complete the development of rail side target controller, and the integrated development with each large system is carried out based on the application scenario.	As the direct control unit of rail side signal equipment, the target controller adopts the architecture of double two out of two, which has the characteristics of high safety, high reliability, high integration and intelligence, and greatly reduces the workload of installation, commissioning and maintenance. The electronic module can be flexibly applied to each signal system.	It can be applied to the fields of general speed railway, local railway and urban rail transit.
Total /		101,969.99	35,845.17	84,569.17 /	/	/	/	/

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

5. Research and development personnel

Unit: 0'000 Yuan Currency: RMB

Basic information

	Amount for the current period	Amount for the Corresponding period of last year
Number of research and development personnel in the Company (person)	4,374	4,310
Percentage of total research and development personnel in total personnel of the Company (%)	21.56	20.89
Total remuneration for research and development personnel	94,458.08	89,442.49
Average remuneration for research and development personnel	21.60	20.75

Composition by education for research and development personnel

Composition by education

Category	Number (person)	Percentage (%)
Doctoral candidate	63	1.44
Master degree candidate	1,699	38.84
Bachelor degree	2,408	55.05
College degree	190	4.34
High school and below	14	0.33
Total	4,374	100.00

Age structure for research and development personnel

Age structure

Category	Number (person)	Percentage (%)
Below 35	2,650	60.59
36 to 40	820	18.75
41 to 45	438	10.01
46 to 50	234	5.35
51 to 54	118	2.70
Over 55	114	2.60
Total	4,374	100.00

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

Reasons for material change on composition of research and development personnel and the impact on the future development of the Company

☐ Applicable ☒ Not applicable

6. *Other explanation*

☐ Applicable ☒ Not applicable

III. ANALYSIS OF THE CORE COMPETITIVENESS DURING THE REPORTING PERIOD

(I) Analysis of Core Competitiveness

☒ Applicable ☐ Not applicable

1. *Leading market position*

As the main force of China's rail transit construction, the Company provides products and services for the rail transit construction of China State Railway Group, 18 Railway Administrations, more than 40 cities and many factories and mining enterprises. The Company enjoys a good reputation all over the country and is the most trusted expert of rail transit control system. The Company provides core train control technology and equipment for more than 95% of China's high-speed railways that have been in operation; The Company occupies about 40% of the domestic market share of urban rail transit control system, and participates in the design, integration and construction projects of rail transit control system in 30 cities such as Beijing, Shanghai and Shenzhen. According to statistics, in 2021, among the 31 metro signal control system projects which bids have been opened for, CRSC won 15 bids which accounted for over 54%, continuing to top the list, and is the leading provider of urban rail transit control system solutions in China. The ultra-high market share has also laid a solid foundation for the Company's future efforts to update, transform and operate and maintain the market.

2. *Outstanding comprehensive technology innovation strength and core technology reserves*

The Company has adhered to independent innovation with more than 3,200 registered patents and realized the absolute independent ownership of intellectual property rights and 100% domestic production of products for the core technologies of train operation control, thus helping its technologies regarding high-speed railways, normal-speed railways, heavy haul railways, transportation control for regional and new transit, coordinated transportation and management for regional freight and integrated dispatching for freight hold a leading position among peers. Relying on the world-leading comprehensive research and development strength, the Company has developed core technologies of rail transportation control system with independent intellectual property rights and its products and services have been widely used in fields including railway and urban transit, which has established the Company's leading position in the industry.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

The Company is the responsible department for the equipment standards, technical standards and product standards of China's rail transportation control system and has led the establishment of the most important and advanced technical standards for railway and urban transit control system in the PRC, such as CTCS and CBTC. The Company has extremely rich experience in the construction and operation of high-speed railway control systems, complex railway hub transformation experience, existing line upgrade and transformation experience, and customized development experience to meet transportation needs in different regions. The Company's special database for railway control system had over 61,000 test cases. In addition, the Company also has advanced research and development ("R&D"), experiment and test institutions. The completeness and scale of its laboratory facilities are at a leading position in the world.

The Company has built a high-level innovation platform and technical support capabilities, vigorously promoted innovation platform and demonstration construction, gathered innovation elements, optimized the allocation of innovation resources, and formed a "3479+N" sci-tech innovation platform and demonstration pattern, including 3 postdoctoral scientific research mobile workstations, 4 academician workstations, 7 national and industry innovation platforms, 9 national innovation demonstrations, and more than 30 provincial and ministerial innovation platforms providing strong platform support for the realization of high-quality innovation and development of enterprises.

3. *Extensive engineering project management experience*

Over the years, the Company has served the construction of national railway and urban rail transit, deeply participated in the speed increase of national railway for six times, and successively participated in the construction of all major domestic high-speed railway projects. It has experience in many projects involving long mileage, high altitude, alpine region and heavy-haul trains with ten thousand tons. Many projects have been ranked "first" in China and even the world, and the standardized management of engineering services has become the industry benchmark, which has improved the weak current process standard and image of China's rail transit, and established and maintained the Company's leading position in the industry.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

4. *One-stop service capabilities for the entire industrial chain*

The Company professionally provides integrated services covering investment and financing, design and integration, equipment manufacturing, system implementation, supporting project construction and repair and maintenance for rail transportation control system. As a company with the most complete technical pedigree and the most system products in the domestic industry, it has 13 modern production bases all over the country, creating a complete industrial chain in the field of rail transit control. It is the only company in the world that can provide one-stop services for the entire industrial chain from investment and financing to R&D and design, equipment manufacturing, engineering services and operation and maintenance. The one-stop services can effectively reduce the construction, operation and management costs of customers and the system compatibility risk in the case of complex lines, and minimise the impact of renovation projects on normal operations. While adapting to common requirements, it can also provide customers with a flexible combination of different products and services based on the actual needs of customers; combining with the Company's internal efficient and accurate informatization management, effectively reduce marketing cost, and lay a good foundation for tracking and carrying out maintenance, repair and upgrading business.

5. *Highly reliable and safe core services and products*

The Company establishes classified enterprise standards according to relevant international, national and industrial standards, implements strict and prudent quality and safety control measures, so as to ensure the high reliability and safety of rail transportation control system solutions and core products, and provides support for the safe and efficient operation of national rail transportation. The Company's quality management follows the requirements of ISO9001: 2015 Standard, with quality control standards and system procedures to maintain continuous improvement and certification obtained from independent third parties. All subordinate enterprises of the Company which engage in the fields of R&D and design, system integration and industrial manufacturing have passed the ISO/TS22163: 2017 (the upgraded standard of International Railway Industry Standard (IRIS)) certification; all subordinate enterprises of the Company engaged in the field of R&D and design have passed the maturity assessment and certification of CMMI software. The Company's rail transportation control system products meet the European EN50126 standard for railway product safety and meet the generally accepted international quality requirements regarding safety, reliability, availability and maintenance.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

6. *Stimulating innovation and vitality and promoting development through scientific research*

The Company implements the innovation-driven development strategy and accelerates the training of innovative talents through multiple channels. The Company makes good use of existing human resources, increases the training of expert-level leading talents and key researchers, facilitates the career development of scientific and technological talents, and improves the incentive and evaluation system for result transformation to stimulate the innovation and vitality of researchers. The Company improves quality, increases efficiency, and achieves upgrade and sustainable and healthy development under the support and guidance of technology innovation. The Company unswervingly takes the road of independent innovation, truly contributing to promoting corporate transformation and upgrading.

More than 4,300 employees of the Company are engaged in technology research and development, accounting for 21.6% of the total employees, 38.07% of whom have graduate degrees or above. The excellent talent team has laid a solid foundation for the Company to develop core technologies and maintain technical advantages.

(II) Events which have a Serious Impact on the Company's Core Competitiveness, Impact Analysis and Measures During the Reporting Period

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

IV. RISK FACTORS

(I) Risk of Making No Profits Yet

☐ Applicable ☒ Not applicable

(II) Risk of Sharp Decline or Loss of Results

☐ Applicable ☒ Not applicable

(III) Core Competitiveness Risk

☒ Applicable ☐ Not applicable

The rail transportation control system industry in which the Company is engaged is still in a healthy development stage. The information technology of new generation is gradually integrated with the traditional control system. The emerging technologies may lead to the major upgrades of the Company's main system equipment, and put forward new and higher requirements on the Company's scientific and technological innovation. If research on new technologies moves slowly, it will affect the development progress of new generation system products, which is not conducive to consolidating the Company's leading position in innovation.

Responsive measures: From the perspective of the industry and the long-term development needs of the Company, the Company will focus on scientific and technological issues and emerging technologies, develop scientific research plans, deploy strategic forces, coordinate innovation resources, increase investment in science and technology, strengthen the management of the R&D projects of new technologies, and enhance the allocation of resources for the R&D projects of new technologies and new products, to ensure that R&D tasks are completed as planned. The Company will also strengthen the linkage between scientific and technological research and development and market operation, enhance the transformation of scientific and technological achievements, make precise market positioning, and speed up the response to specific needs of users, to maintain the Company's leading position in scientific and technological innovation, and support the sustainable, healthy and high-quality development of the Company.

(IV) Operating Risk

☒ Applicable ☐ Not applicable

First, the centralized distribution of the Company's product markets results in a weak anti-risk ability of the Company, which leads to the Company's operating risks; Second, various factors such as international political situation, international contingent political incidents, changes in international relations expose the Company's overseas operations to risk. In addition, given the nature of the Company's business, we may be involved in liability for compensation or punishment from the government arising from the design, R&D, manufacturing, installation, testing, repair and sales of the products or services of rail transportation control system.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

Responsive measures: The Company will continue to strengthen the construction of scientific and technological innovation capacity, take market demand as the guidance, accelerate the R&D of new technologies and new products and market transformation, constantly expand the market in new fields, form new growth drivers as soon as possible, and improve the anti-risk ability of enterprises. For overseas markets, the Company will strengthen the timely summary and analysis of comprehensive information in target countries, stay alert to changes in the international market, and adjust coping strategies in time to prevent and resolve overseas business risks.

(V) Financial Risk

☒ Applicable ☐ Not applicable

The construction of certain railway, urban rail and infrastructure construction projects undertaken by the Company has the characteristics of long construction period, large investment amount, lagging settlement and lagging recovery, and some contract assets or account receivables have long settlement period and recovery period, which may have a negative impact on current profits.

Responsive measures: The Company will establish a normalized control mechanism to strengthen its source and process control and regularly analyze and dynamically monitor contract assets and account receivables of major projects, improve its appraisal mechanism and increase the frequency of appraisal to mobilize its staff's initiative, and speed up the progress of fund settlement and recovery.

(VI) Industry Risk

☒ Applicable ☐ Not applicable

In view of the year-on-year decline in the scale of fixed asset investment in railway, the railway industry highlighted the prevention and resolution of debt risks in the field, and tightened the implementation of railway investment planning, translating into a shift from pursuing scale and speed to controlling investment pace. During the 14th Five-Year Plan period, the NDRC will strictly control the debt risk incurred by local governments as a result of urban rail investment, raising the approval threshold for all urban rail transit projects, including large, medium and small carrying-capacity projects.

Responsive measures: The Company will strengthen communication with railway owners by leveraging the further improvement of the management layout and system, establish a leading brand image and reputation in the industry through benchmark projects and high-quality projects, and gradually shift the business focus from new line construction to an operation pattern that places equal emphasis on the construction of new lines and the upgrading of existing lines. At the same time, the Company will actively expand the management concepts, closely follow the urban rail construction model, give full play to the resources of the whole system, and adopt various methods such as investment-driven, joint operation, and joint venture to consolidate the existing metro market and expand the market of medium and small carrying capacity, thus forming a multi-point supporting market operation pattern in the rail transit industry.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

(VII) Macro-environmental Risk

☒ Applicable ☐ Not applicable

The world economic environment is becoming increasingly complex, with greater instabilities and uncertainties. The widespread and far-reaching impact of the COVID-19 epidemic has caused the most severe recession in global economy only after the Great Depression. Combined impact and resonance of financial risks and sluggish real economy are posing huge challenges to CRSC's expansion into overseas markets.

Response measures: Actively explore the markets giving play to the dominant advantage brought by favourable foreign aid and overseas expansion policies of the State; obtain accurate information about the policies and dynamic trends of target countries; speed up the pace of overseas business expansion and industrial layout; strengthen efforts in international operations; actively fit into the competitive global market; optimize business structure; innovate profit models and explore development opportunities.

(VIII) Risk Relating to Depository Receipts

☐ Applicable ☒ Not applicable

(IX) Other Material Risks

☒ Applicable ☐ Not applicable

Market competition risk: there are more competitors in the railway construction and urban rail transit markets; the adjustment of the railway construction mode and the change in bidding rules for railway project construction are diminishing the development space for the Company's traditional business, putting the Company under pressure from market competition.

Response measures: Adhere to a market- and technology-oriented management policy, strengthen the full linkage with technological innovation, stay ahead of industry peers in terms of overall competitiveness with technological development as the foundation; insist on providing customers with a good experience covering the whole life cycle of the project with efficient and quality services; and continuously enhance the brand influence.

V. MAIN OPERATIONS DURING THE REPORTING PERIOD

In 2021, the Company adhered to innovation-driven development, strengthened the research on the technology of rail transit control systems, led the development with science and technology, steadily increased market share, deepened the Company's reform, solidly carried out quality and efficiency improvement, and achieved stable growth in assets and interests. However, the revenue and profit decreased as compared to the last year, mainly due to the year-on-year decrease in the total national railway investment, the lag in project bid opening, and the year-on-year decrease of 14.7% in new lines, the revenue of railway projects decreased by 3.61%; in accordance with the requirements of high-quality development, the Company reasonably controlled the scale of EPC business, and the EPC revenue decreased by 10.17% year-on-year; the price of bulk commodities increased, which led to an increase in the cost of raw materials for equipment manufacturing; the state canceled the social security reduction, resulting in an increase of RMB301 million in labor costs; we increased key core technology research, increased R&D investment, and R&D expenses increased by RMB204 million year-on-year. If the impact of the state's cancellation of the social security reduction and exemption policy, the increase in R&D expenses and the income from the disposal of large assets is excluded, the net profit for this year is basically the same as that of the last year.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

(I) Main Business Analysis

1. Table of analysis of changes in relevant items in the income statement and cash flow statement

Unit: Yuan Currency: RMB

Items	Amount for the current Period	Amount for the corresponding period of last year	Change (%)
Revenue	38,358,297,108.78	40,124,476,710.76	-4.40
Operating Cost	29,846,875,671.34	31,269,101,236.91	-4.55
Selling expenses	796,771,857.42	782,685,977.22	1.80
Administrative expenses	2,116,982,019.27	2,059,557,214.11	2.79
Research and development expenses	1,638,494,903.20	1,434,273,399.90	14.24
Finance costs	-312,381,754.25	-249,659,643.80	N/A
Net cash flow generated from operating activities	2,768,701,491.06	3,007,375,953.08	-7.94
Net cash flows generated from investing activities	-1,257,681,570.79	-137,249,343.34	N/A
Net cash flows generated from financing activities	-2,073,337,055.29	-2,466,616,063.08	N/A

Particulars of material changes in business type, profit composition or source of the Company in the current period

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

2. Analysis of revenue and cost

✓ Applicable ☐ Not applicable

Explanation on reasons for changes in revenue: Revenue fell by 4.40% as compared to the last year mainly because of the year-on-year decrease in the total investment in national railway construction project in 2021, the delay in project bid opening and the year-on-year decrease in new lines put into production; and the Company's reasonable control of the scale of the construction contracting business, resulting in a decrease in the revenue from the construction contracting business, further leading to the slight decrease in the revenue for the year as compared with the previous year.

Explanation on reasons for changes in operating cost: Operation cost fell by 4.55% as compared to the last year mainly due to the decrease in the revenue of the Company and vigorous promotion of cost reduction for benefit increase.

(1). Performance of main businesses by industry, product, region and sales model

Unit: Yuan Currency: RMB

Main Businesses by Segment

By segment	Operating Revenue	Operating cost	Gross profit margin (%)	Increase/decrease in revenue as compared to the last year (%)	Increase/decrease in operating cost as compared to the last year (%)	Increase/decrease in gross profit margin as compared to the last year (%)
Rail transit control system	28,081,473,559.38	20,615,607,750.80	26.59	-2.15	-2.03	Decreased by 0.09 percentage point
Equipment manufacturing	5,593,359,700.72	3,421,823,804.96	38.82	-4.88	-4.04	Decreased by 0.54 percentage point
Design and integration	9,619,324,550.64	5,921,930,936.62	38.44	3.54	4.29	Decreased by 0.44 percentage point
System implementation	12,868,789,308.02	11,271,853,009.22	12.41	-4.86	-4.46	Decreased by 0.37 percentage point
Construction contracting	10,211,703,641.11	9,193,313,039.98	9.97	-10.17	-9.79	Decreased by 0.38 percentage point
Others	65,119,908.29	37,954,880.56	41.72	9.66	4.63	Increased by 2.81 percentage points

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

Main Businesses by Terminal Market

By terminal market	Revenue	Operating cost	Gross profit margin (%)	Increase/decrease in revenue as compared to the last year (%)	Increase/decrease in operating cost as compared to the last year (%)	Increase/decrease in gross profit margin as compared to the last year (%)
Railway	18,611,776,388.44	13,528,133,057.03	27.31	-3.61	-3.05	Decreased by 0.42 percentage point
Urban transit	8,364,792,704.15	6,350,229,196.43	24.08	-1.29	-0.50	Decreased by 0.60 percentage point
Overseas businesses	1,104,904,466.79	737,245,497.34	33.28	20.72	4.42	Increased by 10.42 percentage points
Construction contracting	10,211,703,641.11	9,193,313,039.98	9.97	-10.17	-9.79	Decreased by 0.38 percentage point
Others	65,119,908.29	37,954,880.56	41.72	9.66	4.63	Increased by 2.81 percentage points

Main Businesses by Region

By region	Revenue	Operating cost	Gross profit margin (%)	Increase/decrease in revenue as compared to the last year (%)	Increase/decrease in operating cost as compared to the last year (%)	Increase/decrease in gross profit margin as compared to the last year (%)
China	37,253,392,641.99	29,109,630,174.00	21.86	-4.99	-4.76	Decreased by 0.19 percentage point
Other countries and regions	1,104,904,466.79	737,245,497.34	33.28	20.72	4.42	Increased by 10.42 percentage points

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

Description of performance of main businesses by segment, terminal market and region

In terms of revenue, the investment amount and new railways put into operation witness a year-on-year decrease as the domestic overall railway investment slowed down in 2021, resulting in the year-on-year decrease of 4.88% and 4.86% in the revenue from equipment manufacturing and system implementation services of the Company, respectively. The Company continued to give full play to its technological advantages and accelerated the application of core technology achievements, and the revenue from design and integration business increased by 3.54% as compared to last year. Adhering to high-quality development strategy, the Company reduced the scale of construction contracting business appropriately, leading to a year-on-year decrease of 10.17% in the revenue from construction contracting business. On the whole, though the Company's annual revenue decreased slightly, the business structure was more optimized.

In terms of gross profit margin, gross profit margin of main segment staged a year-on-year decline under the influence of rising bulk commodity prices and China's cancellation of the social insurance exemption policy; however, the decreased percentage of revenue from construction contracting business and the optimized business structure of the Company resulted in an increase of 0.12 percentage point in the overall gross profit margin year-on-year.

Revenue from overseas business for the year significantly increased by 20.72% as compared to the same period of last year, mainly because the Company made effort to promote the construction of overseas projects like Hungary-Serbia Railway and 10th of Ramadan Light Rail Transit Project Phase I, and as a result, the revenue recognized increased significantly as compared to last year.

(2). Table of analysis of output and sales volume

✓ Applicable ☐ Not applicable

Main products	Unit	Production output	Sales volume	Inventory level	Increase/decrease in production output as compared to the last year (%)	Increase/decrease in sales volume as compared to the last year (%)	Increase/decrease in inventory level as compared to the last year (%)
Track circuit equipment	Set	11,953	11,989	3,875	-3.05	-9.02	-0.92
Train control and chain system equipment	Set	2,700	2,870	303	-19.14	-2.35	-35.94
Signal relay	10,000 sets	46	48	7	-34.29	-31.43	-22.22
Turnout conversion equipment	Set	28,731	29,696	884	-6.74	-3.56	-52.19
Transponder device	Set	30,317	30,209	10,831	-21.72	-19.41	1.01

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

(3). *The performance of the material procurement contract and material sale contract*

☐ Applicable ☒ Not applicable

(4). *Table of cost analysis*

Unit: Yuan Currency: RMB

By segment

Segment	Cost item	Amount for the current period	Percentage of amount for the current period in total cost (%)	Amount for the corresponding period of the last year	Change of the amount for the current period as compared to that for the corresponding period of last year (%)	
					Percentage of amount for the corresponding period of the last year in total cost (%)	Change of the amount for the current period as compared to that for the corresponding period of last year (%)
Equipment manufacturing	Raw material, subcontracting costs, labor cost, etc.	3,421,823,804.96	11.46	3,565,894,296.92	11.40	-4.04
Design and integration	Raw material, subcontracting costs, labor cost, etc.	5,921,930,936.62	19.84	5,678,138,556.95	18.16	4.29
System implementation service	Raw material, subcontracting costs, labor cost, etc.	11,271,853,009.22	37.77	11,797,902,756.80	37.73	-4.46
Construction contracting	Raw material, subcontracting costs, labor cost, etc.	9,193,313,039.98	30.80	10,190,889,819.77	32.59	-9.79
Others	Labor cost, subcontracting costs, etc.	37,954,880.56	0.13	36,275,806.47	0.12	4.63

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

By terminal market

Unit: Yuan Currency: RMB

Terminal market	Cost item	Amount for the current period	Percentage of amount for the current period in total costs (%)	Amount for the corresponding period of last year	Percentage of amount for the corresponding period of last year in total costs (%)	Change of the amount for the current period as compared to that for the corresponding period of last year (%)
Railway	Raw material, subcontracting costs, labor cost, etc.	13,528,133,057.03	45.33	13,953,789,013.27	44.62	-3.05
Urban transit	Raw material, subcontracting costs, labor cost, etc.	6,350,229,196.43	21.28	6,382,116,883.62	20.41	-0.50
Construction contracting	Raw material, subcontracting costs, labor cost, etc.	9,193,313,039.98	30.80	10,190,889,819.77	32.59	-9.79
Others	Labor cost, subcontracting costs, etc.	37,954,880.56	0.13	36,275,806.47	0.12	4.63
Overseas businesses	Raw material, subcontracting costs, labor cost, etc.	737,245,497.34	2.47	706,029,713.78	2.26	4.42

Other explanations of cost analysis

Business cost in 2021 was RMB29,847 million, representing a decrease of 4.55% which was 0.15 percentage point higher than the decrease in revenue, as compared to RMB31,269 million in the corresponding period of last year. The cost of equipment manufacturing was RMB3,422 million, representing a decrease of 4.04% as compared to the corresponding period of last year; the cost of design and integration segment was RMB5,922 million, representing an increase of 4.29% as compared to the corresponding period of last year; the cost of system implementation service was RMB11,272 million, representing a decrease of 4.46% as compared to the corresponding period of last year; the cost of construction contracting was RMB9,193 million, representing a decrease of 9.79% as compared to the corresponding period of last year.

(5). *Changes in the scope of consolidation due to changes in the equity of major subsidiaries during the reporting period*

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

(6). Information about significant changes in or adjustments to the Company's business, products or services during the reporting period

☐ Applicable ☒ Not applicable

(7). Information about main customers and main suppliers

A. Information about main customers of the Company

The sales to the top five customers were RMB24,283,899,020.20, accounting for 63.31% of annual total sales, of which sales to related parties was RMB0.

Top five customers of the Company

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

No.	Name of customer	Sales	Percentage in annual total sales (%)	Whether there is a related party relationship with the listed company
1	Customer 1	19,097,470,835.75	49.79	No
2	Customer 2	1,977,042,048.08	5.15	No
3	Customer 3	1,554,268,291.04	4.05	No
4	Customer 4	900,364,083.00	2.35	No
5	Customer 5	754,753,762.33	1.97	No
Total	/	24,283,899,020.20	63.31	/

Sales to a single customer exceeded 50% of the total amount, and there were new customers among the top 5 customers or there was heavy reliance on a few customers during the reporting period

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

B. Information about main suppliers of the Company

The purchase from top five suppliers was RMB2,000,824,683.86, accounting for 6.71% of annual total purchase amount, of which purchase from related parties was RMB0.

Top five suppliers of the Company

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

No.	Name of supplier	Purchase amount	Percentage in annual total purchase amount (%)	Whether there is a related party relationship with listed companies
1	Supplier 1	778,729,818.77	2.61	No
2	Supplier 2	458,533,678.38	1.54	No
3	Supplier 3	283,596,768.03	0.95	No
4	Supplier 4	278,152,276.19	0.93	No
5	Supplier 5	201,812,142.49	0.68	No
Total	/	<u>2,000,824,683.86</u>	<u>6.71</u>	/

Purchases from a single supplier exceeds 50% of the total amount, and there were new suppliers among the top five suppliers or there was a heavy reliance on a few suppliers during the reporting period

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

3. Expense

☒ Applicable ☐ Not applicable

The explanation on reasons for sale expense changes: the sale expenses in this year was RMB797 million, an increase of 1.80% compared with last year, primarily due to the increase in staff costs upon the cancellation of social security exemption and preferential policies by the state.

The explanation on reasons for management expense changes: the management fees in this year was RMB2,117 million, an increase of 2.79% compared with the same period of last year, primarily due to salaries, contributions to social security and other remuneration fees of the staff for the current period raised as compared to last year due to the expiration of the interim policy of reduction and exemption of social insurance payment for 2021.

The explanation on reasons for financial expense changes: the financial income in this year was RMB312 million, primarily due to increased interest income and decreased exchange losses.

The explanation on reasons for research and development expense changes: the research and development expense in this year was RMB1,638 million, an increase of 14.24% as compared to last year, primarily because the Company increased R&D investment and intensified efforts on scientific and technological development, accelerated breakthroughs in core technologies in key fields and continuously improved its core competitiveness.

4. Cash flow

☒ Applicable ☐ Not applicable

Explanation on reasons for changes in net cash flow from operating activities: the net cash flows used in operating activities amounted to RMB2,769 million, representing a decrease of RMB239 million as compared to the period of last year, mainly due to an increase in cash paid for purchase of goods and services received as compared to last year.

Explanation on reasons for changes in net cash flow from investing activities: the net cash flows used in investing activities amounted to RMB1,258 million, while the net cash flows used in investing activities amounted to RMB137 million in the period of last year, mainly due to changes in time deposits with maturity over three months in this year and the impact of the decrease in disposal of fixed assets, intangible assets and cash recovered from other long-term assets.

Explanation on reasons for changes in net cash flow from financing activities: the net cash flows used in financing activities amounted to RMB2,073 million, and the net cash flows used in financing activities during the period of last year amounted to RMB2,467 million, mainly due to an increase in cash received from borrowings.

(II) Explanation on material changes in profit due to non-main businesses

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

(III) Analysis of assets and liabilities

✓ Applicable ☐ Not applicable

1. Assets-Liabilities analysis table

Unit: Yuan Currency: RMB

Project name	Amount at the end of the current period	Percentage of amount at the end of the current period to the total assets (%)	Amount of the end of last period	Percentage of amount at the end of last period to the total assets (%)	Change of the amount at the end of the current period as compared to that of last period (%)
Prepayments	908,511,854.83	0.83	605,757,702.28	0.58	49.98
Long-term receivables	3,713,734,908.20	3.41	8,384,707,579.19	7.96	-55.71
Construction in progress	800,282,649.47	0.73	1,421,305,987.45	1.35	-43.69
Development expenditure	213,250,203.11	0.20	139,208,125.21	0.13	53.19
Investment properties	284,692,545.57	0.26	211,520,858.93	0.20	34.59
Right-of-use assets	172,627,457.06	0.16	139,559,591.19	0.13	23.69
Other non-current assets	5,004,496,508.18	4.59	203,923,885.50	0.19	2,354.10
Short-term borrowings	75,629,684.59	0.07	491,584,392.53	0.47	-84.62
Long-term borrowings	3,127,722,482.40	2.87	1,995,641,575.20	1.89	56.73
Other payables	1,063,620,223.11	0.98	1,979,340,519.78	1.88	-46.26
Non-current liabilities due within one year	328,560,596.20	0.30	216,094,781.87	0.21	52.04
Other current liabilities	476,073,584.49	0.44	338,315,519.02	0.32	40.72

Other explanations

The increase in prepayments was mainly due to the fact that subsidiaries CRSC CASCO, CRSCD and CRSC Xi'an Industry Group made purchases for stocking at the end of the year.

The decrease in long-term receivables and the increase in other non-current assets were mainly due to the reclassification of long-term receivables of "Build-Operate-Transfer" project to other non-current assets according to the applicable requirements of the Accounting Standards for Business Enterprises Interpretation 14 for the current year.

The decrease in construction in progress was mainly because the subsidiaries CRSCS and CRSC CASCO purchased new R&D bases to build up technology platform last year, some completed projects were ready for intended use and transferred into fixed assets this year.

The increase in development expenditure was mainly because the Company continued to put more efforts into R&D and certain R&D projects are expected to be qualified for capitalization and included in development expenditure in the future.

The increase in investment properties was mainly due to the increase in the rental of office space by the subsidiary CRSCD.

The increase of right-of-use assets was mainly due to the increase of project on-site leasing business by the subsidiary CRSC CASCO.

The decrease in short-term borrowings was primarily due to the repayment of due borrowings under the low-interest policy.

The increase in long-term borrowings was mainly because the Company increased the low-interest policy borrowings from the export and import bank.

The decrease in other payables was mainly due to the repayment of due factoring payments by the Company.

The increase in non-current liabilities due within one year was mainly due to the increase in the Company's long-term borrowings due within one year.

The increase in other current liabilities was mainly due to the increase in the Output VAT to be transferred.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

2. Information of overseas assets

☐ Applicable ☒ Not applicable

3. Major assets subject to restriction by the end of the Reporting Period

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing book value
Cash and bank balances	500,621,987.32
Receivables for financing	48,875,684.59
Accounts receivable	201,458,572.34
Other non-current assets	4,426,249,414.22

4. Other explanation

☐ Applicable ☒ Not applicable

(IV) Analysis of operations information in the industry

☒ Applicable ☐ Not applicable

Please refer to “Section IV Management Discussion and Analysis” for details.

(V) Analysis of investment

Overall analysis of investment in external equities

☒ Applicable ☐ Not applicable

As at the end of the reporting period, the long-term equity investment of the Group was RMB1,378 million, representing an increase of RMB269 million, or 24.27%, as compared to the beginning of the year. For details, please refer to “VII. Note 17 to Items in the Consolidated Financial Statements” of Section XI Financial Report.

1. Material equity investment

☐ Applicable ☒ Not applicable

2. Material non-equity investment

☐ Applicable ☒ Not applicable

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

3. Financial assets measured at fair value

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Changes in fair value for the period	Accumulated changes in fair value recognized in equity	Impairment accrued for the period	Other changes (increase/decrease) for the period	Closing balance
Financial assets						
1. Other equity instrument investments	1,019,867,488.13	-	-	-	104,951,671.07	1,124,819,159.20
Including: non-listed equity investments	1,019,867,488.13	-	-	-	104,951,671.07	1,124,819,159.20
2. Receivables for financing	2,230,124,457.61	-	-	-	-87,131,343.61	2,142,993,114.00
Subtotal	3,249,991,945.74	-	-	-	17,820,327.46	3,267,812,273.20

4. Details about the progress of significant asset restructuring and integration during the reporting period

☐ Applicable ☒ Not applicable

(VI) Disposal of significant assets and equity interest

☐ Applicable ☒ Not applicable

(VII) Analysis of major companies controlled and invested by the Company

☒ Applicable ☐ Not applicable

For details, please refer to “VII. Note 17 to Items in the Consolidated Financial Statements and “IX. Interests in Other Entities” of Section XI Financial Report.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

(VIII) Status of the structured entity controlled by the Company

☐ Applicable ☒ Not applicable

(IX) Use of proceeds raised from H shares

The proceeds raised from H shares amounted to approximately RMB9,104 million. As of the end of 2021, a total of RMB8,372 million of proceeds raised from H shares have been used, of which RMB2,731 million was used in long-term research and development, including the construction of the CRSC Railway Transportation Research Center and technology research projects; RMB1,667 million was used in the fixed asset investments, including the technical overhaul of CRSC Xi'xin production base, the Company's subsidiary, and Changsha Industrial Park; RMB108 million was used in general equity acquisition; RMB1,253 million was used in investment of Tianshui Tramcar project and other PPP projects related to railway transportation; and RMB2,613 million was used to supplement working capital (On 12 June 2020, the Company convened the general meeting and considered and approved the Resolution on Change in the Use of Proceeds Raised from H Shares, according to which, the Company intends to change the portion of the proceeds of RMB1,713 million allocated for general domestic and overseas acquisition to general domestic and overseas purposes (supplementing working capital)). The Company confirms that, apart from RMB1,713 million allocated for general domestic and overseas acquisition, the usage of the aforesaid proceeds is consistent with the use of proceeds as disclosed in the prospectus.

Apart from the aforesaid use of funds, as of the end of 2021, the Company's remaining proceeds raised from H shares amounting to RMB732 million have not been used and are expected to be used up in the coming three years, of which RMB154 million will be used for fixed asset investments, RMB568 million will be used for investments in PPP projects related to railway transportation and RMB10 million will be used to supplement working capital. The intended usage of the aforesaid proceeds is consistent with the use of proceeds as disclosed in the prospectus.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

VI. DISCUSSION AND ANALYSIS OVER THE FUTURE DEVELOPMENT OF THE COMPANY

(I) Industry landscape and trends

☒ Applicable ☐ Not applicable

Internationally, there are widespread problems in terms of technical standards and product certification in overseas markets, and recognition of Chinese standards varies in different regions, which hinder Chinese standards from going global and to some extent dominate the competitive landscape of the industry. First, out of regional protection which is inevitable, overseas countries have different rail transit control systems, standards and railway management measures. Second, most overseas owners are used to European and American standards for long and still have doubts about Chinese standards. Third, there are many kinds of safety certification for products in most overseas rail transit control system markets so that most domestic products need to be re-certified before entering the market, which increases time cost. Fourth, due to increasing problems in overseas rail transit control, many countries impose stringent requirements on the construction experience and professional qualification of bidders, making market development even harder.

However, the impact of the above-mentioned factors on large international enterprises such as Siemens and Alstom, which have long been committed to the international market, is relatively small, and in general, the gradual integration of enterprises competing in the field of rail transportation control system across the globe points to a trend of dominance by the oligarchs; domestic industry peers or leading general contractors have been involved in the field of signal & communication, which will lead to a more intense competition landscape; and the intensified strategic competition between the U.S. and China has exerted a great impact on Chinese enterprises' entry into the European and American markets.

On the domestic front, first, due to the overall slowdown in railway infrastructure investment, railway enterprises must make every effort to increase their share in market segments they have operated or expand presence to other segments to take market share from other external enterprises, and only in this way can they ensure a steady increase in the overall number of projects undertaken on the market, which will inevitably lead to intensified competition. Second, with the promotion of "one company in one province" system reform by China Railway and provincial governments, provincial and municipal governments are increasing investment in high-speed railways and intercity railways, the owner unit is being reorganized on a large scale, and multiple parties compete with each other in respect of project construction and operation leadership, which will add complexity to market operation in the future. Third, large infrastructure projects biddings have begun to require overall and total package for all the professional fields, which sets higher requirements for the comprehensive strength of bidding enterprises and entails constant enhancement in the all-round industry capabilities of enterprises. Fourth, with a high value-added value, the rail transportation control system sector attracts the attention from rail transit enterprises, and the existing players are not willing to lag behind, so the market competition will become more intense in the coming period.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

From a comprehensive point of view, the overall competition pattern of the rail transit industry will not change greatly in the short term. Subject to the qualification, performance and other threshold restrictions, in the area of “Four Electric Systems” integration in passenger train-dedicated high-speed railway, CRSC will mainly compete with China Railway Electrification Bureau, China Railway Wuhan Electrification Bureau and China Railway Construction Electrification Bureau, followed by other five or six subsidiaries under CREC and CRCC. However, with the entanglement of interests, the future market competition will be more complicated, further testing the overall market management ability and level of the enterprises. In the field of railroad core control system, China Academy of Railway Sciences continues to develop the market under the policy support of China Railway, and enterprises such as HollySys and Jiada Microunion remain competitive in subdominant products, but in the foreseeable period of time, CRSC will secure its leadership on the market. In the field of urban rail control system, although some enterprises try to make a breakthrough, according to the overall market performance in recent years, the market is still dominated by the leading enterprises. It is expected that enterprises such as Traffic Control Technology, INSIGMA and Thales Saic Transportation will continue to challenge the leading position of CRSC, and the market share of each enterprise may fluctuate to some extent.

(II) Development strategies of the Company

☒ Applicable ☐ Not applicable

As a leading integrated rail transportation control system solution provider in the world, for the purpose of continuously consolidating and strengthening our leadership in the global market, in view of the development trend in the industry and the Company's abundant resources, and based on the strategic orientation of “holding fast to the main responsibility, leading by innovation, highlighting core business, and synergizing with diversification”, the Company will implement the business strategy of “six cores, one body and two wings”, develop six core businesses including “signal (control) system, information communication, power electrification, general project contracting, investment and operation, and intelligent manufacturing”, give play to the advantage of the whole industrial chain integration on “design and R&D, equipment manufacturing, and engineering installation”, strengthen the operation of international and domestic markets, establish a “rail transportation + N” industrial pattern, so as to build an industry group featuring rail transportation, world-leading system technology and world-class comprehensive strength.

SECTION IV MANAGEMENT DISCUSSION AND ANALYSIS

(III) Business plans

☒ Applicable ☐ Not applicable

In 2022, CRSC will make active efforts to seek progress while maintaining stability. The Company will highlight stable growth, strengthen independent innovation in science and technology, optimize and adjust the structural layout, and prevent and resolve material risks. The Company will grasp strategic opportunities, enhance strategic confidence, strengthen the decomposition of strategic objectives, do a good job in planning and transmission, improve the execution of strategies and promote the implementation of plans. The Company will make every effort to complete all the operation targets in 2022 and put into practice the value preservation and appreciation of state-owned capital by strengthening business synergy development, industrial chain synergy efficiency and new industry expansion and integrating into the national industrial chain upgrading.

(IV) Others

☐ Applicable ☒ Not applicable

VII. MATTERS THAT THE COMPANY FAILED TO DISCLOSE ACCORDING TO THE RULES AS THE RULES WERE NOT APPLICABLE OR STATE SECRETS OR TRADE SECRETS WERE INVOLVED OR FOR OTHER SPECIAL REASONS AND DESCRIPTIONS OF SUCH REASONS

☐ Applicable ☒ Not applicable

VIII. OTHER DISCLOSURES

(I) Performance and Distribution

The performance of the Group for the year ended 31 December 2021 and the financial position of the Group as at 31 December 2021 are set out in the section XI “Financial Report” of this report.

The implementation of cash dividend policy of the Company during the reporting period is set out in the section V “Corporate Governance” of this report.

(II) Distribution Plan and Policy of Dividend

The Company’s distribution plan and policy of dividend is set out in the section V “Corporate Governance” of this report.

SECTION V CORPORATE GOVERNANCE

I. RELEVANT EXPLANATIONS ON CORPORATE GOVERNANCE

☒ Applicable ☐ Not applicable

During the reporting period, the Company strictly adhered to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, firmly implemented the new development concept, thoroughly implemented the spirit of documents such as the Opinions on Further Improving the Quality of Listed Companies, strictly complied with the laws and regulations including the Company Law, the Securities Law and the Code of Corporate Governance for Listed Companies, and the provisions of Shanghai Stock Exchange, the Stock Exchange of Hong Kong, and built a modern corporate governance structure of “the general meeting, the Board, the board of supervisors and senior management” to clarify their specific duties. All governance entities operated in a standardized, coordinated and effective manner, and Directors, Supervisors and senior management performed their duties in accordance with the law and were diligent and responsible, thus the corporate governance standard was improved continuously.

Whether there is any significant difference between corporate governance and laws, administrative regulations and relevant requirements of the CSRC on listed company governance; if there is a significant difference, the reasons shall be explained

☐ Applicable ☒ Not applicable

II. EXPLANATION OF THE COMPANY ON LOSING INDEPENDENCE OR INDEPENDENT MANAGEMENT ABILITY WITH RESPECT TO BUSINESS, PERSONNEL, ASSETS, INSTITUTIONS, FINANCE, ETC. WITH ITS CONTROLLING SHAREHOLDERS

☐ Applicable ☒ Not applicable

The controlling shareholders, actual controllers and other entities under their control are engaged in the same or similar business as the Company, as well as the impact of horizontal competition or major changes in horizontal competition on the Company, the resolution measures that have been taken, the progress of the resolution and the follow-up resolution plan.

☐ Applicable ☒ Not applicable

The controlling shareholders, actual controllers and other entities under their control are engaged in horizontal competition that has a significant adverse impact on the Company.

☐ Applicable ☒ Not applicable

SECTION V CORPORATE GOVERNANCE

III. BRIEF INTRODUCTION TO SHAREHOLDER'S GENERAL MEETINGS

Name of meeting	Time of meeting	Index of website designated for publication of the resolutions	Disclosure date of the publication of the resolutions	Resolutions
2021 First Extraordinary General Meeting	5 March 2021	www.sse.com.cn www.hkexnews.hk	5 March 2021	1. The resolution of the Appointment of GUO Yonghong as Non-executive Director of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting.
2020 Annual General Meeting	11 June 2021	www.sse.com.cn www.hkexnews.hk	11 June 2021	1. The meeting considered and approved the resolution on Report of the Board of Directors for 2020 of China Railway Signal & Communication Corporation Limited. 2. The meeting considered and approved the resolution on Report of the Board of Supervisors for 2020 of China Railway Signal & Communication Corporation Limited. 3. The meeting considered and approved the resolution on Annual Report for 2020 of China Railway Signal & Communication Corporation Limited. 4. The meeting considered and approved the resolution on Final Account Report for 2020 of China Railway Signal & Communication Corporation Limited. 5. The meeting considered and approved the resolution on Profit Distribution Plan for 2020 of China Railway Signal & Communication Corporation Limited. 6. The meeting considered and approved the resolution on Plan of Appointment of Auditor for 2021. 7. The meeting considered and approved the resolution on Remuneration of Directors and Supervisors of the Company for 2020. 8. The meeting considered and approved the resolution on General Mandate to Issue Debt Financing Instruments.

Shareholders of preference shares with restored voting rights request convening extraordinary general meetings

☐ Applicable ☒ Not applicable

Explanation on the General Meetings

☒ Applicable ☐ Not applicable

- On 5 March 2021, the Company held the first extraordinary general meeting in 2021 in an in-person manner. For details, please refer to the Announcement on Resolutions of the 2021 First Extraordinary General Meeting of China Railway Signal & Communication Corporation Limited dated 5 March 2021.
- On 11 June 2021, the Company held the 2020 Annual General Meeting in an in-person manner. For details, please refer to the Announcement on Resolutions of 2020 Annual General Meeting of China Railway Signal & Communication Corporation Limited dated 11 June 2021.

SECTION V CORPORATE GOVERNANCE

IV. IMPLEMENTATION AND CHANGES OF VOTING RIGHTS DIFFERENCE ARRANGEMENT DURING THE REPORTING PERIOD

☐ Applicable ☒ Not applicable

V. CORPORATE GOVERNANCE OF RED-CHIP STRUCTURE

VI. DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

(I) The Changes in Shareholding and Remunerations of Current and Resigned Directors, Supervisors, Senior Management and Core Technicians During the Reporting Period

Name	Position (note)	Gender	Age	Start date of term of office	Termination date of term of office	Shareholding at the beginning of the year	Shareholding at the end of the year	Changes in shareholding during the year	Reason for change	Total before-tax remuneration obtained from the Company during the reporting period (RMB0'000)	Whether to receive any remuneration from any related party of the Company	Unit: share
ZHOU Zhiliang	Executive Director, Chairman	male	57	January 2012	February 2025	-	-	-	-	74.62	no	

SECTION V CORPORATE GOVERNANCE

Name	Position (note)	Gender	Age	Start date of term of office	Termination date of term of office	Shareholding at the beginning of the year	Shareholding at the end of the year	Changes in shareholding during the year	Reason for change	Total before-tax remuneration obtained from the Company during the reporting period (RMB0'000)	Whether to receive any remuneration from any related party of the Company
XU Zongxiang	Executive Director President	male	59	February 2020 December 2019	February 2025	-	-	-	-	74.62	no
YANG Yongsheng	Executive Director	male	53	August 2018	February 2025	-	-	-	-	56.40	no
YAO Guiqing	Independent Non-executive Director	male	66	August 2018	February 2025	-	-	-	-	10	no
GUO Yonghong	Non-executive Director	male	58	March 2021	February 2025	-	-	-	-	0	no
YAO Cho Fai Andrew	Independent Non-executive Director	male	56	February 2022	February 2025	-	-	-	-	0	no
FU Junyuan	Independent Non-executive Director	male	60	February 2022	February 2025	-	-	-	-	0	no
CHEN Jin'en (Resignation)	Former Independent Non-executive Director	male	67	May 2015	February 2022	-	-	-	-	8	no
CHAN Ka Keung Peter (Resignation)	Former Independent Non-executive Director	male	70	August 2018	February 2022	-	-	-	-	13.90	no
WANG Jiajie (Resignation)	Former Independent Non-executive Director	male	71	May 2015	January 2021	-	-	-	-	0	no
KONG Ning	Chairman of the Supervisory Committee	male	57	February 2020	February 2025	-	-	-	-	41.83	no
LI Tianan	Shareholder Representative Supervisor	female	52	February 2020	February 2025	-	-	-	-	0	no

SECTION V CORPORATE GOVERNANCE

Name	Position (note)	Gender	Age	Start date of term of office	Termination date of term of office	Shareholding at the beginning of the year	Shareholding at the end of the year	Changes in shareholding during the year	Reason for change	Total before-tax remuneration obtained from the Company during the reporting period (RMB'0 000)	Whether to receive any remuneration from any related party of the Company
YANG Yang	Employee Representative Supervisor	female	44	February 2022	February 2025	-	-	-	-	45.20	no
CHEN Shikui (Resignation)	Former Employee Representative Supervisor	male	50	August 2018	February 2022	-	-	-	-	49.80	no
HU Shaocong	Chief Accountant Secretary to the Board	male	54	July 2016 January 2022	-	-	-	-	-	71.92 -	no no
ZHAO Xiaodong	Vice President	male	47	December 2018	-	-	-	-	-	71.93	no
HUANG Weizhong	Vice President	male	56	April 2013	-	-	-	-	-	64.42	no
ZHANG Zhihui	Vice President Chief Engineer	male	46	December 2018 October 2016	-	-	-	-	-	68.29	no
QIU Wei (Resignation)	Former Secretary to the Board	female	48	October 2019	January 2022	-	-	-	-	52.80	no
FU Gang	Vice President of Beijing CPSC Research & Design Institute Group Co., Ltd. (CRSCD)	male	41	June 2018	-	-	-	-	-	117.64	no

SECTION V CORPORATE GOVERNANCE

Name	Position (note)	Gender	Age	Start date of term of office	Termination date of term of office	Shareholding at the beginning of the year	Shareholding at the end of the year	Changes in shareholding during the year	Reason for change	Total before-tax remuneration obtained from the Company during the reporting period (RMB0'000)	Whether to receive any remuneration from any related party of the Company
	Deputy Party secretary, director of Beijing CRSC Research & Design Institute Group Co., Ltd. (CRSCD)			April 2020							
MA Lilan	Deputy Chief Engineer of CRSC Research & Design Institute Group Co., Ltd. (CRSCD)	female	55	June 2009		-	-	-	-	37.01	no
JJANG Ming	Deputy Chief Engineer of CRSC Research & Design Institute Group Co., Ltd. (CRSCD)	male	44	February 2017		-	-	-	-	101.43	no
LIU Zhen	Chief Engineer of the Basic Equipment Technology Research Institute of CRSC Research & Design Institute Group Co., Ltd. (CRSCD)	male	41	June 2020		-	-	-	-	132.51	no

SECTION V CORPORATE GOVERNANCE

Name	Position (note)	Gender	Age	Start date of term of office	Termination date of term of office	Shareholding at the beginning of the year	Shareholding at the end of the year	Changes in shareholding during the year	Reason for change	Total before-tax remuneration obtained from the Company during the reporting period (RMB0'000)	Whether to receive any remuneration from any related party of the Company
LUO Jing	Chairwoman of CRSC Communication & Information Group	female	43	April 2020	-	-	-	-	-	92.50	no
	Company Ltd. (通號通信信息集團有限公司)										
	Director of Information			February 2020							
	Center of China Railway Signal & Communication										
	Corporation Limited*										
DENG Hongyuan	The Director, the Deputy male General Manager and	male	47	May 2018	-	-	-	-	-	79.58	no
	Chief Engineer of CRSC Urban Rail Transit										
	Technology Co., Ltd.										
JIANG Jianhua	The Vice President of Technology of CASCO	male	55	January 2011	-	-	-	-	-	242.27	no
	Signal Ltd.										
CUI Ke	The Chief Engineer of the Research & Design Institute of CASCO	male	51	January 2018	-	-	-	-	-	165.15	no
	Signal Ltd.										

SECTION V CORPORATE GOVERNANCE

Name	Position (note)	Gender	Age	Start date of term of office	Termination date of term of office	Shareholding at the beginning of the year	Shareholding at the end of the year	Changes in shareholding during the year	Reason for change	Total before-tax remuneration obtained from the Company during the reporting period (RMB0 '000)	Whether to receive any remuneration from any related party of the Company
LI Hongyan	Product Manager of the R&D Center of CRSC Communication & Information Group Company Ltd.	male	43	June 2020	-	-	-	-	-	33.02	no
WANG Xiangtao	The Deputy General Manager of Technology of CRSC Railway Vehicles Co., Ltd.	male	57	May 2015	-	-	-	-	-	21.60	no
	The Director and Chief Engineer of CRSC Railway Vehicles Co., Ltd.			August 2020	-	-	-	-	-		
Total	/	/	/	/	/	-	-	-	-	1,726.44	/

- Notes:
1. "Total before-tax remuneration obtained from the Company during the reporting period" is the total before-tax remuneration obtained from the Company by the personnel in the table during their terms of office in 2021, excluding social insurance and annuities paid by the Company for individuals;
 2. Mr. GUO Yonghong and Ms. LI Tienan did not receive remuneration from the Company;
 3. Mr. WANG Jiajie ceased to serve as an independent non-executive Director from January 2021.
 4. Mr. CHAN Ka Keung Peter and Mr. CHEN Jin'en ceased to serve as independent non-executive Directors and Mr. YAO Cho Fai Andrew and Mr. FU Junyuan served as independent non-executive Directors from February 2022.
 5. Mr. CHEN Shikui ceased to serve as an employee supervisor and Ms. YANG Yang served as an employee supervisor from February 2022.
 6. Ms. QIU Wei ceased to serve as a secretary to the Board and Mr. HU Shaofeng served as a secretary to the Board from January 2022.
 7. Due to the difference in year, remuneration and statistical calibre for staff, the remunerations of persons in charge of the enterprises in the above table are inconsistent with those disclosed in the official website of the Company. Investors should pay attention to this.

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
ZHOU Zhiliang	<p>He has been the Company's executive Director and chairman since January 2012 and is mainly responsible for overseeing the overall work of the Board. He has been the secretary of the Party Committee of the Company since June 2017. He has served as the chairman and the secretary of the Party Committee of China Railway Signal and Communication (Group) Corporation Limited since May 2017. From January 2012 to May 2017, he served as the general manager and the deputy secretary of the Party Committee of China Railway Signal and Communication (Group) Corporation Limited. Mr. ZHOU was a vice president and a member of the Standing Committee of the Party Committee of China Railway Construction Corporation Limited (listed on the Stock Exchange, stock code: 1186; listed on the SSE, stock code: 601186) from October 2007 to January 2012, during which Mr. ZHOU served as the chairman of China Railway Construction Investment Group Co., Ltd. (中國鐵建投資集團有限公司) from March 2011 to January 2012. From December 2004 to October 2007, Mr. ZHOU was a deputy general manager and a member of the Standing Committee of the Party Committee of China Railway Construction Corp. (中國鐵道建築總公司). From November 2001 to December 2004, Mr. ZHOU was the director and deputy secretary of the Party Committee of MOR No.4 Survey & Design Group Co., Ltd. (鐵道部第四勘察設計院). From January 2000 to November 2001, Mr. ZHOU served as the chairman of Labor Union of MOR No.4 Survey & Design Group Co., Ltd. From November 1996 to January 2000, Mr. ZHOU served as the director at No.2 Railway Survey and Design Department(第二勘测設計處) of MOR No.4 Survey & Design Group Co., Ltd.</p>
XU Zongxiang	<p>He has served as the president and executive Director of the Company since December 2019 and February 2020, respectively. He has served as the deputy Party secretary, director and general manager of China Railway Signal and Communication (Group) Corporation Limited since November 2019. Mr. XU successively held various positions in CRRC Corporation Limited (listed on the Stock Exchange, stock code: 1766; listed on the SSE, stock code: 601766) from October 2012 to November 2019, including as an executive director from June 2017 to November 2019 and a standing member of the Party Committee from May 2017 to November 2019, and a vice president and a standing member of the Party Committee of CSR Corporation Limited from October 2012 to May 2015. He served as the deputy head of Zhuzhou Electric Locomotive Works, the director and general manager, director and general manager and deputy Party secretary, executive director and general manager and deputy Party secretary of CRRC Zhuzhou Locomotive Co., Ltd., a standing member of the Party Committee of CSR Group, and a deputy general manager of CRRC Group Co., Ltd.</p>

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
YANG Yongsheng	<p>He has served as the executive Director of the Company since August 2018. He has been the adjunct professor of China Business Executives Academy, Dalian since June 2018. He has been the extramural tutor of the Executive Education of School of Economics Peking University since November 2017. He has been the deputy secretary of the Party Committee of China Railway Signal and Communication (Group) Corporation Limited since July 2017 and the employee representative director of China Railway Signal and Communication (Group) Corporation Limited since November 2017. Mr. YANG was successively the working group leader, provisional secretary of the Party Committee and the Chairman of China Urban and Rural Construction Group Ltd. (中國城鄉建設集團有限公司) from April 2017 to July 2017. From February 2016 to April 2017, Mr. YANG was the secretary of the Party Committee and vice chairman of China Road & Bridge Corporation. From December 2010 to February 2016, Mr. YANG successively held several positions in China Communications Construction Company Limited (listed on the Stock Exchange, stock code: 1800; listed on the SSE, stock code: 601800), including serving as the deputy director of the general office, the general manager of the human resources department, the head of the organizational department of the Party Committee, the executive vice president of the management college and the executive deputy principal of the party school, etc. Mr. YANG has been the vice director of the general manager department of Sinohydro Group Ltd. from March 2010 to December 2010. From July 1988 to July 2006, Mr. YANG successively held several positions in No. 5 Bureau of Sinohydro, including serving as the principal of the staff children secondary school, the director of the education department, the director of the human resources department, the head of the organizational department of the Party Committee, the director of the system reform office, vice director and the chief economist, etc.</p>
CHEN Jin'en	<p>He has been the independent non-executive Director from May 2015 to February 2022 and has held the position of director at China National Building Material Group Co., Ltd. from August 2016 to January 2021. He has served as a director of State Grid Corporation of China from July 2015 to June 2021. Mr. CHEN has served as the independent non-executive director of Billion Industrial Holdings Limited (listed on the Stock Exchange, stock code: 2299) from September 2012 to March 2013. From March 2010 to August 2013, Mr. CHEN was the secretary of the Party Committee and vice chairman of China Energy Conservation and Environmental Protection Group (中國節能環保集團公司). From 2001 to March 2010, Mr. CHEN also served several positions in China Energy Conservation and Environmental Protection Investment Co., Ltd. (中國節能環保投資公司), including serving as its secretary of the Party Committee and deputy general manager from October 2004 to March 2010, its vice chairman from September 2001 to October 2004. From November 2000 to September 2001, Mr. CHEN was the head of the working department of the supervisory committee of Central Work Committee for Enterprises (中央企業工委). From August 1998 to November 2000, Mr. CHEN was the deputy director of General Administration Office of Special Inspector of Ministry of Personnel (人事部稽查特派員總署辦公室). From July 1988 to August 1998, Mr. CHEN served as a deputy director, director and assistant supervisor of the Department of Title of Ministry of Personnel (人事部職稱司).</p>

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
CHAN Ka Keung Peter	He has served as an independent non-executive Director of the Company from August 2018 to February 2022. Mr. CHAN served as an independent non-executive director of MMG Limited (listed on the Stock Exchange, stock code: 1208) since December 2019. He was the independent non-executive director of Metallurgical Corporation of China Ltd. (listed on the Stock Exchange, stock code: 1618; listed on the Shanghai Stock Exchange, stock code: 601618) from November 2014 to April 2020. He was the independent non-executive director of CRRC Corporation Limited (listed on the Stock Exchange, stock code: 1766; listed on the Shanghai Stock Exchange, stock code: 601766) from May 2015 to May 2018. Mr. CHAN served as a senior assistant of the Audit Department, manager of the Tax Department and senior manager of China Service Department in Ernst & Young Hua Ming LLP and the chief financial officer of Dransfield Group. Mr. CHAN served as a Beijing based partner, a Beijing-based managing partner of Tax and Investment Advisory Service Department and a managing partner of the NPA Transaction Advisory Service Department of Ernst & Young Hua Ming LLP from January 1994 to December 2008. He served as a member of the executive committee of Hong Kong Chamber of Commerce in China, and served as the chairman of Hong Kong Chamber of Commerce in China in 2000 and 2003.
WANG Jiajie	He has been the independent non-executive Director of the Company from May 2015 to January 2021. Mr. WANG is currently the arbitrator of China International Economic and Trade Arbitration Commission and the arbitrator of Beijing Arbitration Commission. From July 1999 to December 2010, Mr. WANG served in several positions in China General Technology (Group) Holding Co., Ltd. (中國通用技術(集團)控股有限責任公司), including serving as its general counsel from December 2004 to December 2010 and as the general manager of its legal department from July 1999 to December 2004. From December 1991 to July 1999, Mr. WANG also served in several positions in China National Technical Imp. & Exp. Corp. (中國技術進出口總公司), including serving as the general manager of its legal department from November 1998 to July 1999; and the vice general manager of its legal department from December 1991 to November 1998.
YAO Guiqing	He has served as an independent non-executive Director of the Company since August 2018. He served as a director of China General Technology Group Co., Ltd. (中國通用技術集團有限公司) since November 2018. He successively held several positions in China Railway from February 1990 to March 2018, including office director of the Party Committee, deputy secretary of the Party Committee of Jianchang Engineering Bureau, vice chairman of Major Bridge Engineering, vice chairman of China Railway Sixth Bureau, chairman of China Railway Ninth Bureau, and deputy secretary of the Party Committee, general manager and vice chairman of China Railway Engineering Corporation. From September 2007 to March 2018, Mr. YAO served in several positions in China Railway Group Ltd. (listed on the Stock Exchange, stock code: 0390; listed on the Shanghai Stock Exchange, stock code: 601390), including serving as its vice president, deputy secretary of the Party Committee, chairman of the labor union, chairman of the supervisory committee and vice chairman; and he served as its executive director from August 2010 to March 2018. From December 1971 to February 1990, Mr. YAO served as the head of the organizational department of the committee of the Communist Youth League of China and the secretary to the committee of the Communist Youth League of China in Engineering No.3 Bureau of the Ministry of Railway* (中國鐵道部第三工程局).

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
GUO Yonghong	<p>He has been the non-executive Director since March 2021. He served as special external Director of Central Enterprises since August 2020. Mr. GUO Yonghong served as the secretary of the Party Committee, chairman, and general manager of China Mobile Tietong Company Limited from March 2018 to August 2020, during which he served as the chairman and general manager of China Tietong Telecommunications Corporation from May 2018 to August 2020. From November 2015 to March 2018, he served as the chairman, general manager and a member of the Party Committee of China Mobile Group Chongqing Co., Ltd., during which he served as the secretary of the Party Committee from January 2017, and concurrently served as an executive director (from February 2018) and the general manager of Chongqing Communication Services Company* (重慶通信服務公司). From March 2008 to November 2015, he served as the chairman, general manager and a member of the Party Leadership Group of China Mobile Group Hubei Co., Ltd., during which he served as the secretary of the Party Leadership Group from March 2010 and the general manager of Hubei Communication Services Company from July 2011 to November 2015. From February 2007 to March 2008, he served as a director and the chief executive officer (CEO) of CMPak Limited. From July 2006 to June 2007, he served as the chairman, secretary of the Party Leadership Group and general manager of China Mobile Group Guizhou Co., Ltd., and from November 2000 to July 2006, he served as a director (from July 2001), deputy general manager and a member of the Party Leadership Group of Hebei Mobile Communication Company.</p>
YAO Cho Fai Andrew	<p>He has been the independent non-executive director of the Company since February 2022. He is currently the chairman and chief executive officer of Hong Kong Shanghai Alliance Holdings Limited, as well as the member of the National People's Congress and part-time vice chairman of Shanghai Federation of Industry and Commerce. Since 1994, he has served in several positions in Hong Kong Shanghai Alliance Holdings Limited (listed on the Stock Exchange, stock code: 1001), including serving as executive director, chief executive officer, and chairman, as well as the chairman of the nomination committee, a member of the remuneration committee and director of some subsidiaries of Hong Kong Shanghai Alliance Holdings Limited. Since 2004, Mr. YAO has served as independent non-executive director of Kader Holdings Company Limited (listed on the Stock Exchange, stock code: 0180). From 2015 to 2020, he served as independent non-executive director of Shanghai Dazhong Public Utilities (Group) Co., Ltd. (listed on the Stock Exchange, stock code: 1635; listed on the Shanghai Stock Exchange, stock code: 600635). Mr. Yao's public services include being a member of the 13th National People's Congress of Hong Kong, chairman of Shanghai-Hong Kong Economic Development Association, vice chairman of Shanghai Federation of Industry and Commerce, a member of the council of Fudan University, and chairman of the School Council of Lingnan University in Hong Kong.</p>

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
FU Junyuan	<p>He has been the independent non-executive Director of the Company since February 2022. He served as a member of the Standing Committee of the Party Committee and chief accountant in China Poly Group Corporation Ltd. from August 2018 to September 2021. From September 1996 to September 2018, he served in several positions in China Communications Construction Group Corporation Limited, including serving as interim member of the Party committee and chief accountant in China Communications Construction Group Corporation Limited from December 2005 to August 2006. From August 2006 to November 2006, he served as interim member of the Party committee and director in China Communications Construction Group Corporation Limited, during which he served as executive director and chief accountant in China Communications Construction Company Limited. (listed on the Stock Exchange, stock code: 1800; listed on the Shanghai Stock Exchange, stock code: 601800) from September 2006 to August 2018. From October 1998 to December 2005, he served as chief accountant in China Harbour Engineering Company (Group), during which he served as deputy chief accountant in China Harbour Engineering Company (Group) from September 1997 to October 1998. Prior to that, Mr. FU worked for more than ten years in the Department of Finance of the Ministry of Transport and the CNAO's Transportation Audit Office.</p>
KONG Ning	<p>He has served as a Supervisor of the Company since February 2020 and chairman of the Supervisory Committee since March 2020. He was a vice president of the Company from July 2016 to November 2019 and a member of the Standing Committee of the Party Committee of the Company from December 2010 to November 2019. He served as the Company's chief accountant from December 2010 to July 2016 and is mainly in charge of the financial work. Mr. KONG served as a member of the Standing Committee of the Party Committee of CRSC Group from December 2010 to November 2019. He served as the chief accountant of CRSC Group from November 2004 to May 2015. He served as the accountant in the finance department of China Huanqiu Contracting & Engineering Co. Ltd. (中國寰球工程公司) and the head of finance department and the chief accountant of the HQCEC (HB) (華北規劃設計院) from August 2001 to November 2004. He served as deputy chief of financial department of Anhui Medicament Joint Venture Company (安徽省醫藥聯合經營公司) (renamed as Anhui Hua Shi Medicament Co., Ltd. (安徽華氏醫藥有限公司)) from April 1996 to August 2001.</p>

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
LI Tienan	<p>She served as a Supervisor of the Company from February 2020. Since December 2021, she has been the deputy head of the preparatory group of Guoxin Asset Allocation Co., Ltd. From March 2019 to December 2021, she served as deputy general manager, general manager, general counsel, and director in China Reform Asset Management Co., Ltd., during which she has served as a general manager in Capital Management Division of China Reform Holdings Corporation Ltd. from April 2021 to December 2021. Ms. LI served as an external director in China Culture Development Corporation Ltd. (中國文化產業發展集團有限公司) from March 2019 to November 2021. She has been a director of Guoxin Ronghui Equity Investment Fund Management Co., Ltd. (國新融匯股權投資基金管理有限公司) since March 2019, a director of China Aviation Supplies Co., Ltd. (中國航空器材有限責任公司) from July 2019 to April 2021, and a supervisor of China Tower Corporation Limited since July 2019. Ms. LI has served as the legal representative, executive director, and general manager in Guoxin Shengkang Private Equity Fund Management (Beijing) Co., Ltd. (國新盛康私募基金管理(北京)有限公司) since December 2020. She has served as a director in Zhongjin Gold Corp., Ltd. since March 2021. Ms. LI served as a general manager of the legal department of CNIC Corporation Limited (國新國際投資有限公司) from September 2014 to March 2019, during which she also served as a general manager of the legal department of CNIC Consulting Corporation Limited (國新國際投資諮詢有限公司) from February 2017 to March 2019. Ms. LI served as a deputy general manager of the legal department of China Reform Holdings Corporation Ltd. (中國國新控股有限責任公司) from June 2011 to July 2014, during which she also served as a deputy general manager of the legal department of CNIC Corporation Limited (國新國際投資有限公司) from January 2013 to September 2014. Ms. LI served as a deputy general manager of the legal department of China National Coal Group Corp. (中國中煤能源集團有限公司) from April 2011 to June 2011, a general legal counsel and a director of the legal department of China Coal & Coke Holdings Ltd. (中煤焦化控股有限責任公司) from August 2003 to April 2011, a contract director of the legal department of China National Coal Group Corp. (中國中煤能源集團有限公司) from December 2002 to August 2003, a lawyer of Jinde Law Firm from December 1999 to December 2002. and a staff of Pre-trial Division of Shenyang Public Security Bureau (瀋陽市公安局預審處) of Liaoning Province from August 1992 to December 1999.</p>

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
CHEN Shikui	<p>He has been the employee representative supervisor of the Company from August 2018 to February 2022. Since July 2020, he has been the director of risk management Center of the Company. He has been the head of the legal compliance department of the Company since July 2018. He has been a director of CRSC Construction Group Co., Ltd. (通號建設集團有限公司) since August 2016. He has served as the director of CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司) from February 2016 to October 2021. He has served as a supervisor of CRSC (Zhengzhou) Electrification Bureau Co., Ltd. (通號(鄭州)電氣化局有限公司) since May 2015. From November 2015 to July 2018, Mr. CHEN worked as the deputy head of the legal affairs department of the Company. From January 2010 to November 2015, Mr. CHEN served in several positions in Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd., including deputy general counsel, head of legal archives of the enterprise development and legal affairs department and head of enterprise development and legal affairs department. From August 2013 to November 2015, he was an assistant in the legal affairs department of the Company. From July 2007 to January 2010, he served as the assistant economist and economist of the eastern China region operation & command department of China Railway 22nd Bureau Group Co., Ltd. From May 1997 to July 2007, Mr. CHEN worked in the People's Court of Heze City, Shandong Province and the People's Court of Mudan District, Heze City, Shandong Province.</p>
YANG Yang	<p>She has served as an employee representative supervisor of the Company since February 2022. Since 2012, she has successively taken up several positions in China Railway Signal & Communication Corporation Limited., including accountant, finance director, director of engineering finance department, deputy director of audit department (in charge of the work), and deputy director of risk management center. Since April 2020, she has concurrently served as a director of Guangdong Utrust Financial Leasing Co., Ltd. (廣東粵財金融租賃股份有限公司). Since October 2021, Ms. YANG has served as an external director of CRSC (Changsha) railway Traffic Control Technology Co., Ltd. From April 2012 to September 2012, she served as a finance manager in CRSC International Company Limited. (通號國際控股有限公司). From January 2000 to March 2012, she successively served as an accountant, an assistant accountant and the head of financial management department in China Railway Signal & Communication Corporation (中國鐵路通信信號集團公司). From October 1998 to January 2000, she worked as a trainee in China Railway Signal & Communication Company (中國鐵路通信信號總公司).</p>

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
HU Shaofeng	<p>He has served as the chief accountant and a member of the Standing Committee of the Party Committee of the Company since July 2016. He has served as the secretary to the Board of the Company since January 2022 and once took up the same position from May 2013 to October 2019. He has served as a member of the Standing Committee of the Party Committee of CRSC Group since June 2016. From November 2016 to April 2020, he served as the director and vice chairman of Guangdong Utrust Financial Leasing Co., Ltd. (廣東粵財金融租賃股份有限公司). Mr. HU served as the director of CRSC Innovation Investment Company Ltd from August 2012 to February 2016. He served as the Company's deputy chief accountant from July 2012 to July 2016. Mr. HU served as deputy general manager, chief accountant and general counsel of China Railway Construction Heavy Industry Co., Ltd. (中國鐵建重工集團有限公司) from December 2011 to July 2012. Mr. HU served as the chief accountant and a member of the Standing Committee of the Party Committee of China Railway Track Systems Group Co., Ltd. (中鐵軌道系統集團有限公司) from May 2007 to December 2011. Mr. HU served as deputy chief accountant of the MOR No.4 Survey & Design Group Co., Ltd. (鐵道部第四勘察設計院) from February 2004 to October 2006, as the director of financial department of the China Railway No. 4 Survey & Design Group Co., Ltd. from February 2004 to April 2005, as the assistant to director and deputy director of financial department of the China Railway No. 4 Survey & Design Group Co., Ltd. from February 2002 to February 2004.</p>
ZHAO Xiaodong	<p>He has served as a vice president of the Company since January 2019. He has held the positions of the member of the Standing Committee of the Party Committee at the Company and CRSC Group since December 2018. He has also served as the chairman of Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd. (CRSCD), a wholly-owned subsidiary of the Company, since April 2019. From October 2016 to December 2018, he served as an assistant to the president of the Company. From September 2015 to October 2016, he served several positions in CRSCD, including serving as a general manager, as director and as deputy secretary of the Party Committee. From November 2014 to September 2015, he held the positions of the deputy general manager and director at CRSCD, who is mainly in charge of the overall work of operation management. From July 2013 to November 2014, he served several positions in CRSCD, including serving as deputy general manager, as the dean of the Ground Control Research and Design Institute, the general manager of the System Integration Center and secretary of Party General Branch. From March 2012 to July 2013, he served as the dean of the Ground Control Research and Design Institute of CRSCD. From January 2011 to March 2012, he served as a director of CRSC Research & Design Institute Station, during which period, he also served as manager of Beijing Guotie Xintong Technology Development Co., Ltd. (北京國鐵信通科技發展有限公司).</p>

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Name	Major working experience
HUANG Weizhong	He has served as the vice president and a member of the Standing Committee of the Party Committee of the Company since April 2013. From November 2012 to September 2014, he served as the chairman of CRSCD, during which period, served as its secretary of the Party Committee. From November 2010 to November 2012, he served as the director and the general manager of CRSCD. From January 2004 to November 2010, he served as the vice president of CRSC Research & Design Institute. From December 1996 to January 2004, he served as the director of City Transport and Computer Application Research Institute of CRSCD.
ZHANG Zhihui	He has served as vice president of the Company since January 2019 and served as a member of the Standing Committee of the Party Committee of the Company since December 2018. Mr. ZHANG has been the chief engineer of the Company since October 2016. From November 2015 to October 2016, he served as the deputy chief engineer of the Company and the chief engineer of CRSCD. From March 2012 to November 2015, he served as the chief engineer and director of CRSCD. From June 2015 to November 2015, he also served as the dean of CRSCD Electrification Design Institute. From January 2005 to March 2012, he served as the director of CRSCD Signal Station.
QIU Wei	She has served as the secretary to the Board of the Company from October 2019 to January 2022. She has served as a special external director of the Company since October 2021. She has served as a director of China Railway Signal & Communication Shanghai Engineering Bureau Group Co., Ltd. (中國鐵路通信信號上海工程局集團有限公司) and a director of CRSC Urban Rail Transit Technology Co., Ltd. (通號城市軌道交通技術有限公司) since April 2020. She has served as the director of Guogai Shuangbai Development Fund Management Co., Ltd. (國改雙百發展基金管理有限公司) since July 2019. She has been the chairwoman of Supervisory Committee of CRSC Innovation Investment Co., Ltd. (通號創新投資有限公司) since February 2016. She has been the director of the development and planning department of the Company from September 2019 to February 2020. Ms. QIU served successively as the deputy director and director of the finance department of the Company from December 2012 to September 2019. Ms. QIU successively served as the head of the development and planning department and the head of the finance department of the Company from November 2008 to December 2012. She served as the manager of the finance department of Beijing Nera Stentofon Communication Equipment Co., Ltd. (北京挪拉斯特芬通信設備有限公司) from April 2003 to November 2008. Ms. QIU served as the audit supervisor of the supervision and audit department and an accountant of the funds settlement centre of China Railway Signal & Communication Corporation (中國鐵路通信信號集團公司, currently known as China Railway Signal and Communication (group) Corporation Limited (中國鐵路通信信號集團有限公司) from February 2001 to April 2003. Ms. QIU served successively as an assistant accountant of the finance department and an auditor of the audit department of China Railway Signal & Communication Company (中國鐵路通信信號總公司) from August 1995 to February 2001.

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
FU Gang	<p>He has served as the deputy secretary of the Party Committee and a director of Beijing CRSC Research & Design Institute Group Co., Ltd. (CRSCD), a wholly-owned subsidiary of the Company, since April 2020. He has served as the deputy secretary of the Party Committee (responsible for the work of the Party Committee), a director and the deputy general manager of CRSCD from April 2020 to September 2021. From July 2018 to April 2020, he served as a director, the deputy general manager and chief engineer of CRSCD. From February 2017 to July 2018, he served as assistant to general manager of CRSCD. He served as the senior engineer of CRSCD from January 2017 to February 2017; as the secretary to the General Party Branch and dean of the Signal & Communication Design Institute of CRSCD from May 2016 to January 2017; as the dean of the Signal & Communication Design Institute and the secretary to the General Party Branch of the Signal & Communication Institute of CRSC Research & Design Institute Group Co., Ltd. from July 2015 to May 2016; as the dean of the Signal & Communication Design Institute and the secretary to the General Party Branch of the Signal & Communication Institute of Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd. from October 2014 to July 2015; and as engineer, deputy director and director of the Technology Management Center, deputy dean, among other roles, of the Signal & Communication Design Institute of Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd. from March 2011 to October 2014.</p>
JIANG Ming	<p>He has served as deputy chief engineer of CRSC Research & Design Institute Group Co., Ltd., a wholly-owned subsidiary of the Company, since February 2017. Mr. JIANG served as chief engineer of Security Control Institute of CRSC Research & Design Institute Group Co., Ltd. from May 2016 to November 2018; as chief engineer of Research Institute of CRSC Research & Design Institute Group Co., Ltd. from July 2015 to May 2016; as chief engineer of Research Institute of Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd. from March 2012 to July 2015; he served as the dean of Research Institute of Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd. from December 2012 to October 2013; as engineer, senior engineer, chief engineer and among other roles of the R & D Center of CRSC Research & Design Institute from August 2007 to March 2012.</p>
LIU Zhen	<p>He has been the dean of the Basic Equipment Technology Research Institute of CRSC Research & Design Institute Group Co., Ltd., a wholly-owned subsidiary of the Company, since June 2020. He served as the chief engineer of the Basic Equipment Technology Research Institute of CRSC Research & Design Institute Group Co., Ltd. from June 2017 to June 2020; as the senior engineer of CRSC Research & Design Institute Group Co., Ltd. from January 2017 to June 2017; as the deputy director of the Hardware Research Institute of Security Control Institute of CRSC Research & Design Institute Group Co., Ltd. from May 2016 to January 2017; as the deputy director of the Hardware Research Institute of Research Institute of CRSC Research & Design Institute Group Co., Ltd. from January 2016 to May 2016 and as senior engineer of CRSC Research & Design Institute Group Co., Ltd. from December 2012 to January 2016.</p>

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
MA Lilan	She has served as deputy chief engineer of CRSC Research & Design Institute Group Co., Ltd., a wholly-owned subsidiary of the Company, since July 2015. She served as the deputy chief engineer of CRSC Research & Design Institute Group Co., Ltd. from March 2012 to July 2015, during which she also served as, among other roles, the director of the Quality Center and the chief engineer of the Signal & Communication Institute; as the deputy chief engineer and director of General Engineer Office of the CRSC Research & Design Institute from June 2009 to March 2012; She served as a senior engineer, deputy director of the General Engineer Office, director of the Technology Department and director of the General Engineer Office of CRSC Research & Design Institute among other roles from December 1997 to June 2009.
LUO Jing	She has served as Party secretary and chairperson of CRSC Communication & Information Group Company Ltd., a wholly-owned subsidiary of the Company since April 2020 and the director of Information Center of the Company since February 2020. From April 2018 to July 2020, she has been the chairman and Party branch secretary of CRSC Institute of Smart City Research & Design Co., Ltd. Ms. LUO served as the vice chairperson and the head of Party organization of CRSC Institute of Smart City Research & Design Co., Ltd., and director of Information Center and deputy director of the office of the Company from August 2016 to April 2018. From January 2016 to August 2016, she served as the deputy dean (chair) of the Smart City Engineering Research Institute (Information Center) and the deputy director of office of the Company, during which from February 2016 to August 2016, she served as a director of CRSC Communication & Information Group Company Ltd., a wholly-owned subsidiary of the Company. From January 2015 to January 2016, she served as the director of Smart City Research & Application Center of CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司智慧城市研究應用中心). From January 2014 to January 2015, she served as the deputy chief engineer of CRSC Communication & Information Group Company Ltd., and the director of Smart City Research & Application Center. From July 2013 to January 2014, she served as the deputy general manager and chief engineer of CRSC Information Industry Co., Ltd. From July 2009 to July 2013, she served successively as an assistant researcher, an associate researcher of Human Resource Development Center of Ministry of Housing and Urban-Rural Development (住房和城鄉建設部人力資源開發中心), and an associate researcher of China Academy of Urban Planning & Design among other roles.

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
DENG Hongyuan	<p>Since May 2018, he has served as a director, the deputy general manager and chief engineer of CRSC Urban Rail Transit Technology Co., Ltd., a wholly-owned subsidiary of the Company. From January 2017 to May 2018, he served as the deputy general manager and chief engineer of Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd. From April 2016 to January 2017, he served as the deputy chief engineer of Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd., during which he also served as the deputy general manager and chief engineer of Beijing Urban Transit Technology Co., Ltd. (北京通號國鐵城市軌道技術有限公司). From October 2014 to January 2015, he was the director of the Integration Center of Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd. He served successively as the deputy chief engineer, the chief engineer, the deputy branch dean, and the dean of the City Traffic Branch of Beijing National Railway Research & Design Institute of Signal & Communication (北京全路通信信號研究設計院城交分院) from September 2007 to December 2014, during which he also served as deputy general manager and deputy director of the Integration Center.</p>
JIANG Jianhua	<p>Since January 2011, he has served as the vice president of technology of the R&D Center of CASCO Signal Ltd., a subsidiary controlled by the Company. Since August 2019, he has served as a provisional member of the Party Committee of CASCO Signal Ltd. He has served as the vice president of technology of the Research & Design Institute of CASCO Signal Ltd. (卡斯柯信號有限公司研究設計院) since August 2015. From July 1998 to January 2011, he served successively as the deputy chief engineer and the chief engineer of CASCO Signal Ltd. From July 1988 to July 1998, he served successively as a software engineer, the deputy department manager and the department manager of the software department of CASCO Signal Ltd.</p>
CUI Ke	<p>Since January 2018, he has served as the chief engineer of the Research & Design Institute of CASCO Signal Ltd., a subsidiary controlled by the Company. From January 2014 to December 2017, he served as the urban rail product director of Urban Rail System Development Department of CASCO Signal Ltd.; from August 2010 to December 2013, he served as the urban rail technical director of R&D Department of CASCO Signal Ltd.; and from August 2000 to July 2010, he served as the department manager of the R&D Department of CASCO Signal Ltd.</p>

SECTION V CORPORATE GOVERNANCE

Name	Major working experience
LI Hongyan	<p>Since June 2020, he has served as the product manager of R&D center of CRSC Communication & Information Group Company Ltd., a wholly-owned subsidiary of the Company. From April 2017 to June 2020, he has been the chief engineer of Security Technology Branch of CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司安防技術分公司). From July 2015 to April 2017, he served as the chief engineer of Beijing Research Institute of CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司北京研究院). From January 2014 to July 2015, he served as the deputy chief engineer of CRSC Communication & Information Group Company Ltd. From September 2013 to July 2015, he served as the dean of Beijing Research Institute of CRSC Communication & Information Group Company Ltd. From January 2010 to September 2013, he served successively as the deputy manager and manager of the Technology Development Research Department of Beijing Guotie Huachen Communication Technology Co., Ltd. (北京國鐵華晨通信技術有限公司). From June 2006 to January 2010, he served successively as an engineer of the Engineering Technology Department (工程技術部) and the manager of Research & Development Department (研究開發部) of Beijing Nera Stentofon Communication Equipment Co., Ltd.</p>
WANG Xiangtao	<p>Since August 2020, he has served as a director, the deputy general manager and chief engineer of CRSC Railway Vehicles Co., Ltd. Since May 2015, he has served as the deputy general manager of technology of CRSC Railway Vehicles Co., Ltd. From November 2016 to December 2020, Mr. WANG has been a director of CRSC Airbus Co., Ltd., a subsidiary invested by the Company. From May 2011 to April 2015, he served as the deputy general manager of technology of Xiangtan Electric Urban Rail Vehicle Co., Ltd. (湘電城軌車輛有限公司). From May 2009 to May 2011, he served as the deputy general manager of technology of Xiangtan Electric Urban Rail Equipment Co., Ltd. (湘電城軌裝備有限公司). From August 2007 to May 2011, he served as the institute director of the Vehicle Research Institute of Xiangtan Electric Heavy Equipment Co., Ltd. (湘電重型裝備有限公司車輛研究所), and as a supervisor of the same company. From June 2001 to August 2007, he served as the institute director of the Vehicle Research Institute of Xiangtan Electric Co., Ltd. From July 1985 to June 2001, he served as an engineer of the Technical Center of Xiangtan Electric Plant (湘潭電機廠技術中心).</p>

The Company has adopted a code of conduct no less exacting than that as provided in the Model Code as the code of conduct for all the Directors and Supervisors trading securities of the Company ("code of conduct"). All the Directors and Supervisors of the Company have confirmed that they have complied with the standards as stipulated by the code of conduct for the period ended 31 December 2021.

Other explanations

☐ Applicable ☒ Not applicable

SECTION V CORPORATE GOVERNANCE

(II) POSITIONS HELD BY CURRENT AND RESIGNED DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT DURING THE REPORTING PERIOD

1. Positions Held in Shareholder Entities

✓ Applicable ☐ Not applicable

Name	Name of Shareholder Entity	Position held in the Shareholder Entity	Start date of term of office	Termination date of term of office
ZHOU Zhiliang	China Railway Signal and Communication (group) Corporation Limited	Secretary of the Party Committee and Chairman	May 2017	–
XU Zongxiang	China Railway Signal and Communication (group) Corporation Limited	Deputy secretary of the Party Committee, Director and general manager	November 2019	–
YANG Yongsheng	China Railway Signal and Communication (group) Corporation Limited	Deputy secretary of the Party Committee and Employee representative director	July 2017, November 2017	–
HU Shaofeng	China Railway Signal and Communication (group) Corporation Limited	A member of the Standing Committee of the Party Committee	June 2016	–
ZHAO Xiaodong	China Railway Signal and Communication (group) Corporation Limited	A member of the Standing Committee of the Party Committee	December 2018	–
Explanation on positions held in Shareholder entities	None			

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2. Positions Held in Other Entities

✓ Applicable ☐ Not applicable

Name	Name of other entities	Positions held in other entities	Start date of term of office	Termination date of term of office
CHEN Jin'en	State Grid Corporation of China	Director	July 2015	June 2021
	China National Building Material Group Co., Ltd.	Director	August 2016	January 2021
CHAN Ka Keung Peter	Metallurgical Corporation of China Ltd.	Director	November 2014	April 2020
	MMG Limited	Director	December 2019	December 2022
YAO Guiqing	China General Technology Group Co., Ltd. (中國通用技術集團有限公司)	Director	November 2018	October 2024
GUO Yonghong	China Reform Holdings Corporation Ltd. (中國國新控股有限責任公司)	Special external Director of Central Enterprises	August 2020	
YAO Cho Fai Andrew	Hong Kong Shanghai Alliance Holdings Limited (滬港聯合控股有限公司)	Chairman and chief executive officer	July 1999	
	Kader Holdings Company Limited (開達集團有限公司)	Independent Non-executive Director	September 2004	
FU Junyuan	China Information and Communication Technology Group Co., Ltd.	Director	November 2021	

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Name	Name of other entities	Positions held in other entities	Start date of term of office	Termination date of term of office
LI Tienan	China Green Development and Investment Group Co., Ltd.	Supervisor	November 2020	
	China Reform Asset Management Co., Ltd.	General Legal Adviser	September 2020	
	China Reform Asset Management Co., Ltd. (中國國新資產管理有限公司)	General manager	February 2020	December 2021
	CRRC Industrial Investment Co., Ltd. (中車產業投資有限公司)	Director	January 2020	March 2021
	China Northern Industry Co., Ltd. (中國北方工業有限公司)	Director	October 2019	
	China Aviation Supplies Co., Ltd. (中國航空器材有限責任公司)	Director	July 2019	February 2021
	China Tower Corporation Limited (中國鐵塔股份有限公司)	Supervisor	July 2019	
	China Culture Development Corporation Ltd. (中國文化產業發展集團有限公司)	Director	March 2019	November 2021
	Guoxin Ronghui Equity Investment Fund Management Co., Ltd. (國新融匯股權投資基金管理有限公司)	Director	March 2019	
	Zhongjin Gold Corp., Ltd. (中金黃金股份有限公司)	Director	March 2021	
	Guoxin Shengkang Private Equity Fund Management (Beijing) Co., Ltd. (國新盛康私募基金管理(北京)有限公司)	Legal representative, executive Director and general manager	December 2020	

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Name	Name of other entities	Positions held in other entities	Start date of term of office	Termination date of term of office
YANG Yang	Guangdong Utrust Financial Leasing Co., Ltd. (廣東粵財金融租賃股份有限公司)	Director	April 2020	
	CRSC (Changsha) Railway Traffic Control Technology Co., Ltd. (通號(長沙)軌道交通控制技術有限公司)	Director	October 2021	
CHEN Shikui	CRSC Construction Group Co., Ltd. (通號建設集團有限公司)	Director	August 2016	
	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Director	February 2016	October 2021
	CRSC (Zhengzhou) Electrification Bureau Co., Ltd. (通號(鄭州)電氣化局有限公司)	Supervisor	May 2015	
QIU Wei	CRSC Urban Rail Transit Technology Co., Ltd. (通號城市軌道交通技術有限公司)	Director	April 2020	
	China Railway Signal & Communication Shanghai Engineering Bureau Group Co., Ltd. (中國鐵路通信信號上海工程局集團有限公司)	Director	April 2020	
	Guogai Shuangbai Development Fund Management Co., Ltd. (國改雙百發展基金管理有限公司)	Director	July 2019	
	CRSC Innovation Investment Company Ltd. (通號創新投資有限公司)	Chairwoman of the supervisory committee	February 2016	
Explanation on positions held in other entities	None			

SECTION V CORPORATE GOVERNANCE

(III) REMUNERATION OF DIRECTORS, SUPERVISORS, SENIOR MANAGEMENT AND CORE TECHNICAL PERSONNEL

✓ Applicable ☐ Not applicable

Unit: RMB0' 000 Currency: RMB

The decision-making procedure for the remunerations of Directors, Supervisors and senior management	The Remuneration and Evaluation Committee of the Board makes recommendations to the Board on the remunerations of Directors and Senior Management of the Company. The Board shall make decision on remuneration and awards for senior management, and the general meetings shall make decision on remuneration matters for Directors and Supervisors.
The basis for determining remunerations of Directors, Supervisors and senior management	The remunerations of the Company's Directors, Supervisors and senior management are determined in accordance with the Articles of Association of China Railway Signal & Communication Corporation Limited* and relevant rules.
Actual payment of remunerations of Directors, Supervisors and senior management	Mr. GUO Yonghong and Ms. LI Tienan did not receive remunerations from the Company. The remuneration of other Directors, Supervisors and senior management shall be paid by the Company in accordance with relevant rules.
Total actual remunerations received by all Directors, Supervisors and senior management at the end of the reporting period	635.44
Total actual remunerations received by core technical personnel at the end of the reporting period	1,091

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(IV) THE CHANGES IN THE COMPANY'S DIRECTORS, SUPERVISORS, SENIOR MANAGEMENT AND CORE TECHNICAL PERSONNEL

☒ Applicable ☐ Not applicable

Name	Position held	Changes	The reason of changes
WANG Jiajie	Independent Non-executive Director	Resignation	Age
GUO Yonghong	Non-executive Director	Election	Election
YAO Cho Fai Andrew	Independent Non-executive Director	Election	Election
FU Junyuan	Independent Non-executive Director	Election	Election
CHAN Ka Keung Peter	Independent Non-executive Director	Resignation	Resignation upon expiration of term of office
CHEN Jin'en	Independent Non-executive Director	Resignation	Resignation upon expiration of term of office
CHEN Shikui	Employee Supervisor	Resignation	Resignation upon expiration of term of office
YANG Yang	Employee Supervisor	Election	Election from the Workers Congress
QIU Wei	Secretary to the Board	Resignation	Personal reasons

(v) EXPLANATION ON PENALTIES IMPOSED BY SECURITIES REGULATORY AUTHORITIES IN THE RECENT THREE YEARS

☐ Applicable ☒ Not applicable

(VI) OTHERS

☐ Applicable ☒ Not applicable

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VII. DETAILS OF THE BOARD MEETINGS CONVENED DURING THE REPORTING PERIOD

Name of meeting	Time of meeting	Resolutions
The 23rd Meeting of the Third Session of the Board	15 January 2021	1. The resolution on the Scheme of Main Economic Indicators for 2021 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting
The 24th Meeting of the Third Session of the Board	29 January 2021	1. The resolution on nominating candidates for non-executive directors of the third session of the Board of the Company was considered and approved at the meeting 2. The resolution on the by-election of members of the Nomination Committee of the third session of the Board of the Company was considered and approved at the meeting 3. The resolution on requesting to convene an extraordinary general meeting was considered and approved at the meeting
The 25th Meeting of the Third Session of the Board	26 March 2021	1. The resolution on Annual Report for 2020 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting 2. The resolution on Final Account Report for 2020 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting 3. The resolution on profit distribution plan for 2020 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting 4. The resolution on payment of audit fees for 2020 and plan of appointment of external auditor for 2021 was considered and approved at the meeting 5. The resolution on general mandate to issue debt financing instruments was considered and approved at the meeting 6. The resolution on the Special Report on Deposit and Use of Proceeds for 2020 was considered and approved at the meeting 7. The resolution on the Report on Internal Control Evaluation for 2020 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting 8. The resolution on the Internal Control Audit Report for 2020 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting

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Name of meeting	Time of meeting	Resolutions
		<p>9. The resolution on the Report on the Duty Performance of the Audit and Risk Management Committee for 2020 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting</p> <p>10. The resolution on the Environmental, Social and Governance Report for 2020 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting</p> <p>11. The resolution on the remuneration evaluation of directors and senior management of the Company for 2020 was considered and approved at the meeting</p> <p>12. The resolution on Report of the Board of Directors for 2020 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting</p> <p>13. The resolution on proposing to convene the general meeting was considered and approved at the meeting</p>
The 26th Meeting of the Third Session of the Board	29 April 2021	<p>1. Resolution on the 2021 First Quarterly Report of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting</p>
The 27th Meeting of the Third Session of the Board	7 July 2021	<p>1. Resolution on the Optimization and Adjustment Plan for CRSC Headquarters Organization Setup and Personnel Allocation was considered and approved at the meeting</p>
The 28th Meeting of the Third Session of the Board	28 July 2021	<p>1. Resolution regarding Considering the Plan for Merging Zhejiang Construction Investment with CRSC Construction Group was considered and approved at the meeting</p> <p>2. Resolution regarding Considering the Plan for Vertical Integration of Enterprises Engaging in R&D and Design and Enterprises in Systems and Equipment Industry</p>
The 29th Meeting of the Third Session of the Board	25 August 2021	<p>1. Resolution on the 2021 Interim Report of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting</p> <p>2. Resolution on utilizing unused raised funds for cash management was considered and approved at the meeting</p>

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Name of meeting	Time of meeting	Resolutions
		3. Resolution on the Special Report on the Depositing and Use of Raised Funds in the First Half of 2021 was considered and approved at the meeting
The 30th Meeting of the Third Session of the Board	12 September 2021	1. Resolution on authorizing the operating management of the Company to handle matters related to the issuance of perpetual medium-term notes was considered and approved at the meeting
The 31st Meeting of the Third Session of the Board	27 October 2021	1. Resolution on the 2021 Third Quarterly Report of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting 2. Resolution on external guarantees plan for 2022 of China Railway Signal & Communication Corporation Limited was considered and approved at the meeting
The 32nd Meeting of the Third Session of the Board	29 December 2021	1. Resolution on 14th Five-Year Development Plan of CRSC was considered and approved at the meeting

VIII. PERFORMANCE OF DUTIES OF DIRECTORS

(I) Directors' Attendance at Board Meetings and General Meetings

Attendance at Board meetings								Attendance at the general meetings
Name of Director	Independent director or not	Number of required attendances this year	Number of attendances in person	Number of attendances by means of telecommunications	Number of attendances by proxy	Number of absences	Failure to attend	Number of attendances at the general meetings
							meetings in person for two consecutive times	
ZHOU Zhiliang	No	10	5	4	1	0	No	2
XU Zongxiang	No	10	6	4	0	0	No	2
YANG Yongsheng	No	10	6	4	0	0	No	2
YAO Guiqing	Yes	10	6	5	0	0	No	2
CHEN Jin'en	Yes	10	6	4	0	0	No	2
CHAN Ka Keung Peter	Yes	10	6	9	1	0	No	2
GUO Yonghong	No	8	4	5	0	0	No	1
WANG Jiajie	Yes	1	1	0	0	0	No	0

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The explanation of failure to attend Board meetings in person for two consecutive times

☐ Applicable ☒ Not applicable

Number of the Board meetings held for the year	10
Including: number of meetings held onsite	0
Number of meetings held by means of telecommunications	4
Number of meetings held onsite and by means of telecommunications simultaneously	6

(II) Objections Raised by Directors against Relevant Matters of the Company

☐ Applicable ☒ Not applicable

(III) Others

☐ Applicable ☒ Not applicable

IX. THE SPECIAL COMMITTEES UNDER THE BOARD OF DIRECTORS

☒ Applicable ☐ Not applicable

The Company has established five special committees under the Board of Directors, including the Strategy and Investment Committee, the Remuneration and Evaluation Committee, the Nomination Committee, the Audit and Risk Management Committee, and the Quality and Safety Committee. Members of the Remuneration and Evaluation Committee and the Audit and Risk Management Committee were all held by external directors, who accounted for the majority of the Nomination Committee and the Quality and Safety Committee, ensuring that external directors fully express their opinions and perform their duties efficiently.

(1). Members of the Special Committees under the Board of Directors

Categories of Special Committees	Member Name
Nomination Committee	ZHOU Zhiliang, YAO Guiqing, CHEN Jin'en
Remuneration and Evaluation Committee	CHEN Jin'en, CHAN Ka Keung Peter, YAO Guiqing
Strategy and Investment Committee	ZHOU Zhiliang, XU Zongxiang, YANG Yongsheng, CHEN Jin'en, YAO Guiqing
Audit and Risk Management Committee	CHAN Ka Keung Peter, CHEN Jin'en, GUO Yonghong
Quality and Safety Committee	XU Zongxiang, YAO Guiqing, GUO Yonghong

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(2). During the reporting period, the Audit and Risk Management Committee Convened Four Meetings

Time of meeting	Content of the meeting	Important comments and recommendations	Other performance of duties
24 March 2021	Considered proposals such as the plan of the external auditor for 2021, the internal audit report for 2020, the internal control evaluation report for 2020, the compliance management report for 2020, the material risk assessment report for 2021, and the work report of internal control system for 2020.	They agreed with the above motion.	
27 April 2021	Considered the proposal on the first quarterly report for 2021.	They agreed with the above motion.	They listened to the reports from the Legal Compliance Department and the Audit Department on their annual work priorities.
23 August 2021	Considered the report on the results of Ernst & Young's 2021 interim review and the proposal on the interim reports for 2021.	They agreed with the above motion.	They listened to the statement on the critical tasks of the Risk Control Center (Legal Compliance Department and Audit Department) in the second quarter of 2021.
25 October 2021	Considered the proposal of the third quarterly report for 2021.	They agreed with the above motion.	They listened to the report on the critical tasks of the Risk Control Center (Legal Compliance Department and Audit Department) in the third quarter.

During the reporting period, the Audit and Risk Management Committee currently consists of independent non-executive Directors Mr. CHAN Ka Keung Peter, Mr. CHEN Jin'en and a non-executive Director Mr. GUO Yonghong. In particular, Mr. CHAN Ka Keung Peter is a member of the Hong Kong Institute of Certified Public Accountants, International Association of Accounting Professionals and CPA Australia, with rich knowledge and experience in accounting. He serves as chairman of the Audit and Risk Management Committee. The Audit and Risk Management Committee was mainly responsible for proposing the selection and replacement of the Company's external audit firm; supervising the Company's internal audit system; the communication, supervision and verification of the Company's internal

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audit; reviewing the financial information and its disclosure; reviewing risk management and internal systems; reviewing the Company's risk management strategies and solutions; risk control, management, supervision and evaluation of major decisions, major events, and important business processes. During the reporting period, the Audit and Risk Management Committee strictly complied with the requirements of the Company's Working Rules for the Audit and Risk Management Committee of the Board of Directors and the Working Rules for the Annual Report of the Audit and Risk Management Committee of the Board of Directors and other system requirements, performed the duties of the committee independently and objectively, and actively carried out work centering on auditing and supervision, financial monitoring, internal control system construction and comprehensive risk management. The Audit and Risk Management Committee reviewed the Company's financial information and disclosure thereof, repeatedly examined and studied the financial information disclosed in the Company's reports and financial statements, carefully reviewed the proposals on the relevant financial reports of the Company; examined the implementation of the Company's internal control and risk management; guided the internal audit work of the Company, listened to the reports of internal audit department of the Company on auditing work and determined the audit work plan of the Company for 2021.

The Audit and Risk Management Committee of the Company has reviewed the annual results of the Company for the year ended 31 December 2021.

(3). The Nomination Committee held a meeting during the Reporting Period

Time of meeting	Content of the meeting	Important comments and recommendations	Other performance of duties
21 January 2021	Considered the Proposal on the Nomination of Candidates for Non-executive Director of the Third Session of the Board of Directors of the Company.	They agreed with the above motion.	

During the reporting period, the Nomination Committee consists of Chairman Mr. ZHOU Zhiliang, independent non-executive Directors Mr. YAO Guiqing and Mr. CHEN Jin'en serving as members. Mr. ZHOU Zhiliang serves as the chairman. The Nomination Committee was accountable to the Board of Directors and was mainly responsible for researching the selection criteria, procedures and methods for Directors and senior management and making recommendations; reviewing candidates for Directors and senior management, and providing review opinions and appointment recommendations to the Board of Directors; reviewing the independence of Non-executive Directors; and making recommendations to the Board of Directors on the appointment or reappointment of Directors and senior management and the succession plans for the above-mentioned personnel.

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(4). The Remuneration and Evaluation Committee held one meeting during the Reporting Period

Time of meeting	Content of the meeting	Important comments and recommendations	Other performance of duties
27 October 2021	Listened to the report on the remuneration of the corporate officers of CRSC in 2020	Agreed.	

During the Reporting Period, the Remuneration and Evaluation Committee consists of independent non-executive Directors Mr. CHEN Jin'en, Mr. CHAN Ka Keung Peter and Mr. YAO Guiqing. Mr. CHEN Jin'en serves as chairman of the committee. The Remuneration and Evaluation Committee was mainly responsible for formulating and assessing the evaluation standards of the Company's directors and senior management; and formulating and reviewing the remuneration policies and plans of the Company's directors and senior management, and making recommendations to the Board of Directors. During the reporting period, the Remuneration and Evaluation Committee of the Board of Directors strictly complied with the Company's Working Rules for the Remuneration and Evaluation Committee of the Board of Directors and other system requirements, and performed the duties of the committee independently and objectively. During the reporting period, the Remuneration and Evaluation Committee of the Board of Directors strictly complied with the Company's Working Rules for the Remuneration and Evaluation Committee of the Board of Directors and other system requirements, and performed the duties of the committee independently and objectively.

(5). The Strategy and Investment Committee held one meeting during the Reporting Period

Time of meeting	Content of meeting	Important comments and recommendations	Other information on performance of duties
15 January 2021	Listened to the report on the 14th Five-Year Development Plan of CRSC (Preliminary Draft)	Agreed.	

During the reporting period, the Strategy and Investment Committee consists of executive Directors Mr. ZHOU Zhiliang, Mr. XU Zongxiang and Mr. YANG Yongsheng, and independent non-executive Directors Mr. CHEN Jin'en and Mr. YAO Guiqing, and Mr. ZHOU Zhiliang serves as chairman of the committee. The Strategy and Investment Committee was accountable to the Board of Directors, mainly responsible for researching the Company's development strategy and planning, and making recommendations on major investments, major investment and financing, major capital operations, asset management projects, and other major issues affecting the Company's development.

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(6). During the reporting period, the Quality and Safety Committee held one meeting

Time of meeting	Content of meeting	Important comments and recommendations	Other performance of duties
20 December 2021	Listened to the report on the quality and safety work of the Company in 2021 and the key work arrangement in 2022.	Agreed.	

(7). The details of objections

☐ Applicable ☒ Not applicable

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X. EXPLANATION OF THE SUPERVISORY COMMITTEE ON DISCOVERY OF THE COMPANY'S RISKS

☐ Applicable ☒ Not applicable

The Supervisory Committee had no objection to the supervision matters during the reporting period.

XI. EMPLOYEES OF THE PARENT COMPANY AND MAJOR SUBSIDIARIES AS OF THE END OF REPORTING PERIOD

(I) Employee

Number of in-service employees of the parent company	135
Number of in-service employees of major subsidiaries	20,153
Total number of in-service employees	20,288
Number of resigned and retired employees with expenses borne by the parent company and major subsidiaries	66

Professional composition

Category	Number
Production personnel	6,006
Sales personnel	1,223
Technical personnel	8,744
Financial personnel	739
Administrative personnel	1,917
Others	1,659
Total	20,288

Educational background

Category	Number (person)
Doctoral candidate	75
Master degree candidate	2,743
Bachelor's degree	11,231
College degree	3,940
High school degree and below	2,299
Total	20,288

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(II) Remuneration Policy

☒ Applicable ☐ Not applicable

In accordance with various policies and guidelines of the state in relation to income distribution and considering the requirements of modern enterprise system, the Company has been continuously improving the remuneration management system and established a salary determination and normal increment mechanism which is basically adapted to the labor market and linked with the enterprise benefits and labour productivity. The Company gives full play to the incentive and constraint functions that remuneration distribution may serve to attract and retain the core talents of the Company, and focuses on the cultivation and reward of scientific and technological talents and technical talents.

In terms of total remuneration adjustment, the Company strictly follows the archival management measures of total remuneration, and adheres to the basic principle of efficiency-based wages, i.e., the enterprises with high efficiency and benefit set high wage levels, which reflects the fairness of distribution, at the same time, support of standalone measures of total remuneration was provided to the team undertaking key core technology research projects to stimulate the enthusiasm of scientific research personnel; in terms of management of the remuneration of responsible persons, the remuneration of responsible persons are linked with the operating performance and the management of the Company, which has good guiding and supporting effects on achieving the operation and management objectives; in terms of the remuneration management of employees of the Company, the Company established a salary system based on basic wages and performance-based bonus, to reflect the job value orientation and work achievement orientation of internal income distribution, effectively enhance the working positivity of employees and improve the vitality of enterprises.

(III) Training Plan

☒ Applicable ☐ Not applicable

In 2021, according to training management measures of CRSC, the Company prepared the 2021 Annual Training Plan of the Company based on employees' needs. To ensure the implementation of training plan, the Company cultivated talents by adopting the online and offline method, followed and supervised the implementation of training plan, and evaluated the training effect. In light of actual situation, each subsidiary organized the trainings for whole year. The training content included the work procedure of business, relevant specialized knowledge and business skills. All departments of the headquarters have carried out trainings according to the plan to strengthen the business training of the Group and the trainings on management ability and professional ability of the headquarters staff, and enhance the management and control ability of the Group.

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In order to thoroughly study and implement Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, strengthen our consciousness of the need to maintain political integrity, think in big-picture terms, follow the leadership core, and keep in alignment with the central Party leadership; stay confident in the path, theory, system, and culture of socialism with Chinese characteristics; and uphold General Secretary Xi Jinping's core position on the Party Central Committee and in the Party as a whole, and uphold the Party Central Committee's authority and its centralized, unified leadership, we conscientiously implemented the requirements of SASAC and the Party Committee of the Company, strengthened the political construction and capacity building of leading cadres, actively organized various kinds of Party building trainings, and organized learning through the learning platform of China Business Executives Academy, Dalian. The Company organized and completed the online special training on promoting the high-quality development of state-owned enterprises, the overall training on the three-year actions for the reform of Chinese state-owned enterprises, the online training on the reform of three systems of key state-owned backbone enterprises, the advanced seminar benchmarking with the world's best, and the online training on the spirit of the Sixth Plenary Session of the 19th Central Committee. The Company cultivated international talents, management talents, technical talents and skilled talents which met the development of the Company by strengthening the trainings to enhance the quality of talents.

In 2021, the Company organized trainings with 65,996 participants, of which 20,651 participants were management personnel, 33,719 participants were professional technicians (other than management personnel), and 11,626 participants were technical personnel. CRSC continued to improve the talent training system, which provided strong support for the realization of CRSC talent strategy.

(IV) Labor Outsourcing

✓ Applicable ☐ Not applicable

Total number of working hours of outsourced labor

54.6 million hours

Total remuneration paid to outsourced labor

RMB1,843.7 million

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XII. PROFIT DISTRIBUTION PLAN OR RESERVES-TO-EQUITY TRANSFER PLAN

(I) Formulation, implementation or adjustment of cash dividend policy

☒ Applicable ☐ Not applicable

1. Formulation of cash dividend policy

While maintaining its sustained and steady development, the Company attaches great importance to the reasonable return on investment of shareholders. According to the relevant regulations of the CSRC, the Articles of Association have clearly stipulated the review procedures for cash dividend and profit distribution. The Company's profit distribution complies with the provisions of the Articles of Association. The dividend standards and ratios are explicit and clear, and the relevant decision-making mechanism and procedures are complete.

2. Implementation of cash dividend policy during the reporting period

On 11 June 2021, the 2020 annual general meeting of the Company reviewed and approved the profit distribution plan for 2020. Calculated based on the total share capital of 10,589,819,000 shares (after the listing and issue of A Shares of the Company), cash dividends of RMB0.2 (tax inclusive) per share were distributed, which had been completed.

3. Explanation of profit distribution plan for 2021

The Company held the 2nd meeting of the fourth session of the Board on 25 March 2022. The meeting reviewed and approved the Annual Profit Distribution Plan for 2021 with 7 affirmative votes, 0 dissenting vote and 0 vote abstaining from voting, and agreed to submit the profit distribution plan to the Company's 2021 annual general meeting for review. The plan decides that a cash dividend of RMB1.7 (tax inclusive) will be paid to all shareholders for every 10 shares, of which domestic shareholders will be paid in RMB and H shareholders will be paid in Hong Kong dollars. The exchange rate of Hong Kong dollars will be calculated in accordance with the average forex closing price published by the People's Bank of China for the three working days before the day when the dividend distribution announcement is made. As of 31 December 2021, the total share capital of the Company was 10,589,819,000 shares. Based on this calculation, the total cash dividend to be distributed is RMB1,800,269,230, accounting for 54.98% of net profit attributable to shareholders of listed companies in the 2021 consolidated statement of the Company. The independent Directors of the Company performed their duties diligently, carefully reviewed the proposal on the cash dividend policy and issued independent opinions.

If the above profit distribution plan is reviewed and approved by the Company's general meeting, the cash dividends are expected to be distributed on or before 31 August 2022. When the specific time is determined for convening the general meeting, the Company will separately announce further details including the closure of the registration of members of the H shares and the expected cash dividend payment date, if updated, in respect of the relevant cash dividend distribution. The time arrangement such as the record date and the cash payment date for Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect investors is in line with that for H shareholders of the Company.

SECTION V CORPORATE GOVERNANCE

- (II) The Company's plans for distribution of dividends from ordinary shares or transfer of capital reserve funds in the recent three years (including the reporting period)

Unit: Yuan Currency: RMB

Year	Bonus shares for every 10 shares (shares)	Dividends distributed per 10 shares (yuan) (tax inclusive)	New shares for every 10 shares (shares)	Amount of cash dividends (tax inclusive)	Net profits in the consolidated statements for the dividend year attributable to ordinary shareholders of the listed company	Percentage in the net profits in the consolidated statements attributable to ordinary shareholders of the listed company (%)
2021	0	1.7	0	1,800,269,230	3,274,672,689.28	54.98
2020	0	2.0	0	2,117,963,800	3,819,046,319.02	55.46
2019	0	2.0	0	2,117,963,800	3,815,874,901.39	55.50

- (III) Special explanation of cash dividend policy

☒ Applicable ☐ Not applicable

Whether the policy complies with the Articles of Association or requirements of the resolutions of the general meeting	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Whether the criteria and proportion of dividends are specific and clear	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Whether relevant decision-making procedures and mechanisms are complete	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Whether independent directors have performed their duties and given play to their due roles	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Whether minority shareholders have adequate opportunities to express their opinions and demands, and whether their legitimate rights and interests have been adequately protected	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

- (IV) Provided that the Company has made profits and the parent company's profits distributable to shareholders are positive, but no plan for distribution of profits by cash has been proposed during the reporting period, the Company shall disclose in details the reasons therefore and use and plan of usage of the undistributed profit

☐ Applicable ☒ Not applicable

SECTION V CORPORATE GOVERNANCE

XIII. INFORMATION ABOUT THE COMPANY'S SHARE INCENTIVE PLAN, EMPLOYEE STOCK OWNERSHIP PLAN OR OTHER EMPLOYEE INCENTIVE MEASURES AND THEIR IMPACTS

(I) General information of Share Incentive Plan

☐ Applicable ☒ Not applicable

(II) Relevant incentive events disclosed in the temporary announcements and with no progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

Other explanations

☐ Applicable ☒ Not applicable

Employee stock ownership plan

☐ Applicable ☒ Not applicable

Other incentive measures

☐ Applicable ☒ Not applicable

(III) The Equity Incentives Granted to the Directors, Senior Management and Core Technicians during the Reporting Period

1. Stock option

☐ Applicable ☒ Not applicable

2. The first type of restricted stocks

☐ Applicable ☒ Not applicable

3. The second type of restricted stocks

☐ Applicable ☒ Not applicable

(IV) Establishment and implementation of evaluation and incentive mechanisms for senior management during the reporting period

☐ Applicable ☒ Not applicable

SECTION V CORPORATE GOVERNANCE

XIV. CONSTRUCTION AND IMPLEMENTATION OF INTERNAL CONTROL SYSTEM DURING THE REPORTING PERIOD

☒ Applicable ☐ Not applicable

At present, the Company has formed an internal control system consisting of 400 policies, which horizontally covers 64 business segments of all 21 management businesses of the Company, and vertically forms a four-level system composed of the basic management system, specific management norms, and working guidelines based on the Articles of Association. CRSC continuously manages the whole life cycle of the internal control system, conducts regular reviews and evaluations on the internal control system, formulates an annual system construction plan, and conducts system establishment, revision and abolition. In 2021, CRSC added 14 new policies, revised 10 policies, and abolished 30 policies to continuously improve the internal control system of “pre-event standards, in-process monitoring, post-event evaluation, accountability and continuous improvement.” In 2021, the Company organized internal control self-evaluation for subsidiaries at all tiers, and carried out internal control supervision and inspection for five second-tier subsidiaries and 14 third-tier subsidiaries. CRSC conducted self-inspection and self-correction on the effectiveness of the internal control system in key business areas and key links such as capital activities and asset management, with no material internal control deficiencies found during the inspection. With the development of the Company’s business and adjustment of internal organization and management functions, and in response to changes in national laws and regulations, external regulatory requirements, etc., the Company will continue to carry out the establishment, revision and abolition of rules and regulations so that the internal control can be adapted with the business scale, business scope, competition status and risk level of the Company.

Explanation of any significant defects in internal control during the reporting period

☐ Applicable ☒ Not applicable

XV. MANAGEMENT AND CONTROL OVER SUBSIDIARIES DURING THE REPORTING PERIOD

☒ Applicable ☐ Not applicable

By strengthening the system construction, strengthening the functions of the management structure and optimizing the working mechanisms, the Company conducted all-round management and control of subsidiaries’ production and operation, capital operation, and major risks. At present, the management and control mechanism for subsidiaries is running well. By improving the construction of the board of directors of all subsidiaries of the Company, the Company drew on the “preventing risks” function of the board of directors, further strengthened the role and effect of risk prevention and control, and optimized the governance mechanism of subsidiaries. By continuing to build the decision-making on major events, appointment and dismissal of important cadres, investment decisions on major projects, and use of large amounts of funds (“Three Importance and One Large”) and operation supervision system, investment project approval decision-making system, safety and quality information system, data collection system for three-year action plan for reform, contract information system, accountability information system and other information systems, the Company obtained enterprise information in time, and carried out major risks tracking and monitoring to achieve dynamic management and control of subsidiaries. On the basis of effective management and control of each subsidiary, supports have been provided for the reform and risk resolution of each subsidiary. In the next step, the Company will further strengthen information construction, strengthen the control of subsidiaries through scientific and technological means.

SECTION V CORPORATE GOVERNANCE

XVI. RELEVANT INFORMATION ABOUT AUDIT REPORT ON INTERNAL CONTROL

☒ Applicable ☐ Not applicable

Whether to disclose the audit report of internal control:

Yes

Opinion type of internal control audit report:

Standard report without reserved opinions

XVII. SELF-EXAMINATION AND RECTIFICATION OF LISTED COMPANY GOVERNANCE SPECIAL ACTIONS

The Company carefully learned and implemented the Opinion on the Further Promotion of the Governance of Companies Listed, and conducted self-inspection with reference to the Special Self-inspection List of Corporate Governance for Listed Companies in 2021. The Company conducted inspection on the setting of corporate organizations, the establishment of system, the operation and decision-making of corporate organizations, controlling shareholders, actual controllers and related parties, the internal control management, the transparency of information disclosure, the circumstances of investors and other aspects, and carefully sorted out problems and actively and promptly made rectifications in an organized way. In 2021, the Company rectified all the problems. In addition, the Company also integrated the initiatives of improving corporate governance into the three-year action of the state-owned enterprise reform and further improved the long-term mechanism of corporate governance, contributing to perfecting the corporate governance and promoting high-quality corporate development.

XVIII. JOINT COMPANY SECRETARIES

In the reporting period, Ms. QIU Wei and Ms. NG Wing Shan are the joint company secretaries of the Company. Ms. NG Wing Shan serves as the assistant vice president of SWCS Corporate Services Group (Hong Kong) Limited and her main contact person is Ms. QIU. Ms. NG and Ms. QIU undertook no less than 15 hours of relevant professional training for the year ended 31 December 2021.

On 17 January 2022, Ms. QIU Wei resigned as one of the joint company secretaries of the Company for personal reasons, and Mr. HU Shaofeng became a joint company secretary of the Company. On 25 March 2022, Ms. NG Wing Shan resigned as the joint company secretary of the Company, and Mr. WEI Weifeng replaced her as the joint company secretary of the Company. The main contact person of Mr. WEI is Mr. HU Shaofeng.

XIX. OTHERS

☒ Applicable ☐ Not applicable

The Company's corporate governance practices are based on the principles and code provisions as provided by the Corporate Governance Code set out in Appendix 14 to the Hong Kong Listing Rules. The Board is of the view that the Company had complied with the code provisions as set out in the Hong Kong Listing Rules and the Corporate Governance Code during the reporting period.

From the resignation of Mr. WANG Jiajie as an independent non-executive director of the Company on 29 January 2021 to the appointment of Mr. GUO Yonghong as a non-executive director of the Company on 5 March 2021, the Audit and Risk Management Committee of the Board of Directors of the Company only contained two directors, which failed to meet the requirements of Rule 3.21 of the Listing Rules that the Audit and Risk Management Committee shall comprise at least three members. The above was due to that upon the nomination of Mr. Guo Yonghong by the Board as a candidate for election as a non-executive director of the Company and as a member of the Audit and Risk Management Committee and a member of the Quality and Safety Committee of the Board, the appointment of Mr. Guo Yonghong is subject to the approval of the shareholders at a general meeting of the Company. The Company has appointed a fit and proper person as a member of the Audit and Risk Management Committee within three months after failing to meet the relevant requirements in accordance with Rule 3.23 of the Listing Rules.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

I. STATEMENT ABOUT ESG FROM THE BOARD OF DIRECTORS

The Company's Board of Directors has always attached great importance to the ESG situation, started from top-level design, integrated ESG into corporate management, and established a closed loop of ESG risk investigation, control, monitor and improvement. The Company has a department dedicated to the day-to-day ESG management and preparation of ESG report. The 2021 ESG report is the 9th ESG report of the Company, which describes the management philosophy, highlight practices and annual results of the Company's work on environmental, social and governance in 2021. For more details, please refer to the 2021 ESG report disclosed with this report.

II. ENVIRONMENTAL INFORMATION

- (I) Whether it falls in the category of key pollutant-discharging units determined by environmental protection departments

☐ Yes ☒ No

- (II) Administrative Penalty for environmental problems during the Reporting Period

None

- (III) Information on energy consumption and emissions

☒ Applicable ☐ Not applicable

The Company adheres to the guidance of Xi Jinping's ecological civilization thought, thoroughly implemented the requirement of the Party Central Committee, the State Council and SASAC on the work of carbon peak and carbon neutrality, actively fulfills the development philosophy of "Green mountains and clear water are invaluable assets" (綠水青山就是金山銀山), advocates resource and energy conservation, promotes innovation of green and low-carbon technology, minimize emissions of waste water, waste gas and waste materials, builds green and low-carbon cycling development system, reduce environmental pollution by various measures, forms a green development style and lifestyle, empowers high-quality development with green and low-carbon, and contribute to the achievement of the goal of "Dual carbon" (雙碳). In 2021, the Company accelerated the elimination of high-energy-consuming and high-pollution processing equipment, accelerated the demonstration, application and promotion of new energy-saving and low-carbon technologies, processes and products, implemented green manufacturing, and improved the level of energy conservation and resources recycling. CRSC also implemented clean and efficient use of fossil energy, strictly and reasonably controlled coal consumption, promoted the transformation of coal power to a supporting and regulatory power resource, strictly controlled new coal power projects, continuously eliminated backward coal power productivity, and actively and orderly promoted substitution of coal and transformation of coal cleaning.

1. Greenhouse gas emissions

☒ Applicable ☐ Not applicable

The Company puts energy-saving resources in the first place, improves utilization efficiency, actively implements transformation and upgrading of green and low-carbon, continuously reduces energy and resource consumption and carbon emissions per unit of production, and reduces carbon dioxide from the source. CRSC fully plays the main role of enterprise innovation, strengthens technological innovation and institutional innovation, enhances the supply ability of high-quality and green products and services, accelerates the application and promotion of key green and low-carbon technology and products. In 2021, the greenhouse gas emissions of CRSC was 97,067.01 tons, of which the Scope 1 greenhouse gas emissions was 23,486.98 tons, and the Scope 2 greenhouse emissions was 73,580.03 tons; the greenhouse gas emission intensity was 0.0253 tons/RMB' 0,000.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

2. Energy and resources consumption

✓ Applicable ☐ Not applicable

2019-2021 Annual Energy and Resources Consumption of CRSC						
Energy Type	Electric Power MWh	Liquefied Gas m ³	Gasoline ton	Diesel ton	Thermo million kJ	Natural Gas m ³
2019	92,216.8	149,292.1	3,997.1	2,786.6	85,202.6	2,994,306.2
2020	80,719.1	87,154.2	3,848.1	1,037.2	122,483.6	2,230,187.0
2021	109,700.0	74,883.0	3,800.0	1,606.3	86,601.8	2,952,281.6

2019-2021 Annual Energy and Resources Consumption of CRSC				
Energy Type	Water		Combined	Combined
	Consumption		Energy	Energy
			Consumption	Consumption
			Intensity	Intensity
	ton	ton/RMB' 0,000	tons of standard coal	standard coal/ RMB' 0,000
2019	1,164,700	0.27	45,196	0.01
2020	1,093,600	0.27	41,130	0.01
2021	938,003	0.24	25,955	0.01

3. Waste and pollutant emissions

✓ Applicable ☐ Not applicable

2019-2021 Annual General Waste Emissions of CRSC											
Type of General Waste	Manufacturing					Engineering Construction		Office Premises			
						Disposal Volume of					
						Construction	Waste	Waste	Electronic	Toner Cartridges and other printing supplies	Bulbs
	Wood ton	Plastic ton	Metal ton	Carton ton	Others ton	Waste ton	Paper kg	Lamp unit	Waste unit	unit	unit
2019	118.8	344.1	1,425.1	72.5	138.5	51,528.9	24,054.7	3,166	1,146	7,325	1,046
2020	107.2	330.7	1,355.9	99.0	133.5	6,040.6	49,292.5	6,660	617	5,113	889
2021	104.5	320.3	692.9	100.7	133.2	28,753.3	35,405.6	2,867	1,109	4,834	1,366

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

Company environmental protection management system and other information

☒ Applicable ☐ Not applicable

CRSC has attached great importance to the work on energy conservation and environmental protection, and constantly improved relevant systems, the current systems are as follows: Notice of CRSC on the Implementation of Work Plan on Carbon Peak and Carbon Neutrality, CRSC Energy Conservation and Eco-environmental Protection Management Measures, Notice of CRSC on Strengthening the Management of Energy Conservation and Emission Reduction.

(IV) Measures taken to reduce carbon emissions during the Reporting Period and their effectiveness

☒ Applicable ☐ Not applicable

The Company actively followed the spirit of the Opinions of CPC Central Committee and State Council on the Complete and Accurate Implementation of the New Development Philosophy to Work Well on Carbon Peak and Carbon Neutrality (《中共中央國務院關於完整準確全面貫徹新發展理念做好碳達峰碳中和工作的意見》), and SASAC's Guidance on Promoting Central Enterprises' High-quality Development and Working Well on Carbon Peak and Carbon Neutrality (Guo Zi Fa Ke Chuang [2021] No. 93) (《關於推進中央企業高質量發展做好碳達峰碳中和工作的指導意見》)(國資發科創[2021] 93號)), set up a work leading group and a work group for the implementation of "Dual Carbon", and clarified responsibilities and personnel. CRSC formulated and issued the Work Plan for Implementation of the Carbon Peak and Carbon Neutrality of CRSC (CRSC An Quan [2021] No. 369) (《中國通號落實碳達峰碳中和行動工作方案》)(中國通號安全[2021] 369號)), which mainly includes general requirement, main objectives and specific measures, etc. The specific measures, among which, include promoting the development of green and low-carbon transformation, building green and low-carbon recycling industrial system, building clean, low-carbon, safe and efficient energy system, strengthening research and innovative application of green and low-carbon technologies, setting up a complete management mechanism of carbon emission, and strengthening organization and implementation, etc.

(V) New technologies, new products and new services in reduction of carbon emission

☒ Applicable ☐ Not applicable

By improving the R&D design, scientific research management and process optimization, the Company has strengthened the collaborative development of scientific research, improved R&D efficiency and reduced energy consumption of scientific research. The new control system was oriented to western railway applications, combined with the national strategic demand of Beidou promotion and application, and adopted Beidou satellite-based technology of trains autonomous localization and technology of trains integrity inspection, by which achieved system structure innovation, and built a new simplified train operation control system structure, making the cost of system construction and maintenance reduced by more than 1/4. By researching and developing PSDC platform door controller, the Company has shortened the opening and closing time, improved the running speed of trains and reduced the energy consumption of metro operation; the intelligent management of the laboratory of the City Traffic Company can set different strategies to achieve automatic management of the lighting system and equipment power supply system according to different using requirements, which reduces the power consumption of laboratory equipment by 50%.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

In addition, the Company enhanced their construction of engineering projects and the scientific research of energy-saving, carbon-reducing and environmental protection projects, and conducted five scientific research projects such as “Technological research on reducing loss rate of brick-using of secondary structure material in Chuxiong Incubation Park” (一種減少二次結構材料用磚損耗率在楚雄創業園項目技術研究), “Application and research on underground space supporting and waterproofing green construction technology” (地下空間支護及止水綠色施工技術應用研究) and “Research on recyclable infill blockwork” (回收型填充墻砌塊的研究), which improved the processes, reduced the cost, enhanced the quality of projects, reduced the emission of construction waste, strengthened the efforts on recycling and promoted green construction.

(VI) Information beneficial to Ecological protection, pollution prevention, and fulfilling environmental responsibility

☒ Applicable ☐ Not applicable

R&D and system integration Entities integrated the concept of green and low-carbon development into all links and continued to increase the introduction of design ideas and integration concepts of energy conservation and environmental protection. In terms of selecting materials and equipment, energy conservation and environment-friendly technical solutions were preferred, low-energy components and equipment configurations were adopted to ensure energy conservation and low carbon from the source.

Industrial manufacturing entities accelerated the space of enterprise upgrading and promoted green development. CRSC Xi'an, a subsidiary of CRSC Xi'an Industry Group, has built an automatic production line for switch machines and relay assembly and debugging that integrated assembly and manufacturing, logistics and warehousing, quality control, and collected real-time quality data of the production process, improved the consistency of production and processing quality and prevented batch quality problems to realize secure and controllable, low carbon and environment-friendly intelligent green manufacturing. CRCEF updated its re-coating methods, developed new equipment, optimize process redundancy, reduced exhaust emissions and improved the efficiency of the re-coating process. The electronics processing center of the BRSC of CRSCD replaced LED lamps, which saved approximately 120,000 kWh of electricity per year.

Engineering construction enterprises actively practiced green construction. CRSC Construction Group gave priority to the use of national and industry-recommended energy-saving, high-efficiency and environment-friendly construction equipment, and selected the energy-saving construction equipment with inverter technology; optimized construction organization to maximize mechanical energy consumption and reduce carbon emissions; implemented a quota material collection system to eliminate waste of materials. The project department of enterprises such as the CRSCE has increased the green coverage of worksite to create a green site by optimizing on-site layout, collecting rainwater for incoming and outgoing vehicle washing, equipping solar streetlights and implementing the principle of less hardening and more greening of worksite roads.

The Company vigorously promoted the concept of energy conservation and environmental protection, strengthened control of energy consumption, encouraged green travel and reduced the number of vehicles used; encouraged paperless offices and reduced the use of printing consumables and paper; and encouraged the use of natural light sources and energy-saving equipment to reduce electricity consumption.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

III. SOCIAL RESPONSIBILITY WORK

(I) Social contribution of the main business and key indicators of the industry

During the Reporting Period, the Company continued to further cultivate the rail transportation control system, accelerated the implementation of key core technology research and development, further consolidated and increased the market share of rail transportation control system, and continuously promoted the enterprise to achieve high-quality development. In 2021, we ensured the opening and operation of 1,500km of high-speed railway projects such as Lianyungang-Xuzhou High-speed Rail, Ganzhou-Shenzhen High-speed Railway, Lunan High-speed Railway (魯南高鐵), Hangzhou-Shaoxing-Taizhou High-speed Railway and Chaoyang-Linghai High-speed Railway; ensured the smooth delivery of 2,309km of railway trunk lines such as Yuxi-Mohan, Lhasa-Nyingchi, Jinhua-Taizhou and Nansha Port Railway; ensured the opening and operation of 29 urban rail transit projects including the northern section of Beijing Subway Line 8 Phase III, Chongqing Rail Transit Line 5 Phase I and the southern section of Tianjin Rail Transit Line 4, totalling 625km were put into operation.

(II) Types and contributions of charitable activities

Type	Amounts	Explanation
External donations		
Including: Funds (RMB0'000)	1,000.00	Donations to disaster areas for flood relief
Goods converted into money (RMB0'000)	—	—
Commonweal projects		
Including: funds (RMB0'000)	22.50	Donations to charitable foundations for public relief and public welfare; donations to education for funding poor children's schooling
Number of people rescued (persons)	—	the actual number of people it helps is unable to be account due to the channels
Rural revitalization		
Including: funds (RMB0'000)	43.52	To support rural revitalization in Hetian, Xinjiang, Qionghshan District, Haikou City, Hainan Province, Taibai County and Baihe County, Shaanxi Province, etc.
Goods converted into money (RMB0'000)	—	—
Number of people assisted in employment (persons)	—	The number of employees actually helped by the Company is unable to be accounted due to the channels

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

1. Details of public charitable activities

☒ Applicable ☐ Not applicable

While creating economic benefits, the Company always insists in giving back to society, actively participates in public charitable activities and voluntary service actions, to help the society develop harmoniously with practical efforts.

In the aspect of participating in the prevention and control of COVID-19, the youth volunteer service team carried out the work of prevention and control of COVID-19 in the park and special volunteer service actions at service points for vaccination and nucleic acid test, which fully demonstrated the responsibility of CRSC's young people. Among them, the youth volunteer service team of CRSC Communication & Information Group won the honorary title of "The Best Volunteer Service Organization" for the National Volunteer Service to Learn from Lei Feng in 2021.

In the aspect of carrying out activities to care for left-behind children, the Company's volunteers went to rural primary schools to send school supplies for left-behind children. CRSC has effectively done practical things for the growth of adolescents and children and delivered social love.

In the aspect of actively participating in environmental protection actions, the Company organized volunteers to beautify the riverbank of riverside forest in Shanghai and accomplished the task of environmental protection brilliantly, which aroused more people to pay attention to the marine litter pollutions problems. CRSC carried out environmental sanitation work in the neighborhood where it located, contributed to the urban environment, and guarded the lucid waters and lush mountains with practical actions.

In the aspect of actively carrying out volunteer services, the Company organized volunteers to carry out services such as maintaining the order of entry to local parks and explaining relevant policies, visiting poverty families and comforting widows, orphans, and older. Among them, Liu Xingguo, an employee of CRSC, and his comrades jointly initiated and establishment the "Plus One" charity organization, which won the honorary title of "The Most Beautiful Volunteer" in 2021 for the National Volunteer Service to Learn from Lei Feng.

2. Details on consolidating and expanding the achievements of shaking off poverty and rural revitalization

☒ Applicable ☐ Not applicable

Facing the new situation and new need of rural revitalization, the Company implemented the Opinions on Adhering to the Work of Central Units in Targeting Assistance, overall promoting revitalization in industries, human resources, culture, the ecosystem, and organizations, etc., and effectively helping Sheqi in Henan, where we have been designated to help, to achieve poverty eradication on the basis of comprehensive high-quality rural revitalization.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

(III) Information about the protection of equity of shareholders and creditors

The Company has always attached great attention to the protection of the equity of shareholders and creditors, and faithfully performed our responsibilities as a listed company. The Company actively protected the earning rights, governance rights, information rights and other legal interests of the shareholders. The Company attached importance to the return to shareholders and strictly implements the profit distribution in accordance with the relevant provisions of the Articles of Association and the resolutions of the general meeting. On 11 June 2021, the 2020 annual general meeting was held to review and approve the Resolution on Profit Distribution Plan for 2020 in the manner of voting by way of poll and internet voting combination. It is recommended to distribute the cash dividend of RMB2.00 (tax inclusive) per 10 shares, and the cash dividend distributed amounted to approximately RMB2.118 billion, ranking the top of listed companies in the same industry. The Company attaches great importance to the right of shareholders to participate in the corporate governance and guarantees the rights of investors to participate in the general meeting of shareholders. In order to provide shareholders, especially minority shareholders with the convenience to participate in the general meeting, the Company will consider the place and time for convening the general meeting. Generally, the general meeting is held in a relatively fixed time and office. At the same time, voting by way of poll and internet voting combination is adopted to further facilitate their participation in corporate governance. In addition, the chairman, president and other major leaders of the Company will directly respond to investors' concerns face-to-face, encourage investors to understand the Company and participate in corporate governance through setting up a shareholders' question and answer session in general meeting. Oriented to the demands of shareholders, the Company continued to improve the transparency of information disclosure, comprehensively strengthened communication and exchange with them, and disclosed important information of the Company in a true, accurate, complete, timely, fair, brief and clear manner, so as to ensure that all shareholders have equal opportunities to obtain the information they need in a timely manner. The Company pays great attention to the communication with investors, guiding them to make rational and long-term investments, avoiding irrational speculation, and improving their self-protection ability. Through signing contracts and making regular payments, the Company actively cleans up the debts owed by creditors, especially the private enterprises to fully ensure the payment of migrant workers' wages. Strictly complying with the requirements of bond subscription, the Company will timely repay the financing principal and interest on schedule to ensure the legal interests of bond holders.

(IV) Information about the protection of the interests of employees

Not applicable

Employee stock ownership

During the reporting period, no employee stock ownership plan was carried out.

(V) Information about the protection of the interests of suppliers, customers and consumer

The Company has been insisting on continuously improving product quality and service level, ensuring the delivery of qualified projects and high-quality projects. The Company has been paying great attention to long-term win-win cooperation with suppliers and customers. Based on the principle of mutual benefit and reciprocity and joint development, the Company has established a friendly long-term cooperative relationship with suppliers and customers, and strives to guarantee the legal interests of suppliers, customers and consumers.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

The Company has constantly conducted in-depth marketing, effectively understood customers, quickly responded to customer demands, constantly improved customer satisfaction and loyalty. The Company has also comprehensively collected relevant statistics from Ministry of Transportation, State Railway Administration, China State Railway Group and China Association of Metros, learnt the industry overview and developments of rail transit industry in a timely manner, identified the current operation status and development process of CRSC in the field of rail transit, and further regurgitated the market.

The Company always safeguarded the interests of suppliers, customers and consumers. The Company shall strictly manage the performance of the contract, make payment to the suppliers timely, so as not to bring financial pressure to the suppliers. The Company shall also strictly perform the confidentiality agreement with the supplier, and not disclose the technical and commercial secrets of the supplier to any third party. The Company actively cultivates excellent suppliers with long-term cooperation in the industry chain, helps suppliers to improve their technology, enhance their quality control capacity. Base on credit rating, the Company has established a list of qualified suppliers, regularly published the “blacklist” of suppliers, provided high-quality products and services for suppliers and customers, ensuring the healthy and sustainable development of the Company.

The Company speeded up the promotion of engineering innovation, comprehensively promoted the high-quality engineering construction. The Company comprehensively carried out intelligent construction, BIM technology and informatization to expand the application, construction and maintenance of integrated construction, factory preassembly, etc. in the construction of four railroad projects, namely Yuxi-Mohan, Lhasa-Nyingchi, Lianyungang-Xuzhou, Ganzhou-Shenzhen, and strived to improve the utilization rate and efficiency of engineering innovation resources, and made the technology and concept mastered achievements, systematic and platform.

The Company insists on stable and reliable product safety and quality. The Company established a perfect standardized management system for engineering construction, quality, environment and occupational health and safety management system in accordance with the requirements of relevant national and industry laws and regulations and management standards, and provided the necessary resources to ensure the effective operation of the relevant management system. The Company strictly controlled over the construction of business lines and dangerous projects, while establishing traceability control requirements for the delivered engineering products by using technologies such as QR codes, and traceability could be realized for the material equipment, construction and inspection personnel, and technical parameters of engineering projects. In 2021, the Company underwent various supervision and inspection by the National Railway Administration, China Railway, the Ministry of Housing and Urban-Rural Development, the Ministry of Emergency Management and other superior supervision and management departments, and third-party certification units, without any illegal violations, material safety production accidents or material malpractices.

The Company constantly created a “customer-focused” service concept. Relying on the strong R&D and manufacturing integration advantages and advanced production processing and quality control capabilities, the Company fully satisfied customers’ customized needs and provided them with high-quality products on schedule, established a localized service center and a 24-hour response mechanism for customer information feedback, and served our customers with the whole life cycle concept, providing them with a series of service contents such as on-site maintenance, return to the factory for monitoring and repair, equipment inspection, product training, and emergency protection.

The Company insisted on doing a good job of emergency response to deal with emergencies. In the face of force majeure disasters such as pandemics, earthquakes and rainstorms, we actively assisted users in repairing and maintaining on-site equipment to ensure the smooth flow of rail traffic and fulfill our social responsibility.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

(VI) Product Safety and Security

The Company strengthened the safety certification of safety products and software tools, completed 122 product safety certifications and 83 software tool certifications; improved safety product change control, supervised enterprises to focus on safety function changes to strengthen process control; dynamically maintained safety product lists and safety feature lists, added and revised 14 safety feature lists; enhanced the tracking and remediation of hidden dangers, evaluated the effectiveness of the implementation of rectification measures, and improved product safety, reliability and safety and quality control capabilities through the implementation of “dual zero”.

(VII) Other Commitments of Social Responsibility

✓ Applicable ☐ Not applicable

In July 2021, flooding caused by continuous heavy rainfall in several regions of Henan caused varying degrees of damage to railroad and subway station line equipment, halting train service and stranding passengers. The Party Committee of CRSC quickly organized and motivated, and involved more than 11,000 operating personnel, 1,200 traffic vehicles and 155 large construction machinery to carry out rescue and relief, and quickly raised RMB10 million in cash to support flood relief and post-disaster reconstruction in Henan Province.

IV. OTHER CORPORATE GOVERNANCE

(I) Party's Building

✓ Applicable ☐ Not applicable

The Company improved the corporate governance system, refined the construction of the decision-making system for “Three Importances and One Large” (i.e. decisions on important issues, important personnel appointment and dismissal and important project investment as well as use of large-amount funds) and revised the implementation rules of the decision-making system for “Three Importances and One Large” of the Group. Lists of prior matters of the Party Committee were formulated for the Group and key subsidiaries. The Company deepened the implementation of the responsibility system for Party building work, promoted the effective linkage between the Party building assessment and the production and operation performance assessment, deployed the Party building work around the key reform and development tasks, and tested the fighting capacity of Party organizations based on the reform and development achievements. Intensified efforts were made on the construction of grassroots organizations. Under the goals of “ensuring independent innovation to strengthen the momentum, ensuring production and operation to promote development and ensuring safety and quality to promote stability”, the Company strengthened the “construction of three basics” (i.e. grassroots, foundation and basic skills), promoted the standardization and regularization of Party building work at the grassroots level, established the Party building culture system of “one branch with one feature” and “a Party member like a flag”, continuously strengthened the construction of Party building informatization, and promoted the deep integration of Party building at grassroots level and corporate production and operation. The Company conscientiously summarized and refined experience and practices, and the CSRC Party Building Brand Collection formed on that basis was promoted in the system. The Company convened a study seminar on the fifth anniversary of the important speech of General Secretary Xi Jinping at the National Conference on Party Construction of State-owned Enterprises and the promotion meeting on the creation of Party building brand, the first batch of 50 characteristic Party building cases were collected, and 5 outstanding Party building brands were announced, 29 cases were selected for compilation, forming an exemplary and leading effect in the whole system.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

(II) Investor Relationships and Protection

Type	Number	Related information
Convening the results presentation meetings	1	The Company held the online results presentation meetings after the disclosure of the Annual Report 2020, and disclosed the Investor Relations Activities Record Form in a timely manner after the meetings.
Carrying out investor relationships management activities through new media	–	The Company posted short videos through e-Interaction platform to interpret the Annual Report, which provides convenience for investors to quickly understand the Company. The Company set up the WeChat Official Account to provide timely feedback to the public on the recent important situation of the Company, convey the core intrinsic value of the Company and demonstrate a good image of a listed central state-owned enterprise.
Setting up an investor relationships column on the official website	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Company's official website has an investor relationships column, through which investors can view the Company's online announcements and contact the Company's investor relationships in a timely manner.

Details of investor relationship management and protection

☒ Applicable ☐ Not applicable

The Company disclosed information in accordance with the law and regulations and conducted two-way communication with investors in various forms to promote investors' understanding and recognition of the Company and built up an image of respect for investors. The Company always adheres to the principle of fair disclosure and makes disclosure on the Shanghai Stock Exchange and the Hong Kong Stock Exchange simultaneously. Given the different regulatory requirements between the two places, the Company disclosed information in accordance with the more stringent regulatory requirements. To further enhance investors' understanding of the Company, reduce information asymmetry and better demonstrate the Company's strength to investors, the Company organized results presentation meetings in a timely manner after the disclosure of quarterly and annual reports. Combining with the needs of pandemic prevention and control, the Company convened meetings online and communicated and interacted with domestic and overseas investors on issues such as industry trends, development strategies, production and operation, financial conditions, dividend distribution, risks and difficulties through channels such as live streaming, telephone questions and text interaction. The Company helped investors better understand the Company's strategy and operations, maximized market value and protected the interests of the majority of shareholders. Under the premise of proper pandemic prevention and control, by appointment-based on-site visit and discussion and communication, the

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

Company conducted on-site investigation and research for regulatory authorities, institutional investors, securities analysts, small and medium-sized investors and the media in accordance with the procedures, to show investors the achievements of the Company in advanced technology research and development, high-end equipment manufacturing and emerging industries in recent years and enhance visitors' in-depth understanding of the Company's technological attributes, key core technologies and reform and development.

Information about other ways of engagements with investors

☒ Applicable ☐ Not applicable

The Company carries out investors' relations management through various channels. We keep in touch with institutional investors and small and medium-sized investors through various forms of communication such as the Company's investors' hotline, investors' dedicated email and SSE e-Interaction, accept the consultation of investors, analysts and media, carefully answer the consultation telephone, and ensure that the questions on the SSE e-Interaction platform are answered in time.

(III) Transparency of Information Disclosure

☒ Applicable ☐ Not applicable

The Company effectively fulfilled the information disclosure obligations as a public company, strictly complied with the published and implemented Information Disclosure Management System and Internal Reporting System for Material Information and other relevant information disclosure systems, clarified the information disclosure responsibilities, facilitated the internal material information contact channels and protected investors' right to timely and equally access to information. On the basis of proper statutory mandatory information disclosure, the Company increased active disclosure through voluntary disclosure, social responsibility report, etc., so that investors could understand the Company's situation more deeply, realized value investment and shared the achievements of the Company's development.

(IV) Intellectual Property and Information Security Protection

☒ Applicable ☐ Not applicable

In accordance with the Patent Law of the PRC, the Copyright Law of the PRC, the Standards for the Management of Corporate Intellectual Property Rights and other relevant laws and regulations, the Company formulated intellectual property management measures and system documents and supervised the implementation, continued to create, manage, protect and apply intellectual property rights, and respected the intellectual property rights of others while protecting our own intellectual property rights from infringement. The Company urged affiliated enterprises to formulate measures on intellectual property rights incentives and remuneration, and established corresponding management mechanisms such as intellectual property rights risk identification mechanism, early warning mechanism and intellectual property rights protection work system. The Company actively laid out overseas patents, and strengthened the analysis of patent risk warning for major overseas projects to continuously reduce intellectual property risks. In parallel with the development of scientific research, the Company continued to improve and implement the intellectual property management system.

SECTION VI ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES AND OTHER CORPORATE GOVERNANCE MATTERS

In accordance with General Secretary Xi Jinping's concept of cybersecurity and the spirit of the national cybersecurity "Four Insist" instructions, the Company seriously implemented the Cybersecurity Law, strictly implemented the management information system cybersecurity responsibility system, and focused on strengthening the awareness and capacity building of cybersecurity for all staff. The Company actively organized and arranged for employees to participate in professional training on cybersecurity practical protection and carried out cybersecurity attack and defense drills, which not only enhanced our employees' awareness of information security and professional technical level, provided talent reserve for strengthening cybersecurity, but also strengthened the Company's ability to deal with emergency events and coordinate with units at different levels, effectively improved the Company's overall cybersecurity. The Company actively carried out cybersecurity self-examination and filing information supplementation work, and continued to consolidate the results of the original rating and filing. The Company established access control to prevent illegal user intrusion, and conducted technical connection with telecom operators and cybersecurity equipment vendors to carry out the deployment of Internet access convergence and monitoring equipment. During important periods such as the "National People's Congress and Chinese People's Political Consultative Congress", the "100th anniversary of the founding of the Party", the "National Day" and the "Winter Olympics", the Company strengthened the special work mechanism for information reporting, raised awareness, maintained proper vigilance, strengthened duty, ensured smooth communication, and made emergency disposal.

(V) Institutional Investors' Participation in Corporate Governance

☒ Applicable ☐ Not applicable

The Company committed to strengthening the research on capital market industry and collection of shareholder information, and attached great importance to investors' concerns and suggestions. Through regular online institutional investors conference calls, the Company explained to institutional investors on their doubts and concerns, and actively listened to their opinions and suggestions on the Company's recent finances, dividend distributions, employee incentives, production and operation, business development and corporate strategy, etc., so as to establish a good interactive exchange and trust relationship with investors and truly allow investors' voices to be heard by the Company. By understanding the demands of investors and the focus of the capital market, the Company further improved its operational management and corporate governance level, further refined its governance structure, further enhanced its core competitiveness and investment value, and contributed to its high-quality development.

(VI) OTHER CORPORATE GOVERNANCE MATTERS

☐ Applicable ☒ Not applicable

I . THE PERFORMANCE OF UNDERTAKINGS

- (I) Undertakings during or carried forward to the reporting period by the Company's actual controller, shareholders, related parties, acquirers and the Company and other relevant parties providing undertakings

✓ Applicable ☐ Not applicable

Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Undertakings associated with the initial public offering	Restricted shares	CRSC Group	The CRSC Group has made the following undertakings in respect of shares lock-up: (1) If the CRSC Group, within 36 months from the date when the CRSC's A shares upon initial public offering are listed on the Shanghai Stock Exchange, holds the CRSC's A shares, it shall not transfer or entrust others to manage the CRSC's domestic shares directly or indirectly held by it prior to the issuance, nor shall CRSC repurchase such shares; (2) If the closing price of CRSC's stocks for 20 consecutive trading days (except for all-day suspension of CRSC's stocks) is lower than the issue price of this offering within six months after the listing of CRSC, or the closing price at the end of six months after listing (if the day is not a trading day, it is the first trading day after that day) is lower than the issue price of this offering, the lock-up period of CRSC's A shares held by CRSC Group will be automatically extended for six months after the expiration of the above lock-up period. The issue price refers to the issue price of this offering of CRSC. If CRSC, after being listed, performs the ex-dividend and ex-right for reasons such as profit distribution, capital reserves to increase share capital, additional issuance, placement etc., it shall do so in accordance with the relevant provisions of the Shanghai Stock Exchange. (3) If CRSC Group violates the above undertakings, it will assume all legal liabilities arising therefrom. (4) If relevant laws, regulations and regulatory documents or other securities regulatory authorities such as China Securities Regulatory Commission and Shanghai Stock Exchange have other requirements for the lock-up period of shares, CRSC Group agrees to adjust the lock-up period of CRSC's shares held by it accordingly.	Time of undertakings: 15 April 2019; term: within 36 months from the date of the listing of CRSC's A shares	Yes	Yes	-	-

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Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Undertakings associated with the initial public offering	Profit distribution	CRSC	CRSC has made the following undertakings in respect of profit distribution policies: The Company will distribute profits to shareholders in strict accordance with the profit distribution policies stipulated by relevant laws and regulations, the Articles of Association of China Railway Signal & Communication Corporation Limited, and Dividend Distribution Plan within the Three Years after the Initial Public Offering and Listing of A Shares of CRSC (2019-2021), and strictly implement the review procedures for the profit distribution plan. If the violation of the above undertakings causes losses to the investors, the Company shall be liable to the investors according to law.	Time of undertakings: 15 April 2019, term: long-term effective	No	Yes	-	-

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Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Undertakings associated with the initial public offering	Non-competition undertakings	CRSC Group	CRSC Group have made the following undertakings in respect of the non-competition undertakings: (1) as of the date of the issuance of letter of undertakings, CRSC Group and the holding enterprises of CRSC Group (excluding CRSC and its holding enterprises, same hereinafter) have not engaged in or participated in the businesses or activities that constitute a direct or indirect competitive relationship with the principal business currently engaged in by CRSC and its holding enterprises in any form domestically or abroad. (2) CRSC Group and its holding enterprises do not, currently or in the future, solely or jointly with others, directly or indirectly, in any form (including but not limited to investment, merger and acquisition, associates, joint ventures, cooperation, partnership, contracting or leasing operation, purchase of shares of listed companies or equity participation) domestically or abroad engage in or participate in, or assist to engage in or participate in any businesses or activities which compete or is likely to compete with the principal business engaged currently or in the future by CRSC and its holding enterprises. (3) if CRSC Group or its holding enterprises find any new business opportunities which directly or indirectly compete or is likely to compete with the principal business of CRSC and its holding enterprises, they will immediately notify CRSC in writing and try their best to procure that these business opportunities are first provided to CRSC and its holding enterprises on reasonable and fair terms and conditions. (4) if CRSC and its holding enterprises waive the above new business opportunities and CRSC Group or its holding enterprises engage in these competitive businesses, CRSC and its holding enterprises have the right to acquire any equity, assets and other interests in the abovementioned competitive business from CRSC Group or its holding enterprises at one or multiple times at any time, or choose to entrust operation, lease or contract to operate the assets or business of the above-mentioned competitive business in accordance with the PPC laws and regulations. (5) if CRSC Group or its holding enterprises intend(s) to transfer, sell, lease, license or otherwise transfer or permit to use the asset and business which competes or is likely to compete, directly or indirectly, with the principal business of CRSC and its holding enterprises, CRSC Group and its holding enterprises will provide priority transfer rights to CRSC and its holding enterprises. (6) CRSC Group will indemnify CRSC and its holding enterprises against all actual losses, damages and expenses suffered/occurred for CRSC Group or its holding enterprises' breach of any terms in the letter of undertaking. (7) the letter of undertakings takes effect from the date of issuance and is terminated upon the occurrence of the following circumstances (whichever is earlier): CRSC Group is no longer the controlling shareholder of CRSC; CRSC terminates its listing (except for the temporary suspension of trading of CRSC's stock for any reason)	Time of undertakings: 15 April 2019; term: the letter of undertakings takes effect from the date of issuance and is terminated upon the occurrence of the following circumstances (whichever is earlier): CRSC Group is no longer the controlling shareholder of CRSC; CRSC terminates its listing (except for the temporary suspension of trading of CRSC's stock for any reason)	Yes	Yes	-	

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Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Undertakings associated with the initial public offering	Related Party Transactions	CRSC Group	<p>CRSC Group has made the following undertakings in respect of regulating Related Party Transactions: (1) CRSC Group and its holding enterprises (excluding CRSC and its holding enterprises, same hereinafter) will try their best to minimize the Related Party Transactions with CRSC and its holding enterprises. (2) for the Related Party Transactions related with operating activities of CRSC that are not avoidable, CRSC Group and its holding enterprises will perform the decision-making procedures of Related Party Transactions to ensure fair pricing and timely fulfill information disclosure obligations in strict compliance with the relevant laws and regulations and regulatory documents as well as the relevant requirements in CRSC's internal system related with Related Party Transactions. (3) CRSC Group will not take advantage of its position as a controlling shareholder to seek any favorable conditions or benefits over independent third parties for CRSC Group and its holding enterprises from CRSC and its holding enterprises in business operation and other business. (4) CRSC Group will indemnify CRSC and its holding enterprises against all actual losses, damages and expenses suffered/incurred for CRSC Group and its holding enterprises' violation of above-mentioned undertakings. (5) the above-mentioned undertakings remain effective when CRSC Group has the control right over CRSC and cannot be changed or cancelled.</p>	Time of undertakings: 15 April 2019; term: the letter of undertakings takes effect from the date of issuance and is terminated upon the occurrence of the following circumstances (whichever is earlier): CRSC Group is no longer the controlling shareholder of CRSC; CRSC terminates its listing (except for the suspension of trading of CRSC's stock for any reason)	Yes	Yes	-	-

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Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Undertakings associated with the initial public offering	Others	CRSC	CRSC has made the following undertakings in respect of restraints on failure to comply with relevant public undertakings: (1) If the relevant undertakings made publicly by the Company in the prospectus have already contained the restraints, such restraints specified in those undertakings shall prevail; if the Company breaches those undertakings, the Company agrees to adopt the restraints already specified in those undertakings. (2) If the Company fails to perform its undertakings, confirms that it is unable to perform or fails to perform as scheduled, its undertakings (except for the objective reasons beyond the control of the Company such as changes in relevant laws and regulations and policies, natural disasters and other force majeure), the Company will take the following measures: 1) publicly explain the specific reasons for the failure to perform, inability to perform or to perform as scheduled, the undertakings in the media designated by the CSRC. 2) make supplementary or substitute undertakings to the Company and its shareholders to protect the rights and interests of the Company and its shareholders as much as possible. 3) if the public investors suffer losses due to their reliance on the undertakings of the Company in transactions, the Company will compensate them in the way and amount determined by the securities regulatory authorities or judicial authorities. (3) in the event that the Company fails to perform its undertakings, confirms that it is unable to perform or fails to perform as scheduled, its undertakings due to objective reasons beyond the control of the Company such as changes in relevant laws and regulations and policies, natural disasters and other force majeure, the Company will take the following measures: 1) publicly explain the specific reasons for the failure to perform, inability to perform or to perform as scheduled, the undertakings in the media designated by the CSRC. 2) make supplementary or substitute undertakings to the Company and its shareholders to protect the rights and interests of the Company and its shareholders as much as possible.	Time of undertakings: 15 April 2019; term: long-term effective	No	Yes	-	-

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Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Undertakings associated with the initial public offering	Others	CRSC Group	<p>CRSC Group has made the following undertakings in respect of restraints on failure to comply with relevant public undertakings: (1) CRSC Group will strictly implement the public undertakings made by CRSC Group in the prospectus for this issue and actively accept public supervision. (2) If CRSC Group fails to fulfill its undertakings, confirms that it is unable to perform or fails to perform as scheduled, its undertakings (except for the objective reasons beyond the control of the Group such as changes in relevant laws and regulations and policies, natural disasters and other force majeure), CRSC Group will take the following measures: 1) publicly explain the specific reasons for the failure to perform, inability to perform or to perform as scheduled, the undertakings in the media designated by the CSRC. 2) make supplementary or substitute undertakings to CRSC and its shareholders to protect the rights and interests of CRSC and its shareholders as much as possible. 3) in case of any gains (if any) due to the failure to perform the relevant undertakings, the gains shall be owned by CRSC. 4) if the public investors suffer losses due to their reliance on the undertakings of CRSC Group in transactions, CRSC Group will compensate them in the way and amount determined by the securities regulatory authorities or judicial authorities. (3) in the event that CRSC Group fails to perform its undertakings, confirms that it is unable to perform or fails to perform as scheduled its undertakings due to objective reasons beyond the control of CRSC Group such as changes in relevant laws and regulations and policies, natural disasters and other force majeure, CRSC Group will take the following measures: 1) publicly explain the specific reasons for the failure to perform, inability to perform or to perform as scheduled, the undertakings in the media designated by the CSRC. 2) make supplementary or substitute undertakings to CRSC and its shareholders to protect the rights and interests of CRSC and its shareholders as much as possible.</p>	Time of undertakings: 15 April 2019; term: long-term effective	No	Yes	-	-

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Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Undertakings associated with the initial public offering	Others	The Company's Directors, Supervisors and senior management	<p>The Company's Directors, Supervisors and senior management have made the following undertakings in respect of restraints on failure to comply with relevant public undertakings: (1) I will strictly perform the public undertakings made in the prospectus for this issue and actively accept public supervision. (2) If I fail to perform my undertakings, confirm that I am unable to perform or fail to perform as scheduled, my undertakings (except for the objective reasons beyond my control such as changes in relevant laws and regulations and policies, natural disasters and other force majeure), I will take the following measures: 1) publicly explain the specific reasons for the failure to perform, inability to perform or to perform as scheduled, the undertakings in the media designated by the CSRC. 2) make supplementary or substitute undertakings to CRSC and its shareholders to protect the rights and interests of CRSC and its shareholders as much as possible. 3) in case of any gains (if any) due to the failure to perform the relevant undertakings, the gains shall be owned by CRSC. 4) if the public investors suffer losses due to their reliance on my undertakings in transactions, I will compensate them in the way and amount determined by the securities regulatory authorities or judicial authorities; if I receive the salary from CRSC, I agree that CRSC can stop paying the salary to me and use it directly to perform my unfulfilled undertakings or to compensate for the loss caused to CRSC and its shareholders by my unfulfilled undertakings. (3) in the event that I fail to perform my undertakings, confirm that I am unable to perform or fail to perform as scheduled, my undertakings due to objective reasons beyond my control such as changes in relevant laws and regulations and policies, natural disasters and other force majeure, I will take the following measures: 1) publicly explain the specific reasons for the failure to perform, inability to perform or to perform as scheduled, the undertakings in the media designated by the CSRC. 2) make supplementary or substitute undertakings to CRSC and its shareholders to protect the rights and interests of CRSC and its shareholders as much as possible.</p>	Time of undertakings: 15 April 2019; term: long-term effective	No	Yes	-	-

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Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Other Undertakings	Others	CRSC	The Company undertook to the Hong Kong Stock Exchange that the Company would not use the proceeds from the global offering, as well as any other funds raised through the Hong Kong Stock Exchange, to finance or assist any activities or business, directly or indirectly, (i) relating to or with the target of any sanction, or relating to, with, or in any countries subject to sanctions administered by the U.S., the EU, Hong Kong, Australia or the U.N. authorities, or (ii) relating to CRSC International, one of the Company's subsidiaries, considering the amount of its annual revenue related to projects in Iran during the Track Record Period. In addition, the Company also undertook to the Hong Kong Stock Exchange that the Company would not undertake any sanctionable transactions that would expose the relevant persons or us to risk of being sanctioned.	Time of undertakings: 28 July 2015; term: long-term effective	No	Yes	-	-

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Background of undertakings	Category of undertakings	Party providing undertakings	Contents of undertakings	Time and term of undertakings	Is there a term for performance	Whether or not timely and strictly performed	If the undertaking fails to be performed timely, please explain the specific reasons for the failure	If the undertaking fails to be performed timely, please state the plan in the next step
Other Undertakings	Non-competition undertaking	CRSC Group	On 20 July 2015, CRSC Group issued to us a letter of non-competition undertakings, which is effective in the Relevant Period (as defined in the H share prospectus). Pursuant to the letter of non-competition undertakings, CRSC Group has confirmed that, as at the date of the letter of non-competition undertakings, CRSC Group has not engaged in or participated in any form of business activities which, directly or indirectly, compete with the Company's principal businesses. For further details of the letter of non-competition undertakings, please refer to the H share prospectus of the Company.	Time of undertakings: 20 July 2015; term: the letter of undertakings takes effect from the date of issuance and is terminated upon the occurrence of the following circumstances (whichever is earlier): CRSC Group is no longer the controlling shareholder of CRSC; CRSC terminates its listing (except for the suspension of trading of CRSC's stock for any reason)	Yes	Yes	-	-

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- (II) If the Company has made profit forecasts for its assets or projects and the reporting period is still in the profit forecast period, explanation made by the Company in regard to whether the assets or projects have reached the profit forecasts and the reasons thereof

☐ Reached ☐ Not reached ☒ Not applicable

- (III) Performance of result-related undertakings and the impact on test of goodwill impairment

☐ Applicable ☒ Not applicable

II. APPROPRIATION OF FUNDS BY CONTROLLING SHAREHOLDERS AND OTHER RELATED PARTIES FOR PURPOSES OTHER THAN FOR BUSINESS DURING THE REPORTING PERIOD

☐ Applicable ☒ Not applicable

III. GUARANTEES IN VIOLATION OF REGULATIONS

☐ Applicable ☒ Not applicable

IV. EXPLANATION OF THE BOARD ON ISSUANCE OF A “NON-STANDARD AUDITING REPORT” BY ACCOUNTING FIRMS

☐ Applicable ☒ Not applicable

V. THE COMPANY’S ANALYSIS AND EXPLANATION ON THE REASONS FOR AND IMPACTS OF CHANGES OF ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES OR CORRECTION OF SIGNIFICANT ACCOUNTING ERRORS

- (I) The Company’s analysis and explanation on the reasons for and impacts of changes of accounting policies and accounting estimates

☒ Applicable ☐ Not applicable

For details, please refer to Section XI Financial Report – V. 44. Changes in significant accounting policies and estimates.

- (II) The Company’s analysis and explanation on the reasons for and impacts of corrections of significant accounting errors

☐ Applicable ☒ Not applicable

- (III) Communication with the former accounting firm

☐ Applicable ☒ Not applicable

- (IV) Other explanations

☐ Applicable ☒ Not applicable

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VI. APPOINTMENT AND REMOVAL OF ACCOUNTING FIRM

Unit: 0'000 Yuan Currency: RMB

Appointed currently

Name of the domestic accounting firm	Ernst & Young Hua Ming LLP (Special General Partnership)
Remuneration of the domestic accounting firm	705
Service year limit of the domestic accounting firm	7 years

	Name	Remuneration
Internal control audit accounting firm	Ernst & Young Hua Ming LLP	50
Sponsor	China International Capital Corporation limited	—

Explanation on appointment and removal of accounting firms

☒ Applicable ☐ Not applicable

After consideration and approval by the Company's general meeting, it was agreed to reappoint Ernst & Young Hua Ming LLP as 2021 financial audit and internal control audit agency of the Company, paying a total of RMB7.55 million.

Explanation on change in the accounting firms during the auditing period

☐ Applicable ☒ Not applicable

VII. EXPOSURE TO DELISTING

(I) The reasons for warning of delisting

☐ Applicable ☒ Not applicable

(II) The countermeasures to be adopted by the Company

☐ Applicable ☒ Not applicable

(III) Exposure to termination of listing and reasons therefor

☐ Applicable ☒ Not applicable

SECTION VII

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VIII. EVENTS REGARDING BANKRUPTCY AND RESTRUCTURING

☐ Applicable ☒ Not applicable

IX. MATERIAL LITIGATION AND ARBITRATION

☐ The Company was involved in material litigation or arbitration in the year.
☒ The Company was not involved in material litigation or arbitration in the year.

X. PUNISHMENTS AND RECTIFICATIONS INVOLVED BY THE LISTED COMPANY, ITS DIRECTORS, SUPERVISORS, SENIOR MANAGEMENT, CONTROLLING SHAREHOLDER AND ACTUAL CONTROLLER FOR VIOLATION OF LAWS AND REGULATIONS

☐ Applicable ☒ Not applicable

XI. EXPLANATION ON CREDIBILITY OF THE COMPANY AND ITS CONTROLLING SHAREHOLDER AND ACTUAL CONTROLLER DURING THE REPORTING PERIOD

☐ Applicable ☒ Not applicable

XII. MATERIAL RELATED PARTY TRANSACTIONS

(I) The related party transactions in relation to the ordinary operations

1. Events disclosed in the temporary announcements and with no progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

2. Events disclosed in the temporary announcements but with progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

3. Events not disclosed in temporary announcements

☐ Applicable ☒ Not applicable

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SIGNIFICANT EVENTS

(II) Related party transactions arising from acquisition or disposal of assets or equity interests

1. Events disclosed in the temporary announcements and with no progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

2. Events disclosed in the temporary announcements but with progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

3. Events not disclosed in the temporary announcements

☐ Applicable ☒ Not applicable

4. Where an agreement on performance is involved, the performance achievements during the reporting period shall be disclosed

☐ Applicable ☒ Not applicable

(III) Significant related party transactions on the joint external investment

1. Events disclosed in the temporary announcements and with no progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

2. Events disclosed in the temporary announcements but with progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

3. Events not disclosed in temporary announcements

☐ Applicable ☒ Not applicable

(IV) Claims and liabilities between related parties

1. Events disclosed in the temporary announcements and with no progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

2. Events disclosed in the temporary announcements but with progress or change in subsequent implementation

☐ Applicable ☒ Not applicable

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3. Events not disclosed in temporary announcements

☐ Applicable ☒ Not applicable

(V) Financial business between the Company with the related financial company and the financial company controlled by the Company with the related parties

☐ Applicable ☒ Not applicable

(VI) Others

☒ Applicable ☐ Not applicable

1. EXEMPT CONTINUING CONNECTED TRANSACTIONS

The following continuing connected transactions of the Group have been entered into on normal commercial terms. Pursuant to Chapter 14A of the Hong Kong Listing Rules, such continuing connected transactions are exempt from the requirements of reporting, annual review, announcement and approval by independent shareholders under Chapter 14A of the Hong Kong Listing Rules.

Domain Name Usage Licensing Agreement between CRSC Group and the Company

Connected Transaction Party	Connected Relationship	Category of Connected Transaction	Contents of Connected Transaction	Pricing principle for connected transactions
CRSC Group	Controlling shareholder	Obtain license to use domain name	Obtain license to use domain name "crsc.cn", "crsc.com.cn" and "crsc.中國"	Free

Description of connected transactions: The aforesaid transaction represented the performance of the Domain Name Usage Licensing Agreement entered into between the Company and CRSC Group on 19 July 2015 during the reporting period. The agreement is valid for ten years and the transaction is within the decision-making authority of the Board of Directors of the Company and is reviewed and approved by the Board. Meanwhile, the transaction shall be exempted from the requirements of reporting, annual review, announcement and independent shareholders' approval as it conforms to the minimum exemption level required by the Hong Kong Listing Rules.

SECTION VII SIGNIFICANT EVENTS

Investment Service Agreement between CRSC CASCO and ALSTOM IC

Connected Transaction Party	Connected Relationship	Category of Connected Transaction	Contents of Connected Transaction	Pricing principle for connected transactions
ALSTOM IC	Substantial shareholders of non-wholly-owned subsidiaries	Receiving services	Receiving supportive services	Pricing through Agreement

Description of connected transactions: The aforesaid transaction represented the performance of the Service Agreement entered into by CRSC CASCO (a non-wholly-owned subsidiary) and ALSTOM IC on 27 April 2015 during the reporting period. The agreement is valid during the operation period of CRSC CASCO. The transaction and the aggregate transaction amount involved is within the decision-making authority of the Board of Directors of the Company and is considered and approved by the Board. Meanwhile, the transaction also meets the minimum level of exemption required under the Hong Kong Listing Rules and is exempt from the requirements of reporting, annual review, announcement and approval by independent shareholders.

U888 Technology Transfer Framework Agreement between CRSC CASCO and ALSTOM Transport S.A.

Connected Transaction Party	Connected Relationship	Category of Connected Transaction	Contents of Connected Transaction	Pricing principle for connected transactions
ALSTOM Transport S.A.	A company indirectly controlled by major shareholders of a non-wholly-owned subsidiary	Licensed technology usage	Accept the transfer of U888-related technology for the application of URBALIS888 solutions and manufacture and sales of UNIVIC and 2003Platform	Pricing through negotiation

Description of the connected transaction: The aforesaid transaction represented the performance of the U888 Technology Transfer Framework Agreement entered into between CRSC CASCO (a non-wholly-owned subsidiary) and ALSTOM Transport S.A. on 10 September 2008 during the reporting period. The Agreement is valid until 4 March 2023. The transaction and the aggregate transaction amount involved is within the decision-making authority of the Board of Directors of the Company and is deliberated and approved by the Board of Directors. Meanwhile, the transaction shall be exempted from the requirements of reporting, annual review, announcement and independent shareholders' approval as it conforms to the minimum exemption level required by the Hong Kong Listing Rules.

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2. NON-EXEMPT CONTINUING CONNECTED TRANSACTIONS

The following continuing connected transactions of the Group have been entered into on normal commercial terms. Pursuant to Chapter 14A of the Hong Kong Listing Rules, such continuing connected transactions are subject to the requirements of reporting, annual review, announcement and (as the case may be) independent shareholders' approval under Chapter 14A of the Listing Rules.

Purchases and Sales Framework Agreement between the Company and CRSC Group

Unit: Yuan Currency: RMB

Connected Transaction Party	Connected Relationship	Category of Connected Transaction	Contents of Connected Transaction	Pricing principle for connected transactions	Amount of Connected Transactions	Connected Transaction Caps
CRSC Group	Controlling Shareholder(s)	Selling goods	Sell, among others, raw materials, excipients, accessories, components and parts, packaging materials, semi-finished products, finished products, commodities and related products	Determined on the basis of market price and by reference to the price agreed between the contractual parties of the Overseas Project	11,560,548.78	30,000,000.00
CRSC Group	Controlling Shareholder(s)	Purchasing goods	Purchase, among others, raw materials, excipients, accessories, components and parts, packaging materials, semi-finished products, finished products, commodities and related products	Determined on the basis of market price, together with costs and various factors	46,314,293.08	130,000,000.00

Description of connected transaction: The aforesaid transaction was the performance of the new purchases and sales framework agreement entered into between the Company and CRSC Group on 25 March 2020 during the reporting period. The agreement is valid for three years, the transaction and the total transaction amount involved were within the decision-making authority of the Board of Directors of the Company and have been considered and approved by the same. In the meantime, the transaction satisfied the partial waiver level under the Hong Kong Listing Rules and was exempted from the approval by independent shareholders.

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General Services Framework Agreement between CRSC Group and the Company

Unit: Yuan Currency: RMB

Connected Transactions Counterparties	Connected Party Relationship	Category of Connected Transactions	Contents of Connected Transaction	Pricing Principles for Connected Transactions	Amount of Connected Transactions	Connected Transaction Caps
CRSC Group	Controlling shareholder(s)	Receiving services	General services including logistics services	Determined on the basis of service costs	1,190,978.50	50,000,000.00

Description of connected transaction: the aforesaid transactions was the performance of the New General Services Framework Agreement entered into between the Company and CRSC Group on 25 March 2020 during the reporting period. The agreement is valid for three years, the transaction and the total transaction amount involved were within the decision-making authority of the Board of Directors of the Company and have been considered and approved by the same. In the meantime, the transaction satisfied the partial waiver level under the Hong Kong Listing Rules and was exempted from the approval by independent shareholders.

Construction Contracting Framework Agreement between the Company and CRSC Group

Unit: Yuan Currency: RMB

Connected Transactions Counterparties	Connected Party Relationship	Category of Connected Transactions	Contents of Connected Transaction	Pricing Principles for Connected Transactions	Amount of Connected Transactions	Connected Transaction Caps
CRSC Group	Controlling shareholder(s)	Providing Services	Provides, among others, project construction and ancillary services, including but not limited to project design and general contracting of construction	Third-party construction cost consulting agency reviews the charged fee in light of the market conditions and refer to the fees for providing services to third-party	292,933,082.64	600,000,000.00

Description of connected transaction: The aforesaid transactions was the performance of the construction contracting framework agreement entered into between the Company and CRSC Group on 25 March 2020 during the reporting period. The agreement is valid for three years, the transaction and the total transaction amount involved were within the decision-making authority of the Board of Directors of the Company and have been considered and approved by the same. In the meantime, the transaction satisfied the partial waiver level under the Hong Kong Listing Rules and was exempted from the approval by independent shareholders.

SECTION VII

SIGNIFICANT EVENTS

XIII. MAJOR CONTRACTS AND PERFORMANCE

(I) Trust, contracting and leasing matters

1. Trust

☐ Applicable ☒ Not applicable

2. Contracting

☐ Applicable ☒ Not applicable

3. Leasing

☐ Applicable ☒ Not applicable

(II) Guarantees

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

External guarantees provided by the Company (excluding guarantees provided for its subsidiaries)

Total guarantee incurred during the reporting period (excluding those provided to subsidiaries)	—
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Total balance of guarantee as at the end of the reporting period (A) (excluding those provided to subsidiaries)	—
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Guarantees provided by the Company and its subsidiaries to its subsidiaries

Total guarantee to its subsidiaries incurred during the reporting period	904,814,058.52
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Total balance of guarantee to subsidiaries as at the end of the reporting period (B)	4,926,615,264.06
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SECTION VII SIGNIFICANT EVENTS

Aggregate guarantee of the Company (including those provided to subsidiaries)

Aggregate guarantee (A+B)	4,926,615,264.06
Percentage of aggregate guarantee to net assets of the Company (%)	11.31
Representing:	
Amount of guarantee provided for shareholders, actual controller and related parties (C)	—
Amount of debts guarantee directly or indirectly provided to guaranteed parties with gearing ratio over 70% (D)	4,671,715,761.48
Excess amount of aggregate guarantee over 50% of net assets (E)	—
Aggregate amount of the above three categories (C+D+E)	4,671,715,761.48

Statement on the contingent joint and several liability in connection with unexpired guarantee

Statement on guarantee

Percentage of the total guarantee amount to net assets of the Company = guarantee amount/equity attributable to owners of the parent company. As at the end of 31 December 2021, the balance of guarantee amounted to RMB4,927 million, accounting for 11.31% of the Company's net assets, of which, the balance of guarantees for wholly-owned subsidiaries was RMB4,922 million; the balance of guarantees for controlling subsidiaries was RMB5 million. The Company did not provide any guarantee for any of its controlling shareholders, actual controllers or related parties. As at the end of the reporting period, the balance of guarantee provided by the Company for its subsidiaries with an asset-liability ratio of more than 70% amounted to RMB4,672 million.

SECTION VII

SIGNIFICANT EVENTS

(III) Entrusted Cash Asset Management

1. Entrusted wealth management

(1) Overview picture about entrusted wealth management

☒ Applicable ☐ Not applicable

Unit: 0'000 Yuan Currency: RMB

Type	Source of funds	Balance	Outstanding balance	Overdue amount
Cash management products of bank	Idle proceeds	270,000	270,000	0

The Company purchased the certificates of large-amount deposits of RMB2,450 million and RMB250 million from the Qinghuayuan Sub-branch of China Everbright Bank Company Limited and the Beijing Branch of China Merchants Bank Co., Ltd. for principal- and revenue-guaranteed cash management. For details, please refer to (IV) Other circumstances of use of proceeds during the reporting period of XIV. EXPLANATION ON PROCESS IN USE OF PROCEEDS in this section.

SECTION VII SIGNIFICANT EVENTS

Other information

☐ Applicable ☒ Not applicable

(2) Individual entrusted wealth management

☐ Applicable ☒ Not applicable

Other information

☐ Applicable ☒ Not applicable

(3) Provision for impairment of entrusted wealth management

☐ Applicable ☒ Not applicable

2. Entrusted loans

(1) Overall picture about entrusted loans

☐ Applicable ☒ Not applicable

Other information

☐ Applicable ☒ Not applicable

(2) Individual entrusted loan

☐ Applicable ☒ Not applicable

Other information

☐ Applicable ☒ Not applicable

(3) Provision for impairment of entrusted loans

☐ Applicable ☒ Not applicable

3. Other information

☐ Applicable ☒ Not applicable

(IV) Other Material Contracts

☐ Applicable ☒ Not applicable

SECTION VII

SIGNIFICANT EVENTS

XIV. EXPLANATION ON PROCESS IN USE OF PROCEEDS

✓ Applicable ☐ Not applicable

(I) Overall Use of Proceeds

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Source of proceeds	Total proceeds	Net proceeds after deduction of issuance expenses	Total promised investment amounts out of proceeds	Total promised investment amounts out of proceeds after adjustments (1)	Accumulated investment amount out of proceeds as of the end of the reporting period (2)	Process of accumulated investment as of the end of the reporting period (%) (3)=(2)/(1)	Investment amount for the year (4)	Proportion of the investment amount for the year (%) (5)=(4)/(1)
The initial public offering	10,530,000,000.00	10,354,342,373.23	10,354,342,373.23	10,354,342,373.23	4,425,178,221.81	42.74	779,554,691.54	7.53

(II) Details of the investment project

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Project name	Whether the change is involved	Proceeds source	Total promised investment amounts out of project proceeds	Total proceeds investment after adjustments (1)	Accumulated investment amount as of the end of the report period (2)	Accumulated investment as of the end of the report period		Whether process of investment is in line with plan	Specific reasons for process of investment not achieved	Efficiency achieved or R&D results of this project	Whether feasibility of projects changes significantly, if yes, please specify	Amount of savings and reasons
						the report period	Date of which projects reached expected available status					
					(%) (3) = (2)/(1)							
Advanced and intelligent technology research and development projects	No	IPO	4,600,000,000.00	4,600,000,000.00	1,407,045,893.81	30.59	2023	No	Yes	Completed the pilot application of the regional coordinative transportation service system in Chongqing, a dynamic test for ground equipment of ETCS train control system based on baseline 3 in Belgrade - Novi Sad section of Hungary-Serbia Railway; completed the pilot application of the railway comprehensive dispatching information system in Beosten line and Shenshuo line of Shenhua Railway; on-site verification of various key technologies for the new train control system based on BeiDou satellite positioning technology and the CBTC system based on full-electronic interlock system that achieved the first delivery of the extension project of Changchun Subway Line 3, etc.	No	Not applicable

SECTION VII SIGNIFICANT EVENTS

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Project name	Whether the change is involved	Proceeds source	Total promised investment amounts out of project proceeds	Total proceeds investment after adjustments (1)	Accumulated investment amount as of the end of the report period (2)	Accumulated investment as of the end of the report period (%) (3) = (2)/(1)	Date of which projects reached expected available status	Whether process of investment is in line with plan process	Specific reasons for process of investment not achieved	Efficiency achieved or R&D results of this project	Whether feasibility of projects changes significantly, if yes, please specify	Amount of savings and reasons
Advanced and intelligent manufacturing base project	No	IPO	2,500,000,000.00	2,500,000,000.00	0.00	0	-	No	Completed the pilot application of the regional coordinative transportation service system in Chongqing, dynamic test of ground equipment of ETCS train control system based on Baseline 3 in the Belgrade - Novi Sad section of the Hungary-Serbia Railway, pilot application of the railway comprehensive dispatching information system in Baoshen line and Shenshui line of Shenhua Railway, site verification of several key technologies of new train control system based on Beidou satellite positioning, delivery of CBTC system based on full-electronic interlock system in the first project of the extension of Changchun Rail Transit Line 3, etc.	Not applicable	No	Not applicable

SECTION VII SIGNIFICANT EVENTS

Project name	Whether the change is involved	Proceeds source	Total promised investment amounts out of project proceeds	Total proceeds investment after adjustments (1)	Accumulated investment amount as of the end of the report period (2)	Accumulated investment as of the end of the report period (%) (3) = (2)/(1)	Date of which projects reached expected available status	Whether process of investment is in line with plan process		Specific reasons for process of investment not achieved	Efficiency achieved or R&D results of this project	Whether feasibility of projects changes significantly, if yes, please specify		Amount of savings and reasons
Information construction project	No	IPO	300,000,000.00	300,000,000.00	38,132,328.00	12.71	2022	No	Yes	Not applicable	Not applicable	No		Not applicable
Supplement liquidity	No	IPO	2,954,342,373.23	2,954,342,373.23	2,990,000,000.00	100	-	No	Yes	Not applicable	Not applicable	No		Not applicable

Notes: 1. A total of RMB1,407.05 million was invested in advanced and intelligent technology research and development projects as at the end of the reporting period. A total of RMB755.23 million was invested in 2021, of which RMB533.76 million was invested in research on advanced rail transit control systems and key technologies, and RMB65.24 million was invested in research on intelligent integrated operation and maintenance systems and technologies for rail transit, RMB116.83 million was invested in smart city and industry communication information system research, RMB7.73 million was invested in chip technology applicable to rail transit, and RMB31.67 million was invested in rail transit intelligent construction technology research.

2. As of 31 December 2021, in the comparison table for the use of raised funds, the actual supplement working capital project investment amount was RMB2,980,000,000.00, including the total initial committed investment of RMB2,954,342,373.23 and current interest of RMB25,657,626.77 in the corresponding special bank account.

SECTION VII

SIGNIFICANT EVENTS

(III) Changes in investment during the reporting period

☐ Applicable ☒ Not applicable

(IV) Other circumstances of use of proceeds during the reporting period

1. Initial investment and replacement of projects with proceeds

☐ Applicable ☒ Not applicable

2. Temporarily supplement working capital with idle proceeds

☐ Applicable ☒ Not applicable

3. Cash management against idle proceeds to invest in relevant products

☒ Applicable ☐ Not applicable

At the 21st meeting of the third session of the Board, the 10th meeting of the third session of the supervisory committee convened on 28 August 2020, and the 29th meeting of the third session of the Board, the 14th meeting of the third session of the supervisory committee held on 25 August 2021, *Resolution on Utilizing Unused Raised Funds for Cash Management* was considered and approved by the Company, approving the Company's utilization of unused proceeds of no more than RMB2.7 billion (inclusive) for cash management for a period of not more than 12 months, provided that the progress on investment plans which use the proceeds, the Company's production and operation and the security of the proceeds would not be affected. Details of the plans of using the proceeds for cash management are as follows:

No.	Trustee	Product type	Investment amount (RMB0'000)	Term	Expected annualized rate on return	Type of return
1	China Everbright Bank Company Limited Qinghuayuan Sub- branch	Large deposit certificate	245,000	12 months	3.9%	Principal- guaranteed and income- guaranteed
2	China Merchants Bank Co., Ltd. Beijing Branch	Large deposit certificate	25,000	12 months	3.78%	Principal- guaranteed and income- guaranteed

SECTION VII SIGNIFICANT EVENTS

4. Permanently supplement liquidity with over-raised proceeds or repay bank loans

☐ Applicable ☒ Not applicable

5. Others

☐ Applicable ☒ Not applicable

XV. EXPLANATION ON OTHER SIGNIFICANT MATTERS THAT HAVE A SIGNIFICANT IMPACT ON THE INVESTORS' VALUE JUDGMENT AND INVESTMENT DECISIONS

☐ Applicable ☒ Not applicable

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

I. THE MOVEMENTS IN SHARE CAPITAL

(I) Table of Changes in Shares

1. Table of changes in shares

Unit: Share

	Before the changes		New shares	Changes for the period (+, -)				After the changes	
	Number of shares	Percentage (%)		Bonus shares	Reserve transferred to shares	Others	Subtotal	Number of shares	Percentage (%)
I. Shares subject to trading moratorium	6,640,426,424	62.71	-	-	-	-36,000,000	-36,000,000	6,604,426,424	62.37
1. State-owned shares	-	-	-	-	-	-	-	-	-
2. State-owned legal person shares	6,640,426,424	62.71	-	-	-	-36,000,000	-36,000,000	6,604,426,424	62.37
3. Other domestic shares	-	-	-	-	-	-	-	-	-
4. Foreign shareholding	-	-	-	-	-	-	-	-	-
II. Circulating shares not subject to trading moratorium	3,949,392,576	37.29	-	-	-	+36,000,000	+36,000,000	3,985,392,576	37.63
1. RMB ordinary shares	1,980,591,576	18.70	-	-	-	+36,000,000	+36,000,000	2,016,591,576	19.04
2. Domestic listed foreign shares	-	-	-	-	-	-	-	-	-
3. Overseas listed foreign shares	1,968,801,000	18.59	-	-	-	-	-	1,968,801,000	18.59
4. Others	-	-	-	-	-	-	-	-	-
III. Total number of shares	10,589,819,000	100.00	-	-	-	-	-	10,589,819,000	100.00

2. Explanation on changes in shares

☒ Applicable ☐ Not applicable

The reason for the change in the share capital structure is that certain of the shares subject to trading moratorium issued under the IPO on 22 July 2021 were listed for trading.

3. The impact of changes in shares on financial indicators such as earnings per share, net asset per share for the latest year and the latest period (if any)

☐ Applicable ☒ Not applicable

4. Other disclosable contents that the Company deemed necessary or were required by securities regulatory authorities

☐ Applicable ☒ Not applicable

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

(II) CHANGES IN SHARES SUBJECT TO TRADING MORATORIUM

✓ Applicable ☐ Not applicable

Unit: Share

Name of Shareholders	Number of shares subject to trading moratorium at the beginning of the year	Number of shares released from trading moratorium for the year	Number of new shares subject to trading moratorium for the year	Number of shares subject to trading moratorium at the end of the year	Reason for the trading moratorium	Date of release from trading moratorium
China CICC Wealth Management Securities Company Limited (Formerly known as China Investment Securities Co., Ltd.)	36,000,000	36,000,000	0	0	subject to trading moratorium under the strategic allotment of the initial public offering	22 July 2021
Total	<u>36,000,000</u>	<u>36,000,000</u>	<u>0</u>	<u>0</u>	/	/

II. SECURITIES ISSUE AND LISTING

(I) Issue of Securities as at the Reporting Period

✓ Applicable ☐ Not applicable

Unit: Share Currency: RMB

Type of shares and their derivatives	Issue date	Issue price (or interest rate)	Issue number	Listing date	Number of shares permitted for listing and trading	Termination date of trading
Bonds (including enterprise bonds, corporate bonds and debt financing instruments of non-financial enterprises)						
Debt financing instruments of non-financial enterprises	2021-12-15	3.32%	28,000,000	2021-12-17	28,000,000	

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

Explanation on securities issue as at the reporting period (for bonds with different interest rates during the duration, please specify separately):

☒ Applicable ☐ Not applicable

China Railway Signal & Communication Corporation Limited raised a total of RMB2.8 billion from the first tranche of medium-term notes project bonds in 2021. According to the Underwriting Agreement of Medium-term Notes for 2021-2023 of China Railway Signal & Communication Corporation Limited and Credit Rating Contract signed between the Company and China Merchants Securities Co., Ltd. (the lead underwriter), China Merchants Securities Co., Ltd. will directly withhold the underwriting fee (including tax: the issuance period is calculated based on the duration before the initial exercise of the redemption option, i.e. 3 years) of RMB2,520,000.00 and directly withhold the rating fee of RMB450,000.00 from the proceeds. After deducting the above fees, the Company has received the total transfer sum of RMB2,797,030,000.00 on 16 December 2021.

(II) Changes in the Total Number of Shares and Shareholders Structure of the Company and Changes in the Company's Assets and Liabilities Structure

☐ Applicable ☒ Not applicable

III. SHAREHOLDERS AND ACTUAL CONTROLLERS

(I) Total Number of Shareholders

Total number of ordinary shareholders as at the end of the reporting period (account)	99,513
Total number of ordinary shareholders at the end of the previous month before the disclosure date of the annual report (account)	97,536
Total number of shareholders of preference shares with restored voting rights as at the end of the reporting period (account)	Not applicable
Total number of shareholders of preference shares with restored voting rights at the end of the previous month before the disclosure date of the annual report (account)	Not applicable
Total number of shareholders holding special voting shares as at the end of the reporting period (account)	Not applicable
Total number of shareholders holding special voting shares at the end of the previous month before the disclosure date of the annual report (account)	Not applicable

Number of depositary receipt holders

☐ Applicable ☒ Not applicable

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

Particulars of Shareholdings of the Top Ten Shareholders and the Top Ten Shareholders of Tradable Shares (or Shareholders Not Subject to Trading Moratorium) as at the End of the Reporting Period

Unit: share

Particulars of shareholdings of the top ten shareholders

Name of Shareholder (full name)	Change of shareholding during the reporting period	Number of shares held as at the end of the period	Percentage (%)	Number of shares held subject to trading moratorium	Number of restricted shares including lending shares for securities financing	Shares pledged, marked or frozen	Status of shares	Number of shares	Nature of shareholder
China Railway Signal and Communication (group) Corporation Limited ^{Note 1}	-	6,604,426,424	62.37	6,604,426,424	6,604,426,424	No shares being pledged, marked or frozen	-	-	State-owned Corporation
HKSCC NOMINEES LIMITED ^{Note 2}	-38,000	1,967,727,950	18.58	-	-	Unknown	-	-	Overseas corporation
HKSCC Limited	-	83,111,314	0.78	-	-	Unknown	-	-	Overseas corporation
China National Machinery Industry Corporation	-	63,507,192	0.60	-	-	Unknown	-	-	State-owned Corporation
China Merchants Bank Co., Ltd.-ChinaAMC SSE STAR 50 Exchange Traded Fund	-13,416,754	53,889,986	0.51	-	-	Unknown	-	-	Other
China Railway Investment Co., Ltd.	-	34,188,000	0.32	-	-	Unknown	-	-	State-owned Corporation
Industrial and Commercial Bank of China Limited-E Fund SSE STAR 50 Exchange Traded Fund	-7,072,737	27,988,409	0.26	-	-	Unknown	-	-	Other
Guangdong Hengjian Capital Management Co., Ltd.	-	23,677,500	0.22	-	-	Unknown	-	-	State-owned Corporation
CETC Fund Management Co., Ltd.-Zhongdian Electronic Information Industry Investment Fund (Tianjin) Partnership (Limited Partnership)	-	23,677,500	0.22	-	-	Unknown	-	-	Other
Hunan Rail Transit Holding Group Co., Ltd.	-	23,677,500	0.22	-	-	Unknown	-	-	State-owned Corporation

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

Particulars of shareholdings of the top ten Shareholders not subject to trading moratorium

Name of Shareholder	Number of circulating shares held not subject to trading moratorium	Type and number of shares	
		Type	Number
HKSCC NOMINEES LIMITED ^{Note2}	1,967,727,950	Overseas listed foreign shares	1,967,727,950
HKSCC Limited	83,111,314	RMB ordinary shares	83,111,314
China National Machinery Industry Corporation	63,507,192	RMB ordinary shares	63,507,192
China Merchants Bank Co., Ltd -ChinaAMC SSE STAR 50 Exchange Traded Fund	53,889,986	RMB ordinary shares	53,889,986
China Railway Investment Co., Ltd.	34,188,000	RMB ordinary shares	34,188,000
Industrial and Commercial Bank of China Limited-E Fund SSE STAR 50 Exchange Traded Fund	27,988,409	RMB ordinary shares	27,988,409
Guangdong Hengjian Capital Management Co., Ltd.	23,677,500	RMB ordinary shares	23,677,500
CETC Fund Management Co., Ltd-Zhongdian Electronic Information Industry Investment Fund (Tianjin) Partnership (Limited Partnership)	23,677,500	RMB ordinary shares	23,677,500
Hunan Rail Transit Holding Group Co., Ltd.	23,677,500	RMB ordinary shares	23,677,500
China Merchants Bank Co., Ltd – SAM Sci-tech Innovation Board Three – year Regular Opening Hybrid Securities Investment Fund	13,518,372	RMB ordinary shares	13,518,372
Explanation on the special account for repurchase of the top ten shareholders	–		
Explanation on the above shareholders who entrusted, be entrusted with or waived voting rights	–		
Explanation on the related party relationship or acting-in-concert arrangement among the above shareholders	China Railway Signal and Communication (group) Corporation Limited, the largest shareholder, does not have any related party relationship with the other shareholders nor is it a person acting in concert with them. The Company is not aware whether the other shareholders have related party relationship or acting-in-concert arrangement.		
Explanation on the shareholders of preference shares with restored voting right and their shareholdings	Not applicable		

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

Note 1: As of 31 December 2021, apart from 6,604,426,424 A shares, China Railway Signal and Communication (group) Corporation Limited also holds 34,302,000 H shares of the Company.

Note 2: H shares held by HKSCC NOMINEES LIMITED are held on behalf of various clients.

Note 3: Apart from information set out in note 1 and note 2, shares held by shareholders in the table above are all A shares of the Company.

The shareholdings of the top ten Shareholders subject to trading moratorium and conditions of such trading moratorium

☒ Applicable ☐ Not applicable

Unit: share

No.	Name of Shareholder subject to trading moratorium	Number of Shares held subject to trading moratorium	Shares subject to trading moratorium available for listing and trading		Conditions of trading moratorium
			Time available for listing and trading	Number of additional shares available for listing and trading	
1	China Railway Signal and Communication (group) Corporation Limited	6,604,426,424	22 July 2022	–	36 months from the date when the Company's shares are listed at the SSE

Explanation on the related party relationship or acting-in-concert arrangement among the above shareholders Not applicable

Particulars of the top ten domestic depository receipts holders of the Company as at the end of the reporting period

☐ Applicable ☒ Not applicable

Number of holdings of the top ten holders of depository receipts subject to trading moratorium and conditions of such trading moratorium

☐ Applicable ☒ Not applicable

(II) Particulars of Top Ten Shareholders with Voting Rights as at the End of the Reporting Period

☐ Applicable ☒ Not applicable

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

(III) Top 10 Shareholders from Strategic Investors or General Legal Persons Participating in the Placing of the New Shares/Depository Receipts

☐ Applicable ☒ Not applicable

(IV) Strategic Placement of IPO

1. Particulars of shareholding of senior management and core employees by setting up a special asset management plan to participate in the strategic placement of IPO

☒ Applicable ☐ Not applicable

Unit: share

Name of Shareholder/holder	Number of allocated shares/ depository receipts	Time available for listing and trading	Changes of number in the reporting period	Number of holdings of shares/depository receipts including lending shares for securities financing at the end of the period
CICC-Guangfa Bank-CICC Feng Zhong No. 1 collective assets management plan for employee participation in STAR MARKET strategic allotment	18,901,500	22 July 2020	-1,037,561	4,010,647
CICC-Guangfa Bank-CICC Feng Zhong No. 2 collective assets management plan for employee participation in STAR MARKET strategic allotment	44,713,112	22 July 2020	-3,676,489	7,339,186
CICC-Guangfa Bank-CICC Feng Zhong No. 3 collective assets management plan for employee participation in STAR MARKET strategic allotment	34,227,038	22 July 2020	-1,210,774	6,328,531
CICC-Guangfa Bank-CICC Feng Zhong No. 4 collective assets management plan for employee participation in STAR MARKET strategic allotment	1,621,102	22 July 2020	—	—
CICC-Guangfa Bank-CICC Feng Zhong No. 5 collective assets management plan for employee participation in STAR MARKET strategic allotment	9,270,248	22 July 2020	-883,002	2,958,800

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

2. Particulars of shareholding of relevant subsidiaries of sponsors participating in the strategic placement of IPO

✓ Applicable ☐ Not applicable

Unit: share

Name of Shareholder	Relationship with the sponsor	Number of allocated shares/ depositary receipts	Time available for listing and trading	Changes of number in the reporting period	Number of holdings of shares/ depositary receipts including lending shares for securities financing at the end of the period
China CICC Wealth Management Securities Company Limited (Formerly known as China Investment Securities Company Limited)	A wholly-owned subsidiary of the sponsor	36,000,000	22 July 2021	-36,000,000	–

IV. THE CONTROLLING SHAREHOLDER AND ACTUAL CONTROLLER

(I) Controlling Shareholder

1 Legal person

✓ Applicable ☐ Not applicable

Name	China Railway Signal and Communication (group) Corporation Limited
Leader or legal representative	ZHOU Zhiliang
Date of establishment	7 January 1984

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

Main business

Business scope: Dispatching expatriate labor required to undertake overseas projects that are compatible with the company's strength, scale, and performance; production of railway (including subway) equipment used in communications, signals, electricity, and automatic control; scientific research, survey, design, installation and construction of the aforesaid projects, as well as construction of supporting projects thereof; import and export businesses; contracting overseas railways and electricity projects and international tender projects in PRC; contracting survey, consultation, design and supervision of the afore-said overseas projects; survey, design, installation, construction and ancillary building construction of communication, signal, electricity, and automatic control projects of roadway traffic, airport, port, industrial and mining enterprises; technical consultation and technical services related to the afore-said projects; leasing of the equipment and self-owned building. (Enterprises can freely choose the operating projects and carry out business activities according to laws; projects subject to approval according to laws shall be launched to carry out business activities with approval of the competent authorities and based on the content of the approval; business activities of the forbidden and restricted projects as required by the municipal industry policies are not allowed.)

Equity in other domestic and overseas listed companies controlled and invested during the reporting period

China Railway Signal and Communication (group) Corporation Limited holds 36,686,852 RMB ordinary shares of Tianjin Keyvia Electric Co., Ltd. (stock code: 300407). The shareholding percentage is 12.03%.

China Railway Signal and Communication (group) Corporation Limited holds 34,843,206 RMB ordinary shares of China Railway Construction Heavy Industry Co., Ltd. (stock code: 688425). The shareholding percentage is 0.68%.

Other explanations

None

2 Natural person

☐ Applicable ☒ Not applicable

3 Special explanation for absence of the Company's controlling shareholder

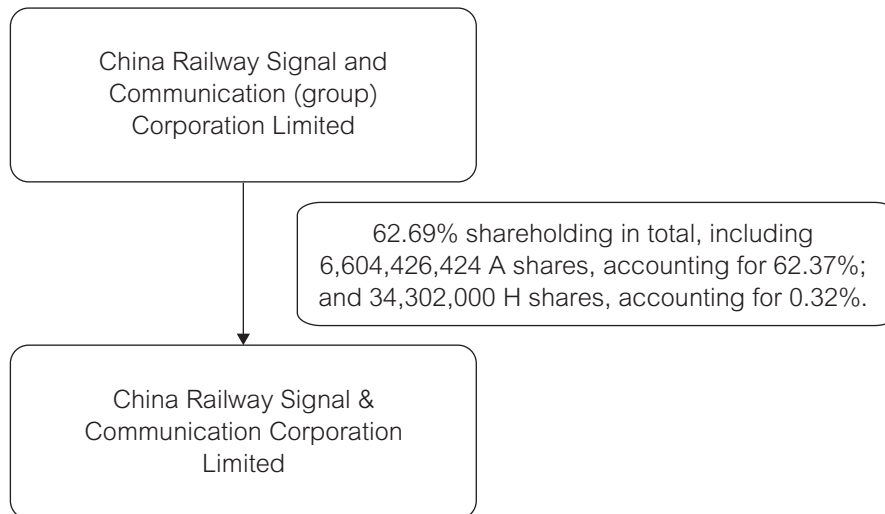
☐ Applicable ☒ Not applicable

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

4 Explanation for changes in controlling shareholder during the reporting period

☐ Applicable ☒ Not applicable

5 Diagram of the property rights and control relationship between the Company and the controlling shareholder



(II) Actual Controllers

1 Legal person

☒ Applicable ☐ Not applicable

Actual controller of the Company – State-owned Assets Supervision and Administration Commission of the State Council, which is the ministry level institution directly under the State Council, and was set up in accordance with the Institutional Reform Plan of the State Council and the Notice of the State Council on Establishment of Institutions passed at the First Session of the 10th National People's Congress. The State-owned Assets Supervision and Administration Commission is authorized by the State Council to perform its duties as an investor on behalf of the State. The scope of supervision of the State-owned Assets Supervision and Administration Commission extends to the state-owned assets of central government owned enterprises (excluding financial enterprises).

2 Natural person

☐ Applicable ☒ Not applicable

3 Special explanation for absence of the Company's actual controllers

☐ Applicable ☒ Not applicable

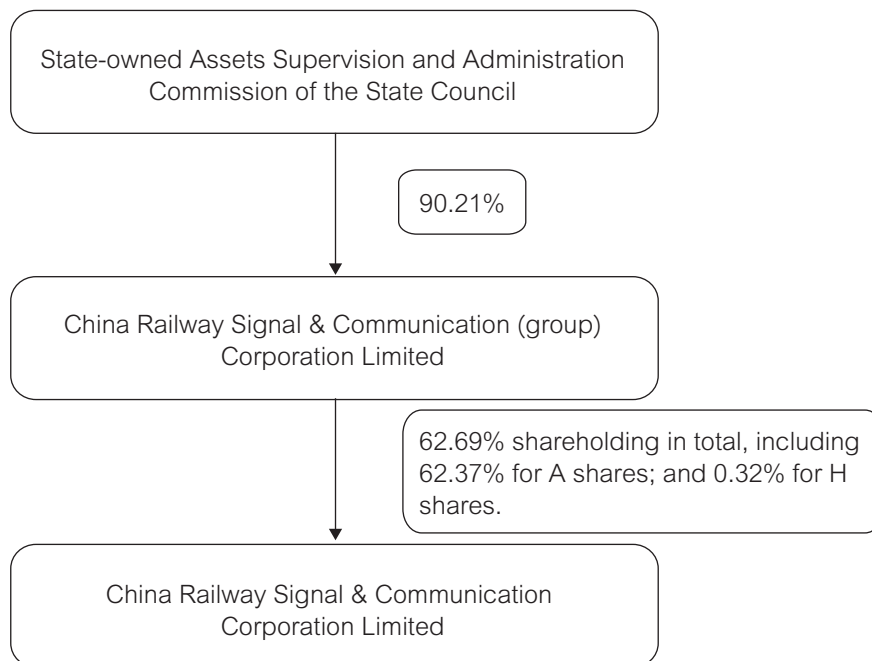
SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

- 4 Explanation for changes in control of the Company during the reporting period

☐ Applicable ☒ Not applicable

- 5 Diagram of the property rights and control relationship between the Company and the actual controllers

☒ Applicable ☐ Not applicable



- 6 Controlling the Company by the actual controllers through trust or other asset management methods

☐ Applicable ☒ Not applicable

(III) Other Information of Controlling Shareholder and Actual Controllers

☐ Applicable ☒ Not applicable

- V. THE CUMULATIVE NUMBER OF PLEDGED SHARES OF THE CONTROLLING SHAREHOLDERS OR THE LARGEST SHAREHOLDER OF THE COMPANY AND THE PERSON ACTING IN CONCERT WITH THEM ACCOUNTS FOR MORE THAN 80% OF THE SHARES OF THE COMPANY HELD BY THEM.

☐ Applicable ☒ Not applicable

SECTION VIII CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

VI. OTHER LEGAL PERSON HOLDING MORE THAN 10% OF THE SHARES

☐ Applicable ☒ Not applicable

VII. EXPLANATION OF RESTRICTIONS ON REDUCTION OF HOLDING OF SHARES/DEPOSITARY RECEIPTS

☐ Applicable ☒ Not applicable

VIII. IMPLEMENTATION OF THE SHARE REPURCHASE DURING THE REPORTING PERIOD

☐ Applicable ☒ Not applicable

Neither the Company nor any of its subsidiaries purchased, sold or redeemed any of its listed securities during the year ended 31 December 2021.

SECTION IX PARTICULARS OF PREFERENCE SHARES

☐ Applicable ☒ Not applicable

SECTION X PARTICULARS OF CORPORATE BONDS

I. ENTERPRISE BONDS, CORPORATE BONDS AND DEBT FINANCING INSTRUMENTS OF NON-FINANCIAL ENTERPRISES

✓ Applicable ☐ Not applicable

(I) Enterprise Bonds

☐ Applicable ☒ Not applicable

(II) Corporate Bonds

☐ Applicable ☒ Not applicable

(III) Debt Financing Instruments of Non-financial Enterprises in the Interbank Bond Market

✓ Applicable ☐ Not applicable

1. Basic information on debt financing instruments of non-financial enterprises

Unit: Yuan Currency: RMB

Name of bond	Abbreviation	Code	Issue date	Value date	Maturity date	Balance of the bond	Interest rate (%)	Repayment of principal and interest	Trading place	Investor suitability arrangements (if any)	Trading mechanism	Whether there is a risk of termination of listing and trading
2021 First Tranche of Medium-term Notes of China Railway Signal & Communication Corporation Limited	21 CRSC MTN001	1021032651B	15 December 2021	16 December 2021	3+N (3) years, standing perpetually before redemption by the issuer in accordance with the terms of issuance, and maturing upon redemption by the issuer in accordance with the terms of issuance.	2,800,000,000	3.32	Interest payment method: Simple interest for accrual of annual interest, and no compound interest will be accrued. If the Company does not exercise the option of deferred payment of interest, interest will be paid annually; if the Company exercises the option of deferred payment of interest, the current interest and all deferred interest and interest thereof will be deferred to the next interest payment date, and each deferred interest is interest bearing at the prevailing coupon rate during the deferral period. The last installment of interest shall be paid together with the principal. Repayment method: The principal and the last installment of interest are paid upon redemption by the issuer in accordance with the terms of issuance.	Interbank market	For qualified institutional investors in the national interbank bond market (other than purchasers prohibited by national laws or regulations), it shall be conducted in accordance with the relevant regulations promulgated by the National Interbank Funding Center.	Through the local currency trading system of the foreign exchange trading center in the interbank market; transactions are concluded one by one with the counterparties by way of price inquiry.	No

SECTION X PARTICULARS OF CORPORATE BONDS

Measures adopted by the Company for the risk of terminating the listing and trading of bonds

☐ Applicable ☒ Not applicable

Overdue and outstanding bonds

☐ Applicable ☒ Not applicable

Payments of interest and principal of bonds during the reporting period

☐ Applicable ☒ Not applicable

2. The triggering and implementation of the issuer or investor option terms and the investor protection terms

☐ Applicable ☒ Not applicable

3. Intermediaries providing services for bonds issuance and business subsisting

Name of intermediary	Address	Name of signing accountant	Contact person(s)	Contact number
China Merchants Securities Co., Ltd.	17/F, Building 3, No. 1 Yuetan South Street, Xicheng District, Beijing	Not applicable	RONG Xi, ZHAO Yan	010-57601901
China Everbright Bank Company Limited	China Everbright Center, No.25 Taipingqiao Avenue, Xicheng District, Beijing	Not applicable	JIANG Shasha	010-63639651
Zhong Lun Law Firm	23-31/F, South Tower of CP Center, No. 20 Jin He East Avenue, Chaoyang District, Beijing	Not applicable	YUAN Ting, MA Sicong	010-59572288
Ernst & Young Hua Ming LLP	Rooms 01-12, Level 17, Ernst & Young Tower, Oriental Plaza, No. 1 East Chang'an Avenue, Dongcheng District, Beijing	Not applicable	ZHANG Xiaoliang	010-58153960

SECTION X PARTICULARS OF CORPORATE BONDS

Name of intermediary	Address	Name of signing accountant	Contact person(s)	Contact number
Dagong Global Credit Rating Co., Ltd.	3/F-01, No. 89 West Third Ring North Road, Haidian District, Beijing	Not applicable	GE Ling	010-67413300

Changes in the above intermediaries

☐ Applicable ☒ Not applicable

4. Use of proceeds as at the end of the reporting period

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Name of bond	Total proceeds	Proceeds used	Proceeds unused	Operation of special account for proceeds (if any)	Rectification of illegal use of proceeds (if any)	Whether the use of proceeds is consistent with the use of proceeds committed, the planned use and other agreements in the prospectus
2021 First Tranche of Medium-term Notes of China Railway Signal & Communication Corporation Limited	2,800,000,000	194,000,000	2,603,030,000	Not applicable	Not applicable	Yes

Note: The Company raised a total of RMB2.8 billion from the debt financing instruments, and the net proceeds after deduction of the relevant issuance expenses was RMB2.79703 billion.

Progress and operating efficiency in use of proceeds for construction projects

☐ Applicable ☒ Not applicable

SECTION X PARTICULARS OF CORPORATE BONDS

Explanation for changing the use of proceeds raised from the above-mentioned bonds during the reporting period

☐ Applicable ☒ Not applicable

Other explanations

☐ Applicable ☒ Not applicable

5. Adjustment of credit rating results

☐ Applicable ☒ Not applicable

Other explanations

☐ Applicable ☒ Not applicable

6. Implementation and changes in guarantees, debt repayment plans and other repayment guarantees during the reporting period and their impact

☐ Applicable ☒ Not applicable

7. Other explanations of debt financing instruments of non-financial enterprises

☐ Applicable ☒ Not applicable

(IV) Losses in the consolidated statements exceeding 10% of the net assets as at the end of the previous year during the reporting period

☐ Applicable ☒ Not applicable

(V) Default on payment of interest-bearing debts excluding bonds as at the end of the reporting period

☐ Applicable ☒ Not applicable

(VI) Influence of violations of laws and regulations, the Articles of Association, the management system for information disclosure, and the agreements or undertakings in the bond prospectus on the rights and interests of bond investors during the reporting period

☐ Applicable ☒ Not applicable

SECTION X PARTICULARS OF CORPORATE BONDS

(VII) Accounting data and financial indicators of the Company for the last two years as of the end of the reporting period

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Major indicators	2021	2020	Change as compared with the corresponding period of last year (%)	Reasons for changes
EBITDA	5,076,537,104.16	5,721,708,099.61	-11.28	/
Current ratio	1.48	1.46	0.02	/
Quick ratio	0.77	0.77	0.00	/
Gearing ratio (%)	58.35	57.94	0.41	/
Debt-to-EBITDA ratio	1.54	2.23	-0.69	/
Interest coverage ratio	46.30	118.67	-72.37	/
Cash interest coverage ratio	38.14	92.24	-54.10	/
EBITDA interest coverage ratio	53.81	133.70	-79.89	/
Loan repayment ratio (%)	100	100	—	/
Interest repayment ratio (%)	100	100	—	/

II. CONVERTIBLE COMPANY DEBENTURES

☐ Applicable ☒ Not applicable

INDEPENDENT AUDITOR'S REPORT

I. AUDIT REPORT

✓ Applicable ☐ Not applicable

AUDIT REPORT

Ernst & Young Hua Ming (2022) Shen Zi No.61172338_A02
China Railway Signal & Communication Corporation Limited

To the Shareholders of China Railway Signal & Communication Corporation Limited

I. OPINION

We have audited the financial statements of China Railway Signal & Communication Corporation Limited ("CRSC"), which comprise the consolidated and company balance sheets as at 31 December 2021, and the consolidated and company income statements, the statements of changes in shareholders' equity and the cash flow statements for the year then ended, and notes to the financial statements.

In our opinion, the accompanying financial statements of CRSC give a true and fair view, in all material respects, of the consolidated and company financial position as of 31 December 2021, and the consolidated and company financial performance and cash flows for the year then ended in accordance with Accounting Standards for Business Enterprises.

II. BASIS FOR OPINION

We conducted our audit in accordance with China Auditing Standards for the Certified Public Accountants. Our responsibilities under those standards are further described in the Responsibilities of Certified Public Accountants for the Audit of the Financial Statements section of our report. We are independent of CRSC in accordance with the China Code of Ethics for Certified Public Accountants ("the Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

III. KEY AUDIT MATTER

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements for the current year. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the Responsibilities of Certified Public Accountants for the Audit of the Financial Statements section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the whole financial statements.

INDEPENDENT AUDITOR'S REPORT

AUDIT REPORT (Continued)

Ernst & Young Hua Ming (2022) Shen Zi No.61172338_A02
China Railway Signal & Communication Corporation Limited

III. KEY AUDIT MATTER (Continued)

Key audit matters:

How our audit addressed the key audit matters:

Recognition of revenue from construction contracts

The revenue of China Railway Signal & Communication Corporation Limited is mainly derived from construction contracts for which CRSC recognises revenue according to performance progress. Recognition of revenue in accordance with performance progress may involve significant management judgements and estimates, including estimated contract revenue, estimated contract costs, and work progress. When conditions change, the relating judgements and estimates may vary. During the execution of contracts, the management of China Railway Signal & Communication Corporation Limited evaluated and revised the estimated contract revenue and estimated contract costs based on factors such as scope of contract delivery and estimated cost to completion. The recognition of revenue from construction contracts has a significant effect on financial statements.

For the accounting policies and the disclosure of information for the recognition of construction contract revenue, please refer to Note V.38 and Note VII.61 to the financial statements.

We tested and evaluated the internal control of revenue recognition of China Railway Signal & Communication Corporation Limited. We obtained major construction contracts, reviewed key contract terms and evaluated the rationality of the management's estimation on estimated contract revenue and estimated contract costs.

We performed sampling inspection of relevant documents to review contract costs incurred; recalculated the performance progress and revenue based on incurred costs and estimated contract costs; carried out cut-off test procedures to check whether relevant contract costs are recorded in the appropriate accounting period; and underwent an analytical review process for the gross profit margin of major construction contracts.

We evaluated the sufficiency of the management's disclosure of recognition of revenue from construction contracts in the financial statements.

INDEPENDENT AUDITOR'S REPORT

AUDIT REPORT (Continued)

Ernst & Young Hua Ming (2022) Shen Zi No.61172338_A02
China Railway Signal & Communication Corporation Limited

III. KEY AUDIT MATTER (Continued)

Key audit matters:

Impairment of accounts receivable and contract assets

China Railway Signal & Communication Corporation Limited recognises provision for impairment of accounts receivable and contract assets based on expected credit losses, which involves significant judgements and estimations of the management. Specific factors considered by the management in its recoverability analysis include ageing, customers' repayment plans, historical settlement records, credit ratings and historical repayment records, and other qualitative and quantitative data available to the management. The management also evaluated the expected changes in the credit risk of the debtor based on the above data combined with economic policies, macroeconomic indicators, industry risks and other factors, and considered forward-looking information. The balance of accounts receivable and contract assets of China Railway Signal & Communication Corporation Limited was significant, and the impairment of accounts receivable and contract assets had significant impacts on the financial statements.

For the accounting policies and the disclosure of information for provision for impairment of accounts receivable and contract assets, please refer to Note V.10, 16 and Note VII.5, 10 to the financial statements.

How our audit addressed the key audit matters:

We tested and evaluated the internal control of accrual process of China Railway Signal & Communication Corporation Limited for provision for impairment of accounts receivable and contract assets, reviewed the management's analysis and evaluation of historical data of receivables and analysis of historical settlement of contract assets, and checked relevant supporting documents for selected samples to review the accuracy of the ageing of receivables.

For individual recognition of impairment provision for receivables and contract assets, we understood the reasons for the management's judgement and evaluated the rationality of the management's impairment provision.

For the recognition of impairment provision for receivables and contract assets by reference to the credit risk portfolio, we reviewed the management's settings for the credit risk portfolio, evaluated the rationality of the impairment loss rate in combination with the consideration of historical audit experience and forward-looking information, and reviewed relevant documents for the selected samples to evaluate the rationality of the management's credit risk portfolio classification and impairment provision.

We evaluated the sufficiency of the management's disclosure of provision for impairment of accounts receivable and contract assets.

INDEPENDENT AUDITOR'S REPORT

AUDIT REPORT (Continued)

Ernst & Young Hua Ming (2022) Shen Zi No.61172338_A02
China Railway Signal & Communication Corporation Limited

IV. OTHER INFORMATION

The management of CRSC is responsible for the other information. The other information comprises the information included in the Annual Report, but does not include the financial statements and our independent auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

V. RESPONSIBILITIES OF THE MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENT

The management of CRSC is responsible for the preparation of the financial statements that give a true and fair view in accordance with Accounting Standard for Business Enterprises, and for designing, implementing and maintaining the necessary internal control to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the management is responsible for assessing CRSC's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the management either intends to liquidate CRSC or to cease operations or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing CRSC's financial reporting process.

VI. RESPONSIBILITIES OF CERTIFIED PUBLIC ACCOUNTANTS FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an independent auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with China Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

INDEPENDENT AUDITOR'S REPORT

AUDIT REPORT (Continued)

Ernst & Young Hua Ming (2022) Shen Zi No.61172338_A02
China Railway Signal & Communication Corporation Limited

VI. RESPONSIBILITIES OF CERTIFIED PUBLIC ACCOUNTANTS FOR THE AUDIT OF THE FINANCIAL STATEMENTS (Continued)

As part of an audit in accordance with China Standards on Auditing, we exercise professional judgement and maintain professional skepticism throughout the audit. We also:

- (1) Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- (2) Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.
- (3) Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.
- (4) Conclude on the appropriateness of the management' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention to users of financial statements in our independent auditor's report on the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the information obtained up to the date of our independent auditor's report. However, future events or conditions may cause CRSC to cease to continue as a going concern.
- (5) Evaluate the overall presentation (including the disclosures), structure and content of the financial statements, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- (6) Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within CRSC to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit, and remain full responsible for our audit opinion.

INDEPENDENT AUDITOR'S REPORT

AUDIT REPORT (Continued)

Ernst & Young Hua Ming (2022) Shen Zi No.61172338_A02
China Railway Signal & Communication Corporation Limited

VI. RESPONSIBILITIES OF CERTIFIED PUBLIC ACCOUNTANTS FOR THE AUDIT OF THE FINANCIAL STATEMENTS (Continued)

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit and deserve attention.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them on all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current year and are therefore the key audit matters. We describe these matters in our independent auditor's report unless laws or regulations prohibit public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Ernst & Young Hua Ming LLP

PRC certified public accountant:

*ZHANG Xiaoliang
(Engagement Partner)*

PRC certified public accountant:

HE Qiongyi

Beijing, China

25 March 2022

CONSOLIDATED BALANCE SHEET

31 December 2021

II. FINANCIAL STATEMENTS

CONSOLIDATED BALANCE SHEET

31 December 2021

Prepared by: China Railway Signal & Communication Corporation Limited

Unit: Yuan Currency: RMB

ITEM	Notes	31 December 2021	31 December 2020
Current assets:			
Cash and bank balances	VII.1	22,982,585,272.39	22,740,631,687.08
Accounts receivable	VII.5	19,853,757,318.28	18,290,953,101.67
Receivables for financing	VII.6	2,142,993,114.00	2,230,124,457.61
Prepayments	VII.7	908,511,854.83	605,757,702.28
Other receivables	VII.8	1,093,595,430.95	1,476,276,378.69
Including: Interest receivable		—	—
Dividends receivable		6,525,000.00	14,040,000.00
Inventories	VII.9	2,492,752,472.50	2,489,187,213.72
Contract assets	VII.10	37,318,249,499.32	36,043,391,206.89
Non-current assets due within one year	VII.12	52,914,920.60	145,843,169.16
Other current assets	VII.13	1,187,176,665.81	1,046,543,972.68
Total current assets		88,032,536,548.68	85,068,708,889.78
Non-current assets:			
Debt investment	VII.14	273,172,183.50	273,172,183.50
Long-term receivables	VII.16	3,713,734,908.20	8,384,707,579.19
Long-term equity investments	VII.17	1,378,223,747.06	1,109,033,216.35
Other equity instrument investments	VII.18	1,124,819,159.20	1,019,867,488.13
Investment properties	VII.20	284,692,545.57	211,520,858.93
Fixed assets	VII.21	4,689,690,366.70	4,204,231,031.03
Construction in progress	VII.22	800,282,649.47	1,421,305,987.45
Right-of-use assets	VII.25	172,627,457.06	139,559,591.19
Intangible assets	VII.26	2,529,711,941.27	2,507,196,579.31
Development expenditure	VII.27	213,250,203.11	139,208,125.21
Goodwill	VII.28	305,324,128.58	305,324,128.58
Long-term prepaid expenses	VII.29	50,007,280.33	52,132,184.27
Deferred income tax assets	VII.30	370,019,211.39	288,190,592.17
Other non-current assets	VII.31	5,004,496,508.18	203,923,885.50
Total non-current assets		20,910,052,289.62	20,259,373,430.81
Total assets		108,942,588,838.30	105,328,082,320.59

CONSOLIDATED BALANCE SHEET

31 December 2021

ITEM	Notes	31 December 2021	31 December 2020
Current liabilities:			
Short-term borrowings	VII.32	75,629,684.59	491,584,392.53
Bills payable	VII.35	2,300,794,453.21	1,974,383,429.57
Accounts payable	VII.36	46,455,196,868.52	44,705,884,497.10
Contract liabilities	VII.38	7,238,346,058.76	6,832,166,619.11
Employee benefits payable	VII.39	657,601,985.99	600,135,460.14
Taxes payable	VII.40	899,642,671.41	930,587,455.57
Other payables	VII.41	1,063,620,223.11	1,979,340,519.78
Non-current liabilities due within one year	VII.43	328,560,596.20	216,094,781.87
Other current liabilities	VII.44	476,073,584.49	338,315,519.02
Total current liabilities		59,495,466,126.28	58,068,492,674.69
Non-current liabilities:			
Long-term borrowings	VII.45	3,127,722,482.40	1,995,641,575.20
Lease liabilities	VII.47	97,747,858.35	80,677,106.29
Long-term payables	VII.48	62,593,424.21	77,846,656.30
Long-term employee benefits payable	VII.49	530,775,000.00	574,084,000.00
Estimated liabilities	VII.50	33,531,824.87	41,449,064.17
Deferred income	VII.51	160,098,912.68	150,934,432.75
Deferred tax liabilities	VII.30	63,277,288.05	41,619,296.79
Total non-current liabilities		4,075,746,790.56	2,962,252,131.50
Total liabilities		63,571,212,916.84	61,030,744,806.19

CONSOLIDATED BALANCE SHEET

31 December 2021

ITEM	Notes	31 December 2021	31 December 2020
Shareholders' equity:			
Share capital	VII.53	10,589,819,000.00	10,589,819,000.00
Other equity instruments	VII.54	2,796,935,660.38	2,800,000,000.00
Including: Preference shares		—	—
Perpetual bonds		2,796,935,660.38	2,800,000,000.00
Capital reserve	VII.55	15,964,108,133.50	15,964,304,189.86
Other comprehensive income	VII.57	-183,635,652.68	-207,690,607.13
Special reserve	VII.58	267,880,349.13	306,215,150.31
Surplus reserve	VII.59	1,811,324,694.45	1,597,958,257.98
Retained earnings	VII.60	12,308,220,568.86	11,512,862,059.38
Total equity attributable to Shareholders of the parent company		43,554,652,753.64	42,563,468,050.40
Non-controlling shareholder interests		1,816,723,167.82	1,733,869,464.00
Total Shareholders' equity		45,371,375,921.46	44,297,337,514.40
Total liabilities and Shareholders' equity		108,942,588,838.30	105,328,082,320.59

Company Representative: ZHOU Zhiliang Chief Financial Officer: HU Shaofeng Head of Accounting Department: ZHANG Shihu

PARENT COMPANY'S BALANCE SHEET

31 December 2021

Prepared by: China Railway Signal & Communication Corporation Limited

Unit: Yuan Currency: RMB

Item	Note	31 December 2021	31 December 2020
Current assets:			
Cash and bank balances		17,821,358,618.20	17,956,276,961.76
Accounts receivable	XVIII.1	1,949,665,011.07	2,125,968,045.27
Receivables for financing		162,628,503.49	375,836,342.66
Prepayments		178,067,195.29	221,994,542.23
Other receivables	XVIII.2	6,569,134,199.92	7,018,129,988.69
Including: Interest receivable		—	—
Dividends receivable		356,533,862.95	699,665,430.31
Inventories		—	31,462,526.72
Contract assets		1,840,202,585.91	1,741,149,049.63
Non-current assets due within one year		—	41,366,628.24
Other current assets		151,428,268.78	133,245,711.04
Total current assets		28,672,484,382.66	29,645,429,796.24
Non-current assets:			
Debt investment		273,172,183.50	273,172,183.50
Long-term receivables		1,816,483,821.44	1,751,698,274.44
Long-term equity investments	XVIII.3	17,197,354,628.64	16,987,641,187.31
Other equity instrument investments		476,408,221.20	476,408,221.20
Investment properties		1,460,482,054.68	1,498,455,649.52
Fixed assets		526,008,611.39	551,997,027.00
Construction in progress		9,199,876.28	712,876.28
Right-of-use assets		—	648,678.18
Intangible assets		478,257,923.35	467,381,583.52
Deferred income tax assets		25,833,621.35	21,013,747.78
Other non-current assets		14,939,305.93	41,477,131.04
Total non-current assets		22,278,140,247.76	22,070,606,559.77
Total assets		50,950,624,630.42	51,716,036,356.01

PARENT COMPANY'S BALANCE SHEET

31 December 2021

Item	Note	31 December 2021	31 December 2020
Current liabilities:			
Short-term borrowings		—	400,000,000.00
Bills payable		74,058,902.62	110,307,696.00
Accounts payable		4,335,980,609.76	4,655,727,585.73
Contract liabilities		1,122,506,270.37	808,883,636.03
Employee benefits payable		28,449,031.48	25,357,541.30
Taxes payable		3,833,264.62	26,355,117.49
Other payables		11,135,484,672.18	12,115,806,084.42
Non-current liabilities due within one year		—	422,419.64
Other current liabilities		29,551,335.32	30,351,127.68
Total current liabilities		16,729,864,086.35	18,173,211,208.29
Non-current liabilities:			
Long-term borrowings		800,000,000.00	—
Lease liabilities		—	20,064.93
Long-term employee benefits payable		66,977,000.00	70,216,000.00
Estimated liabilities		686,646.49	686,646.49
Deferred income		3,869,841.68	4,229,365.49
Total non-current liabilities		871,533,488.17	75,152,076.91
Total liabilities		17,601,397,574.52	18,248,363,285.20
Shareholders' equity:			
Paid-up capital (or share capital)		10,589,819,000.00	10,589,819,000.00
Other equity instruments		2,796,935,660.38	2,800,000,000.00
Including: Preference shares		—	—
Perpetual bonds		2,796,935,660.38	2,800,000,000.00
Capital reserve		16,356,470,432.63	16,356,470,432.63
Other comprehensive income		-48,002,800.35	-47,706,142.52
Special reserve		18,097,489.74	30,739,738.39
Surplus reserve		1,811,324,694.45	1,597,958,257.98
Retained earnings		1,824,582,579.05	2,140,391,784.33
Total Shareholders' equity		33,349,227,055.90	33,467,673,070.81
Total liabilities and Shareholders' equity		50,950,624,630.42	51,716,036,356.01

Company Representative: ZHOU Zhiliang Chief Financial Officer: HU Shaofeng Head of Accounting Department: ZHANG Shihu

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

January to December 2021

Unit: Yuan Currency: RMB

Item	Notes	2021	2020
I. Total revenue	VII.61	38,358,297,108.78	40,124,476,710.76
Including: Revenue		38,358,297,108.78	40,124,476,710.76
II. Total cost of sales		34,340,429,353.84	35,526,041,582.65
Including: Cost of sales	VII.61	29,846,875,671.34	31,269,101,236.91
Taxes and surcharges	VII.62	253,686,656.86	230,083,398.31
Selling and distribution expenses	VII.63	796,771,857.42	782,685,977.22
General and administrative expenses	VII.64	2,116,982,019.27	2,059,557,214.11
Research and development expenses	VII.65	1,638,494,903.20	1,434,273,399.90
Finance costs	VII.66	-312,381,754.25	-249,659,643.80
Including: Interest expenses		94,342,569.44	42,795,594.41
Interest income		482,214,091.74	415,063,581.21
Add: Other income	VII.67	336,893,708.75	216,220,467.27
Investment income (with "-" for loss)	VII.68	113,911,083.50	58,689,540.14
Including: Profit from investment in associates and joint ventures		86,129,094.82	60,364,356.23
Derecognition of income from financial assets measured at amortized cost		—	-23,907,670.65
Credit impairment losses (with "-" for loss)	VII.71	-195,496,554.50	-16,062,175.36
Assets impairment losses (with "-" for loss)	VII.72	-64,728,770.22	-13,806,313.28
Gains from disposal of assets (with "-" for loss)	VII.73	35,949,376.07	171,224,991.74
III. Operating profit (with "-" for losses)		4,244,396,598.54	5,014,701,638.62
Add: Non-operating income	VII.74	44,826,898.06	26,100,278.36
Less: Non-operating expenses	VII.75	15,311,313.98	4,929,393.37
IV. Total profit (with "-" for total losses)		4,273,912,182.62	5,035,872,523.61
Less: Income tax expenses	VII.76	581,002,096.30	796,452,326.62
V. Net profit (with "-" for net losses)		3,692,910,086.32	4,239,420,196.99
(I) Classified by continuity of operation			
1. Net profit from continuing operation (with "-" for net losses)		3,692,910,086.32	4,239,420,196.99
(II) Classified by the ownership			
1. Net profit attributable to the shareholders of parent company (with "-" for net losses)		3,274,672,689.28	3,819,046,319.02
2. Net profit attributable to non-controlling interests (with "-" for net losses)		418,237,397.04	420,373,877.97

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

January to December 2021

Item	Notes	2021	2020
VI. Net other comprehensive income, net of tax		24,056,850.65	65,174,977.99
(I) Net other comprehensive income attributable to the owners of the parent company, net of tax	VII.77	24,054,954.45	65,174,977.99
1. Other comprehensive income not to be reclassified to profit or loss		24,841,000.00	40,842,000.00
(1) Changes of the re-measurement of defined benefit plans	VII.77	24,841,000.00	40,842,000.00
2. Other comprehensive income to be reclassified to profit or loss		-786,045.55	24,332,977.99
(1) Other comprehensive income that may be transferred to profit or loss under equity method		—	—
(2) Change in fair value of other debt investments		—	—
(3) Impairment provisions for receivables for financing	VII.77	592,617.70	4,099,803.48
(4) Provision for credit impairment of other debt investments		—	—
(5) Hedging reserve arising from cash flows	VII.77	-1,074,832.24	20,833,093.25
(6) Exchange differences on translation of foreign operations	VII.77	-303,831.01	-599,918.74
(7) Others		—	—
(II) Other comprehensive income attributable to non-controlling interests, net of tax		1,896.20	—
VII. Total comprehensive income		3,716,966,936.97	4,304,595,174.98
(I) Total comprehensive income attributable to owners of the parent company		3,298,727,643.73	3,884,221,297.01
(II) Total comprehensive income attributable to non-controlling interests		418,239,293.24	420,373,877.97
VIII. Earnings per share:			
(I) Basic earnings per share (RMB/share)		0.30	0.34
(II) Diluted earnings per share (RMB/share)		0.30	0.34

For the business combination under common control occurred during the current period, net profit of the acquiree realised before business combination was RMB0. Net profit of the acquiree realised during the last period was RMB0.

Company Representative: ZHOU Zhiliang Chief Financial Officer: HU Shaofeng Head of Accounting Department: ZHANG Shihu

PARENT COMPANY'S INCOME STATEMENT

January to December 2021

Unit: Yuan Currency: RMB

Item	Notes	2021	2020
I. Revenue	XVIII.4	5,768,771,719.63	4,964,888,395.45
Less: Cost of sales	XVIII.4	5,326,648,007.20	4,462,560,583.42
Taxes and surcharges		43,971,950.42	35,616,228.94
Selling expenses		4,548,788.46	13,307,679.45
Administrative expenses		223,969,645.55	214,495,256.88
Research and development expenses		161,607,975.13	156,392,974.48
Finance costs		-170,608,177.99	-174,333,023.56
Including: Interest expenses		95,570,283.85	114,618,702.36
Interest income		303,878,053.65	361,353,630.70
Plus: Other income		8,318,553.51	1,457,633.07
Investment income (with "-" for loss)	XVIII.5	2,025,893,818.19	2,402,375,225.82
Including: Profit from investment in associates and joint ventures		51,213,441.33	16,031,789.17
Derecognition of income from financial assets measured at amortized cost		—	-18,648,016.99
Credit impairment losses (with "-" for loss)		-17,199,725.67	-9,606,360.24
Assets impairment losses (with "-" for loss)		1,532,848.98	-747,251.23
Gains from disposal of assets (with "-" for loss)		7,400,302.71	14,252.69
II. Operating profit (with "-" for loss)		2,204,579,328.58	2,650,342,195.95
Plus: Non-operating income		250,321.35	135,150.95
Less: Non-operating expenses		75,030.91	47,415.51
III. Total profit (with "-" for total loss)		2,204,754,619.02	2,650,429,931.39
Less: Income tax expenses		71,090,254.50	95,644,948.73
IV. Net profit (with "-" for net loss)		2,133,664,364.52	2,554,784,982.66
(I) Net profit from continuing operations (with "-" for net loss)		2,133,664,364.52	2,554,784,982.66

PARENT COMPANY'S INCOME STATEMENT

January to December 2021

Item	Notes	2021	2020
V. Other comprehensive income, net of tax		-296,657.83	1,744,860.72
(I) Other comprehensive income not to be reclassified to profit or loss		-499,000.00	1,679,000.00
1. Changes of the re-measurement of defined benefit plans		-499,000.00	1,679,000.00
(II) Other comprehensive income to be reclassified to profit or loss		202,342.17	65,860.72
1. Other comprehensive income that may be transferred to profit or loss under equity method		—	—
2. Change in fair value of other debt investments		—	—
3. Impairment provisions for receivables for financing		191,259.88	—
4. Credit impairment provisions for other debt investments		—	—
5. Hedging reserve arising from cash flows		—	—
6. Exchange differences on translation of foreign operations		11,082.29	65,860.72
7. Others		—	—
VI. Total comprehensive income		<u>2,133,367,706.69</u>	<u>2,556,529,843.38</u>

Company Representative: ZHOU Zhiliang Chief Financial Officer: HU Shaofeng Head of Accounting Department: ZHANG Shihu

CONSOLIDATED STATEMENT OF CASH FLOWS

January to December 2021

Unit: Yuan Currency: RMB

Item	Notes	2021	2020
I. Cash flows generated from operating activities:			
Cash received from the sale of goods or rendering of services		40,860,468,880.44	35,154,086,249.89
Refunds of taxes		280,212,429.84	172,267,260.76
Cash received relating to other operating activities	VII.78(1)	832,568,324.24	838,161,091.10
Sub-total of cash inflows from operating activities		41,973,249,634.52	36,164,514,601.75
Cash paid for purchase of goods and services received		29,741,089,837.12	24,799,251,218.27
Cash paid to and on behalf of employees		5,540,044,722.05	5,032,861,332.46
Cash paid for all types of taxes		2,560,992,749.04	2,299,590,102.50
Cash paid relating to other operating activities	VII.78(2)	1,362,420,835.25	1,025,435,995.44
Sub-total of cash outflows from operating activities		39,204,548,143.46	33,157,138,648.67
Net cash flows generated from operating activities		2,768,701,491.06	3,007,375,953.08
II. Cash flows generated from investing activities:			
Cash received from disposal of investments		275,791.34	5,693,165.69
Cash received from return on investment		77,910,792.99	36,653,935.88
Net cash received from disposal of fixed assets, intangible assets and other long-term assets		92,191,889.65	197,320,693.26
Decrease in unsecured/pledged and unrestricted time deposits with maturity over three months		—	1,509,313,788.42
Net cash from disposal of subsidiaries and other operating units		381,153.40	—
Cash received relating to other investing activities	VII.78(3)	309,908,872.00	235,301,688.31
Sub-total of cash inflows from investing activities		480,668,499.38	1,984,283,271.56
Cash paid for acquisition of fixed assets, intangible assets and other long-term assets		869,517,948.66	1,748,944,621.60
Cash paid for investments		334,786,961.07	337,922,258.93
Increase in unsecured/pledged and unrestricted time deposits with maturity over three months		516,507,241.36	—
Cash paid relating to other investing activities	VII.78(4)	17,537,919.08	34,665,734.37
Sub-total of cash outflows from investing activities		1,738,350,070.17	2,121,532,614.90
Net cash flows generated from investing activities		-1,257,681,570.79	-137,249,343.34

CONSOLIDATED STATEMENT OF CASH FLOWS

January to December 2021

Item	Notes	2021	2020
III. Cash flows generated from financing activities:			
Cash received as capital contributions		—	10,243,764.18
Including: Cash received by subsidiaries from minority Shareholders' investment		—	10,243,764.18
Cash received from issuance of other equity instruments		2,796,935,660.38	—
Cash received from borrowings		1,416,825,684.59	957,515,124.08
Sub-total of cash inflows from financing activities		4,213,761,344.97	967,758,888.26
Cash paid on repayments of borrowings		550,856,743.01	607,997,305.08
Cash paid on distribution of dividends or profits and for interest expenses		2,633,026,934.12	2,612,846,276.59
Including: Dividends and profits paid by subsidiaries to minority Shareholders		302,577,231.35	258,990,513.12
Cash paid for redemption of other equity instruments		2,800,000,000.00	—
Cash paid relating to other financing activities	VII.78(6)	303,214,723.13	213,531,369.67
Sub-total of cash outflows from financing activities		6,287,098,400.26	3,434,374,951.34
Net cash flows generated from financing activities		-2,073,337,055.29	-2,466,616,063.08
IV. Effect of fluctuations in exchange rates on cash and cash equivalents		-26,819,831.31	-73,602,157.71
V. Net (decrease)/increase in cash and cash equivalents	VII.79(1)	-589,136,966.33	329,908,388.95
Plus: Balance of cash and cash equivalents at the beginning of the period	VII.79(1)	18,184,861,073.07	17,854,952,684.12
VI. Balance of cash and cash equivalents at the end of the period	VII.79(1)	17,595,724,106.74	18,184,861,073.07

Company Representative: ZHOU Zhiliang Chief Financial Officer: HU Shaofeng Head of Accounting Department: ZHANG Shihu

STATEMENT OF CASH FLOWS OF THE PARENT COMPANY

January to December 2021

Unit: Yuan Currency: RMB

Item	Notes	2021	2020
I. Cash flows generated from operating activities:			
Cash received from the sale of goods or rendering of services		5,992,136,796.55	5,060,449,688.44
Refunds of taxes		61,309,154.12	22,144,841.94
Cash received relating to other operating activities		731,264,165.03	738,941,948.63
Sub-total of cash inflows from operating activities		6,784,710,115.70	5,821,536,479.01
Cash paid for purchase of goods and services received		5,852,045,148.64	4,768,397,688.45
Cash paid to and on behalf of employees		234,388,268.14	132,628,705.40
Cash paid for all types of taxes		166,729,913.67	164,168,446.20
Cash paid relating to other operating activities		1,115,312,251.24	883,099,413.52
Sub-total of cash outflows from operating activities		7,368,475,581.69	5,948,294,253.57
Net cash flow generated from operating activities		-583,765,465.99	-126,757,774.56
II. Cash flows generated from investing activities:			
Cash received from disposal of investments		—	47,735,696.03
Cash received from return on investment		2,218,371,435.73	2,061,885,082.59
Net cash received from disposal of fixed assets, intangible assets and other long-term assets		13,036,725.94	442,068.09
Decrease in unsecured/pledged and unrestricted time deposits with maturity over three months		—	1,503,498,100.00
Cash received relating to other investing activities		1,090,027,524.00	429,945,732.62
Sub-total of cash inflows from investing activities		3,321,435,685.67	4,043,506,679.33
Cash paid for acquisition of fixed assets, intangible assets and other long-term assets		7,310,557.53	34,946,539.94
Cash paid for investments		163,000,000.00	678,048,680.00
Increase in unsecured/pledged and unrestricted time deposits with maturity over three months		562,980,700.00	—
Cash paid relating to other investing activities		899,175,366.56	964,040,469.59
Sub-total of cash outflows from investing activities		1,632,466,624.09	1,677,035,689.53
Net cash flows generated from investing activities		1,688,969,061.58	2,366,470,989.80

STATEMENT OF CASH FLOWS OF THE PARENT COMPANY

January to December 2021

Item	Notes	2021	2020
III. Cash flows generated from financing activities:			
Cash received from issuance of other equity instruments		2,796,935,660.38	—
Cash received from borrowings		800,000,000.00	400,000,000.00
Sub-total of cash inflows from financing activities		3,596,935,660.38	400,000,000.00
Cash paid on repayments of borrowings		400,000,000.00	—
Cash paid on distribution of dividends or profits and for interest expenses		2,236,235,663.72	2,322,295,113.89
Cash paid for redemption of other equity instruments		2,800,000,000.00	—
Cash paid relating to other financing activities		460,000.00	—
Sub-total of cash outflows from financing activities		5,436,695,663.72	2,322,295,113.89
Net cash flows generated from financing activities		-1,839,760,003.34	-1,922,295,113.89
IV. Effect of fluctuations in exchange rates on cash and cash equivalents		-18,578,914.41	-72,131,047.72
V. Net (decrease)/increase in cash and cash equivalents		-753,135,322.16	245,287,053.63
Plus: Balance of cash and cash equivalents at the beginning of the period		13,737,400,620.01	13,492,113,566.38
VI. Balance of cash and cash equivalents at end of the period		12,984,265,297.85	13,737,400,620.01

Company Representative: ZHOU Zhiliang Chief Financial Officer: HU Shaofeng Head of Accounting Department: ZHANG Shihu

January to December 2021

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January to December 2021

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Equity attributable to owners of the parent company

Equity attributable to owners of the parent company									
Item	Other equity instruments						Less:		
	Paid-up capital (or share capital)	Preference shares	Perpetual bonds	Others	Capital reserve	Treasury stocks	Other comprehensive income	General risk reserve	Total owners' equity
I. Closing balance of last year	10,589,819,000.00	-	2,800,000,000.00	-	15,964,386,557.22	-	-272,865,535.12	1,342,479,753.71	42,724,677,581.02
Plus: changes in accounting policies	-	-	-	-	-	-	-	-	-
Correction of errors in prior period	-	-	-	-	-	-	-	-	-
Business combination under common control	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-
II. Opening balance of the year	10,589,819,000.00	-	2,800,000,000.00	-	15,964,386,557.22	-	-272,865,535.12	1,342,479,753.71	42,724,677,581.02
III. Increase/(decrease) during the period (with "+" for decrease)	-	-	-	-	-44,367.36	-	65,174,977.99	255,478,468.27	1,572,659,933.39
(I) Total comprehensive income	-	-	-	-	-	-	65,174,977.99	3,819,046,519.02	4,304,535,174.98
(II) Capital contributions and withdrawals by owners	-	-	-	-	-270,138.00	-	-	-	-5,530,945.82
1. Common shares contributed by owners	-	-	-	-	-	-	-	-	-
2. Capital contributed by holders of other equity instruments	-	-	-	-	-	-	-	-	-
3. Share-based payment recorded in owners' equity	-	-	-	-	-270,138.00	-	-	-	-
4. Others	-	-	-	-	-	-	-	-	-
(III) Profit distribution	-	-	-	-	-	-	-	-270,138.00	-15,504,572.00
1. Appropriation of surplus reserve	-	-	-	-	-	-	-	-283,566,463.12	-2,617,635,970.78
2. Accrual of general risk reserve	-	-	-	-	-	-	-	-	-
3. Distribution to owners (or shareholders)	-	-	-	-	-	-	-	-217,963,800.00	-2,376,954,513.12
4. Others	-	-	-	-	-	-	-	-25,579,050.00	-50,155,000.00
5. Distribution to other holders of equity	-	-	-	-	-	-	-	-190,726,666.66	-190,726,666.66
(IV) Internal transfer of owners' equity	-	-	-	-	-	-	-	-	-
1. Transfer of capital reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-
2. Transfer of surplus reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-
3. Recover of loss by surplus reserve	-	-	-	-	-	-	-	-	-
4. Changes in defined benefit plan transferred to retained earnings	-	-	-	-	-	-	-	-	-
5. Other comprehensive income transferred to retained earnings	-	-	-	-	-	-	-	-	-
6. Others	-	-	-	-	-	-	-	-	-
(V) Special reserve	-	-	-	-	-	-	-	-	-
1. Appropriated in current period	-	-	-	-	-	-	-	-	-
2. Used in current period	-	-	-	-	-	-	-	-	-
(VI) Others	-	-	-	-	175,770.64	-	-	-	128,616.33
IV. Closing balance during the period	10,589,819,000.00	-	2,800,000,000.00	-	15,964,304,493.86	-	-207,690,607.13	1,597,938,257.98	44,297,337,514.40

Legal Representative: ZHOU Zhiliang

Chief Financial Officer: HU Shaofeng

Head of Accounting Department: ZHANG Shihu

PARENT COMPANY'S STATEMENT OF CHANGES IN OWNERS' EQUITY

January to December 2021

Unit: Yuan Currency: RMB

Item	2021										
	Other equity instruments					Less: treasury stocks	Other comprehensive income	Special reserve	Surplus reserve	Undistributed profits	Total owners' equity
Paid-up capital (or share capital)	Preference shares	Perpetual bonds	Others	Capital reserve							
I. Closing balance of last year	10,589,819,000.00	-	2,800,000,000.00	-	16,355,470,432.63	-	47,706,142.52	30,739,738.39	1,597,958,257.98	2,140,391,784.33	33,467,673,070.81
Plus: changes in accounting policies	-	-	-	-	-	-	-	-	-	-	-
Correction of errors in prior periods	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-
II. Opening balance of the year	10,589,819,000.00	-	2,800,000,000.00	-	16,355,470,432.63	-	47,706,142.52	30,739,738.39	1,597,958,257.98	2,140,391,784.33	33,467,673,070.81
III. Increases/(decreases) during the period (with "+" for decrease)	-	-	-3,064,339.62	-	-	-	-296,657.83	-12,642,248.65	213,366,436.47	-315,809,205.28	-118,446,014.91
(I) Total comprehensive income	-	-	-	-	-	-	-296,657.83	-	213,366,436.47	2,133,664,364.52	2,133,367,706.69
(II) Capital contributions and withdrawals by owners	-	-	-3,064,339.62	-	-	-	-	-	-	-	-3,064,339.62
1. Common shares contributed by owners	-	-	-	-	-	-	-	-	-	-	-
2. Capital contributed by holders of other equity instruments	-	-	2,796,935,660.38	-	-	-	-	-	-	-	-
3. Share-based payment recorded in owners' equity	-	-	-	-	-	-	-	-	-	-	2,796,935,660.38
4. Others	-	-	-	-	-	-	-	-	-	-	-
5. Capital recovery by holders of other equity instruments	-	-	-2,800,000,000.00	-	-	-	-	-	-	-	-2,800,000,000.00
(III) Profit distribution	-	-	-	-	-	-	-	-	213,366,436.47	-2,449,473,569.80	-2,236,107,133.33
1. Appropriation of surplus reserves	-	-	-	-	-	-	-	-	213,366,436.47	-213,366,436.47	-
2. Distribution to owners (or shareholders)	-	-	-	-	-	-	-	-	-	-2,117,963,800.00	-2,117,963,800.00
3. Others	-	-	-	-	-	-	-	-	-	-118,143,333.33	-118,143,333.33
(IV) Internal transfer of owners' equity	-	-	-	-	-	-	-	-	-	-	-
1. Transfer of capital reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-
2. Transfer of surplus reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-
3. Recover of loss by surplus reserve	-	-	-	-	-	-	-	-	-	-	-
4. Changes in defined benefit plan transferred to retained earnings	-	-	-	-	-	-	-	-	-	-	-
5. Other comprehensive income transferred to retained earnings	-	-	-	-	-	-	-	-	-	-	-
6. Others	-	-	-	-	-	-	-	-	-	-	-
(V) Special reserve	-	-	-	-	-	-	-	-12,642,248.65	-	-	-12,642,248.65
1. Appropriated in current period	-	-	-	-	-	-	-	54,485,892.75	-	-	54,485,892.75
2. Used in current period	-	-	-	-	-	-	-	67,128,141.40	-	-	67,128,141.40
(VI) Others	-	-	-	-	-	-	-	-	-	-	-
Closing balance during the period	10,589,819,000.00	-	2,796,935,660.38	-	16,355,470,432.63	-	48,002,800.35	18,097,489.74	1,811,324,694.45	1,824,592,279.05	33,349,227,055.90

PARENT COMPANY'S STATEMENT OF CHANGES IN OWNERS' EQUITY

January to December 2021

2020

Item	Other equity instruments						Less: treasury stocks	Other comprehensive income	Special reserve	Surplus reserve	Undistributed profits	Total owners' equity
	Paid-up capital (or share capital)	Preference shares	Perpetual bonds	Others	Capital reserve							
I. Closing balance of last year	10,589,819,000.00	-	2,800,000,000.00	-	16,355,470,432.63	-	-	-	37,577,577.81	1,342,479,759.71	2,149,775,766.60	33,226,671,533.51
Plus: changes in accounting policies	-	-	-	-	-	-	-	-	-	-	-	-
Correction of errors in prior periods	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-	-
II. Opening balance of the year	10,589,819,000.00	-	2,800,000,000.00	-	16,355,470,432.63	-	-	-	37,577,577.81	1,342,479,759.71	2,149,775,766.60	33,226,671,533.51
III. Increases/(decreases) during the period (with "+" for increase)	-	-	-	-	-	-	-	-	-	-	-	-
(I) Total comprehensive income	-	-	-	-	-	-	-	1,744,860.72	-	255,478,488.27	-9,383,982.27	241,001,137.30
(II) Capital contributions and withdrawals by owners	-	-	-	-	-	-	-	1,744,860.72	-	-	2,554,784,982.66	2,556,529,843.38
1. Common shares contributed by owners	-	-	-	-	-	-	-	-	-	-	-	-
2. Capital contributed by holders of other equity instruments	-	-	-	-	-	-	-	-	-	-	-	-
3. Share-based payment recorded in owners' equity	-	-	-	-	-	-	-	-	-	-	-	-
4. Others	-	-	-	-	-	-	-	-	-	-	-	-
(III) Profit distribution	-	-	-	-	-	-	-	-	-	-	-	-
1. Appropriation of surplus reserves	-	-	-	-	-	-	-	-	-	255,478,488.27	-2,554,188,984.93	-2,308,690,466.66
2. Distribution to owners (or shareholders)	-	-	-	-	-	-	-	-	-	255,478,488.27	-255,478,488.27	-
3. Others	-	-	-	-	-	-	-	-	-	-	-2,117,963,800.00	-2,117,963,800.00
(IV) Internal transfer of owners' equity	-	-	-	-	-	-	-	-	-	-	-190,726,666.66	-190,726,666.66
1. Transfer of capital reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-	-
2. Transfer of surplus reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-	-
3. Recover of loss by surplus reserve	-	-	-	-	-	-	-	-	-	-	-	-
4. Changes in defined benefit plan transferred to retained earnings	-	-	-	-	-	-	-	-	-	-	-	-
5. Other comprehensive income transferred to retained earnings	-	-	-	-	-	-	-	-	-	-	-	-
6. Others	-	-	-	-	-	-	-	-	-	-	-	-
(V) Special reserve	-	-	-	-	-	-	-	-	-	-	-	-
1. Appropriated in current period	-	-	-	-	-	-	-	-	-	-	-	-
2. Used in current period	-	-	-	-	-	-	-	-	-	-	-	-
(VI) Others	-	-	-	-	-	-	-	-	-	-	-	-
IV. Closing balance during the period	10,589,819,000.00	-	2,800,000,000.00	-	16,355,470,432.63	-	-	-47,706,42.52	30,739,738.39	1,597,958,257.98	2,140,391,784.33	33,467,673,070.81

Legal Representative: ZHOU Zhiliang

Chief Financial Officer: HU Shaofeng

Head of Accounting Department: ZHANG Shihu

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

III. CORPORATE INFORMATION

1. Company profile

☒ Applicable ☐ Not applicable

China Railway Signal & Communication Corporation Limited (the “Company”) is a joint stock company limited liability company jointly sponsored on 29 December 2010 by China Railway Signal and Communication (group) Corporation Limited, hereinafter referred to as the “CRSC Group”) as the promoter, in association with China National Machinery Industry Corporation, China Chengtong Holdings Group Ltd., China Reform Holdings Corporation Ltd., and CICC Jiacheng Investment Management Co., Ltd. (these four companies are collectively referred to as the “Other Promoters”) approved by the State-owned Assets Supervision and Administration Commission of the State Council (國務院國有資產監督管理委員會) (the “SASAC”) via Guo Zi Gai Ge [2010] No. 876 on 17 August 2010 in accordance with the relevant provisions of laws and administrative regulations of the PRC. The Company’s headquarters are at 20th floor of Block A, CRSC Building, 1 Compound Automobile Museum South Road, Fengtai District, Beijing.

Upon approval of the China Securities Regulatory Commission’s Reply on Issuance of Overseas Listed Foreign Shares by China Railway Signal & Communication Corporation Limited (Zheng Jian Xu Ke [2015] No. 1630), the Company has issued 1,789,819,000 H Shares with a nominal value of RMB1 each at an issue price of HK\$6.30 per share that were listed on the Hong Kong Stock Exchange from July to September 2015. The total amount of funds raised before deducting the issuance expenses was approximately HK\$11,275,859,700 and such H Shares commenced for trading on the Main Board of the Hong Kong Stock Exchange in August and September 2015. The Company’s four state-owned shareholders, CRSC Group, China National Machinery Industry Corporation, China Chengtong Holdings Group Ltd. and China Reform Holdings Corporation Ltd., converted a total of 178,982,000 state-owned legal person shares to H Shares during August and September 2015, which were then transferred to the National Council for Social Security Fund of the People’s Republic of China.

According to the China Securities Regulatory Commission’s Approval for Consent to the Registration of China Railway Signal & Communication Corporation Limited’s Initial Public Offering (Zheng Jian Xu Ke [2019] No. 1135), as of 16 July 2019, the Company has issued 1,800,000,000 ordinary shares with a nominal value of RMB1 each at an issue price of RMB5.85 per share that were listed on the Sci-Tech innovation board of the Shanghai Stock Exchange. The total amount of funds raised before deduction of issuance expenses was RMB10,530,000,000.00 and such ordinary shares were commenced for trading on the Shanghai Stock Exchange’s Sci-Tech innovation board on 22 July 2019.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

III. CORPORATE INFORMATION (Continued)

1. Company profile (Continued)

As of 31 December 2021, the Company has accumulatively issued a total issued share capital of 10,589,819,000 shares with the accumulated share capital amounting RMB10,589,819,000.

The Company and its subsidiaries (collectively referred to as the “Group”) are mainly engaged in the following businesses: design and integration of rail transportation control system which mainly include the provision of comprehensive planning for investigation, design and control systems for rail transportation control system; equipment manufacturing of rail transportation control system which mainly includes production and sales of signal systems, communication systems, infrastructure equipment, information systems and other products; and system implementation services for rail transportation control system which include provision of construction, installation, testing, operation and maintenance services for rail transportation control system; and provision of services relating to municipal engineering projects and other construction projects.

The parent company and the ultimate controlling party of the Company is CRSC Group based in the PRC.

The financial statements were approved by resolution by the Board of Directors of the Company on 25 March 2022.

2. Scope of consolidated financial statements

☒ Applicable ☐ Not applicable

The scope of consolidation of the consolidated financial statements was determined on the basis of control. For changes during the Reporting Period, please refer to Note IX. 1.

IV. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

1. Basis of preparation

The financial statements have been prepared in accordance with Accounting Standards for Business Enterprises – Basic Standards issued by the Ministry of Finance and the specific accounting standards, application guidelines, interpretations and other relevant provisions (collectively referred to as the “Accounting Standards for Business Enterprises”) promulgated and revised thereafter.

The financial statements are presented on a going concern basis.

The financial statements have been prepared under the historical cost as the pricing principle, except for certain financial instruments. If the assets are impaired, the corresponding provisions for impairment shall be made in accordance with related requirements.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

IV. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS (Continued)

2. Continuing operations

☒ Applicable ☐ Not applicable

There were no events or circumstances that resulted in material doubts about the Group's ability of continuing operations within 12 months since the end of the Reporting Period.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

Specific accounting policies and accounting estimates:

☒ Applicable ☐ Not applicable

According to the characteristics of its production and operation, the Group formulated a series of specific accounting policies and made accounting estimates, the detail of which are mainly reflected in:

1. Statement of compliance with accounting Standards for Business enterprises

The financial statements present fairly and fully the financial position at 31 December 2021 and operating results and cash flows of the Company and the Group as of 31 December 2021 in accordance with Accounting Standards for Business Enterprises.

2. Accounting period

The accounting year of the Group is from 1 January to 31 December of each calendar year.

3. Operating cycle

☒ Applicable ☐ Not applicable

Operating cycle refers to the period from the purchase of assets of an enterprise for the purpose of processing to the realization of cash or cash equivalents. The Group's operating cycle is usually 12 months.

4. Functional currency

The functional currency of and the currency adopted for the preparation of these financial statements by the Group is RMB. Unless otherwise stated, all financial statements are denominated in RMB.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

5. Accounting methods for business combinations involving entities under common control and business combinations involving entities not under common control

✓ Applicable ☐ Not applicable

Business combinations are classified into business combinations involving entities under common control and business combinations involving entities not under common control.

Business combinations involving entities under common control

A business combination involving entities under common control is a business combination in which all of the combining entities are ultimately controlled by the same party or parties both before and after the combination, and that control is not transitory. For a business combination involving entities under common control, the party that, on the combination date, obtains control of another entity participating in the combination is the acquirer, while the other entity participating in the combination is the acquiree. The combination date is the date on which the acquirer effectively obtains control of the acquiree.

Assets and liabilities (including the goodwill recognised by the ultimate controlling party in acquisition of the acquiree) that are obtained by the acquirer in a business combination shall be measured at their carrying amounts at the date of combination as recorded by the ultimate controlling party. The difference between the carrying amount of the net assets obtained and the carrying amount of the consideration paid for the combination (or the aggregate face value of the shares issued) as consideration shall be adjusted to share premium under capital reserve and the balance of the capital reserve transferred under the original system. If the capital reserve is not sufficient to absorb the difference, any excess shall be adjusted against retained earnings.

Business combinations involving entities not under common control

A business combination involving entities not under common control is a business combination in which all of the combining entities are not ultimately controlled by the same party or parties both before and after the combination. For a business combination involving entities not under common control, the party that, on the acquisition date, obtains control of another entity participating in the combination is the acquirer, while the other entity participating in the combination is the acquiree. The acquisition date is the date on which the acquirer effectively obtains control of the acquiree.

The acquiree's identifiable assets, liabilities and contingent liabilities acquired by the acquirer in a business combination involving entities not under common control shall be measured at their fair values on the acquisition date.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

5. Accounting methods for business combinations involving entities under common control and business combinations involving entities not under common control (Continued)

Business combinations involving entities not under common control (Continued)

Goodwill is measured at cost being the excess of the aggregate of the fair value of the consideration transferred (or the fair value of the equity securities issued) and any fair value of the acquirer's previously held equity interest in the acquiree over the acquirer's interest in the fair value of the acquiree's net identifiable net assets. If the aggregate of the fair value of consideration transferred (or the fair value of the equity securities issued) and any fair value of the acquirer's previously held equity interest in the acquiree is lower than the acquirer's interest in the fair value of the acquiree's net identifiable net assets, the difference is, after reassessment of the fair value of each identifiable asset, liability and contingent liability acquired from the acquiree and the fair value of consideration transferred (or the fair value of the equity securities issued) and any fair value of the acquirer's previously held equity interest in the acquiree, recognised in profit or loss for the current period.

6. Preparing methods of consolidated financial statements

☒ Applicable ☐ Not applicable

The scope of consolidation in the consolidated financial statements is determined on the basis of control, including the financial statements of the Company and all of its subsidiaries. Subsidiaries refer to the entities controlled by the Company (including an enterprise, a separable part of the invested company, and the structured entities controlled by the Company, etc.).

When preparing the consolidated financial statements, the subsidiaries shall adopt the accounting year and accounting policies consistent with the Company. Assets, liabilities, equity, revenues, expenses and cash flows arising from all transactions between companies within the Group are eliminated in full on combinations.

When the amount of loss for the period attributable to the minority shareholders of a subsidiary exceeds the minority shareholders' portion of the opening balance of initial shareholders' equity of the subsidiary, the excess amount is still allocated against minority interests.

For a subsidiary that is acquired in a business combination involving enterprises not under common control, the operating results and cash flows of the acquiree shall be included in the consolidated financial statements from the date on which the Group obtains control, until the Group ceases its control. In the preparation of the consolidated financial statements, the financial statements of the subsidiaries shall be adjusted based on the fair values of the identifiable assets, liabilities and contingent liabilities determined on the acquisition date.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

6. Preparing methods of consolidated financial statements (Continued)

For a subsidiary that is acquired in a business combination involving enterprises under common control, the operating results and cash flows of the acquiree shall be included in the consolidated financial statements from the beginning of the period of combination. In the preparation of the comparative consolidated financial statements, the relative items of the previous financial statements shall be adjusted, and treated as if the reporting entity formed after the combination has existed since the ultimate controlling party began to implement the control.

If changes in relevant facts and circumstances gives rise to one or more changes in controlling factors, the Group will reassess whether it controls the investee.

Changes in the equity of the minority shareholders without a loss of control is accounted for as an equity transaction.

7. Accounting treatment of joint arrangement and joint operations

☒ Applicable ☐ Not applicable

A joint arrangement is either a joint operation or a joint venture. A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

A party of joint venture recognises its interest in a joint operation: its assets held separately and its share of any assets held jointly; its liabilities, assumed separately and its share of any liabilities assumed jointly; its revenue from the sale of its share of the output arising from the joint operation; its share of the revenue from the sale of the output by the joint operation; and its expenses incurred separately and its share of any expenses incurred jointly.

8. Recognition Standard for cash and cash equivalents

Cash comprises the Group's cash on hand and deposits that can be withdrawn on demand at any time; Cash equivalents are short-term, highly liquid investments held by an enterprise, that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

9. Foreign currency transactions and foreign currency translations

✓ Applicable ☐ Not applicable

The Group translates the amounts of foreign currency transactions into its functional currency.

Foreign currency transactions are initially recorded using the functional currency spot exchange rate ruling at the date of transactions. At the balance sheet date, monetary items denominated in foreign currencies are translated into functional currencies at the spot exchange rates ruling at the balance sheet date. All differences are recognised in profit or loss, except those related to a specific-purpose borrowing denominated in foreign currency that qualify for capitalisation for the purpose of acquisition or construction of qualifying assets. Non-monetary items denominated in foreign currencies that are measured at historical cost are translated into functional currencies using the foreign spot exchange rates at the transaction dates and do not change the amounts of functional currency. Non-monetary items denominated in foreign currencies that are measured at fair value are translated using the foreign exchange spot rate at the date the fair value is determined; the exchange differences are recognised in profit or loss or other comprehensive income depending on the nature of the non-monetary items.

For foreign operations, the Group translates its functional currencies into RMB in preparing the financial statements. All assets and liabilities in the balance sheet are translated at the spot exchange rates ruling at the balance sheet date; the shareholders' equity, with the exception of "retained earnings", is translated at the spot exchange rates ruling at the transaction dates; income and expenditure in the statement of profit are translated at an average rate of the period when transaction take place (however, if exchange rates fluctuate so much that the use of this average rate for the period is inappropriate, it shall be translated at the spot exchange rates ruling at the transaction dates). Exchange fluctuations arising from the translations mentioned above are recognised as other comprehensive income. When an overseas business is disposed of, the component of other comprehensive income related to the overseas business will be transferred to profit or loss in the same period and part of the disposal will be calculated according to the disposal ratio.

Foreign currency cash flows and cash flows of overseas subsidiaries are translated into RMB at the spot exchange rates ruling at the dates of the cash flows. The effect of changes in exchange rates on cash is presented as a reconciled item separately in the statement of cash flows.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments

✓ Applicable ☐ Not applicable

Financial instruments refer to contracts that form the financial assets of an enterprise and form financial liabilities or equity instruments of other units.

Recognition and derecognition of financial instruments

The Group recognises a financial asset or a financial liability when it becomes a party to the contractual provisions of a financial instrument.

A financial asset (or part of a financial asset, or a portion of a group of similar financial assets) is derecognised if it meets the following conditions, that is, it is written off from its account and balance sheet:

- (1) The rights to receive cash flows from financial assets expire;
- (2) Transfer the right to receive cash flows from financial assets, or undertake the obligation to pay the full amount of received cash flows to third parties in a timely manner under the “pass-through agreement”; and (a) transfer substantially all the risks and rewards of ownership of the financial asset, or (b) abandon the control of the financial asset, although the Group does not substantially transfer or retain almost all of the risks and rewards of ownership of the financial asset.

If the liability of a financial liability has been fulfilled, revoked or expired, the financial liability shall be derecognised. If an existing financial liability is replaced by another financial liability of the same creditor with substantially different terms, or if the terms of the existing liability are substantially all modified, such replacement or modification shall be deemed to have derecognised the original liability and to have recognised the new liability, the difference of which shall be included in the profit or loss for the period.

Financial assets traded in regular ways are recognised and derecognised on a trading date. Trading of financial assets in regular ways refers to the collection or delivery of financial assets within the time limit stipulated by regulations or common practices in accordance with the contractual terms. Trading day is the date on which the Group undertakes to buy or sell the financial assets.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments (Continued)

Classification and measurement of financial assets

The financial assets of the Group are classified upon the initial recognition based on the business model of the Group's corporate management financial assets and the characteristics of the financial assets' contractual cash flows: financial assets measured at fair value through profit or loss (FVTPL), financial assets measured at amortised cost, and financial assets measured at fair value through other comprehensive income (FVTOCI). All affected financial assets would be reclassified if and only if the Group changes its business model for managing financial assets.

Financial assets are measured at fair value at initial recognition. However, if the accounts receivable or bills receivable arising from the sale of goods or the provision of services do not contain significant financing components or do not consider financing components not exceeding one year, the financial assets shall be initially measured at the transaction price.

For financial assets measured at fair value through profit or loss, the related transaction costs are directly recognised in profit or loss for the period. Transaction costs of other types of financial assets are included in the value initially recognised.

Subsequent measurement of financial assets depends on their classification:

Debt instrument investments measured at amortised cost

Financial assets are classified as financial assets measured at amortised cost if they meet the following conditions: the business model for managing the financial assets is to collect contractual cash flows; the contractual terms of the financial assets stipulate that cash flows on a specific date are solely for the payments of the principals and interest incurred from the outstanding principal amount. Such financial assets are recognised as interest income using the effective interest rate method. The gains or losses arising from derecognition, modification or impairment are recognised in profit or loss for the period.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments (Continued)

Classification and measurement of financial assets (Continued)

Debt instrument investments measured at fair value through other comprehensive income

Financial assets are classified as financial assets measured at fair value through other comprehensive income if they meet the following conditions: the Group's business model for managing the financial assets is to both collect contractual cash flows and sell the financial assets; the contractual terms of the financial assets stipulate that cash flows on a specific date are solely for the payments of the principals and interest incurred from the outstanding principal amounts. Such financial assets are recognised as interest income using the effective interest rate method. Other changes in fair values are included in other comprehensive income except for interest income, impairment losses and exchange differences which are recognised in profit or loss for the period. When the financial assets are derecognised, the cumulative gains or losses previously recognised in other comprehensive income are transferred from it and included in profit or loss for the period.

Equity instrument investments measured at fair value through other comprehensive income

The Group irrevocably chooses to designate certain non-trading equity instrument investments as financial assets measured at fair value through other comprehensive income, and only the relevant dividend income (excluding dividend income explicitly recovered as part of investment cost) is included in profit or loss for the period. Subsequent changes in fair value are included in other comprehensive income with no impairment provision required. When the financial assets are derecognised, the cumulative gains or losses previously recognised in other comprehensive income are transferred from it and included in retained earnings.

Financial assets measured at fair value through profit or loss

Financial assets other than the above-mentioned financial assets measured at amortised cost and financial assets measured at fair value through other comprehensive income are classified as financial assets at fair value through profit or loss. For such financial assets, fair value is used for subsequent measurement, and all changes in fair value are recognised in profit or loss for the period.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments (Continued)

Classification and measurement of financial liabilities (Continued)

Upon initial recognition, financial liabilities of the Group are classified as financial liabilities at fair value through profit or loss and other financial liabilities. For financial liabilities measured at fair value through profit or loss, the relevant transaction fee is directly recognised in profit or loss for the period, and the related transaction fee of other financial liabilities is included in their initial amount recognised.

Subsequent measurement of financial liabilities depends on their classification:

Financial liabilities measured at fair value through profit or loss

Financial liabilities measured at fair value through profit or loss include financial liabilities held for trading (including derivatives that are financial liabilities) and those designated as financial liabilities at fair value through profit or loss upon initial recognition. Held-for-trading financial liabilities (including derivatives that are financial liabilities) are subsequently measured at fair value. Except for hedging accounting, all changes in fair value are recognised in profit or loss for the period. Financial liabilities designated to be measured at fair value through profit or loss are subsequently measured at fair value. Changes in fair value caused by changes in the Group's own credit risk are recognised in other comprehensive income, while other changes in fair value are included in profit or loss for the period. When changes in fair value caused by changes in the Group's own credit risk included in other comprehensive income may result in or enlarge accounting mismatches in profit or loss, the Group shall include all changes in fair value (including the amount of impact of changes in its own credit risk) in profit or loss for the period.

Other financial liabilities

For such financial liabilities, subsequent measurement is made at amortised cost using effective interest method.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments (Continued)

Impairment of financial instruments

Based on expected credit losses, the Group performs impairment testing on the financial assets at amortised cost, debt instrument investments measured at fair value through other comprehensive income, lease receivables, contract assets, loan commitments, and financial guarantee contracts and recognises loss allowance.

For receivables that do not contain significant financing components and contractual assets, the Group uses a simplified measurement approach to measure loss allowance at the full lifetime expected credit loss.

For lease receivables, receivables that contain significant financing components and contractual assets, the Group uses a simplified measurement approach to measure loss allowance at the full lifetime expected credit loss.

In addition to the above-mentioned financial assets using the simplified measurement method, the Group assesses whether its credit risk has increased significantly since the initial recognition on each balance sheet date. If the credit risk has not increased significantly since the initial recognition, it is at the first stage, and the Group measures loss allowance according to the amount of expected credit losses during the next 12 months and calculates the interest income according to the book balance and the actual interest rate; if the credit risk has increased significantly since the initial recognition, but no credit impairment has occurred, it is at the second stage, and the Group measures loss allowance at the full lifetime expected credit loss and calculates the interest income according to the book balance and the actual interest rate. If credit impairment occurs after the initial recognition, it is at the third stage, and the Group measures loss allowance at the full lifetime expected credit loss and calculates the interest income according to the amortised cost and the actual interest rate. For financial instruments with relatively low credit risk only on the balance sheet date, the Group assumes that their credit risk has not increased significantly since the initial recognition.

The Group evaluates the expected credit losses of financial instruments on individual items and portfolios. Taking into account the credit risk characteristics of different customers, the Group evaluates the expected credit losses of receivables and contract assets based on the combination of aging.

Please refer to Note X.3 for the Group's criteria for judging the significant increase in credit risk, the definition of credit-impaired assets, the assumption of measuring expected credit losses, and disclosures.

When the Group no longer reasonably expects to be able to recover all or part of the contractual cash flows of the financial assets, the Group will write down the carrying amount of the financial assets directly.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments (Continued)

Offsetting of financial instruments

If the following conditions are met, financial assets and financial liabilities are presented in the balance sheet with the net amount after offsetting each other; there is a currently enforceable legal right to offset the recognised amount; net settlement, or simultaneous realisation of the financial assets and settlement of the financial liabilities is planned.

Financial guarantee contracts

A financial guarantee contract is a contract by which the issuer pays a specified amount to a contract holder who has suffered a loss when the specific debtor fails to pay the debt when due in accordance with terms of the debt instrument. Financial guarantee contracts are measured at fair value at initial recognition. Except for the financial guarantee contracts that are designated as financial liabilities at fair value through profit and loss, the other financial guarantee contracts are subsequently measured after initial recognition according to the amount of expected credit loss allowance determined on the balance sheet date and the balance of the initial recognition amount after deducting the accumulated amortisation amount recognised according to the revenue recognition principle, whichever is higher.

Derivative financial instruments

The Group uses derivative financial instruments, such as forward contracts, forward commodity contracts and interest rate swaps, to hedge exchange rate risk, commodity price risk and interest rate risk, respectively. Derivative financial instruments are initially measured at fair value at the date when the derivative contracts are entered into and are subsequently measured at their fair values. Derivative financial instruments with a positive fair value are recognised as an asset, and that with a negative fair value is recognised as a liability.

Other than hedging accounting, gains or losses arising from changes in the fair value of derivatives are directly recognised in profit or loss for the period.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments (Continued)

Transfer of financial assets

The Group derecognises a financial asset when it has transferred substantially all the risks and rewards of ownership of the financial asset to the transferee; the Group does not derecognise the financial asset when it retains substantially all the risks and rewards of ownership of the financial asset.

If the Group neither transfers nor retains substantially all the risks and rewards of ownership of financial assets, the related accounting treatments of such financial assets are as follows: if the control of the financial assets is abandoned, the financial asset are derecognised and the assets and liabilities arising are recognised. If the control of the financial assets is not abandoned, the relevant financial assets are recognised according to the extent to which they continue to be involved in the transferred financial asset and the related liabilities are recognised accordingly.

If the transferred financial assets continue to be involved through the provision of financial guarantee method, the assets that continue to be involved are recognised according to carrying amount of the financial assets and the financial guarantee amount, whichever is lower. The amount of the financial guarantee is the maximum amount of the consideration received that will be required to be repaid.

11. Bills receivable

Methods for determining and accounting of ECL of bills receivable

☐ Applicable ☒ Not applicable

12. Accounts receivable

Method for determining and accounting of expected credit loss of accounts receivable

☒ Applicable ☐ Not applicable

Please refer to Note V. 10.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

13. Receivable for financing

Methods for determining and accounting of expected credit loss of receivables for financing

☒ Applicable ☐ Not applicable

Please refer to Note V. 10.

14. Other receivables

Methods for determining and accounting of ECL of other receivables

☒ Applicable ☐ Not applicable

Please refer to Note V. 10.

15. Inventories

☒ Applicable ☐ Not applicable

The Group's inventories include finished goods, raw materials, semi-finished goods and work-in-progress, turnover materials and goods in transit.

Inventories are initially measured at cost. Cost of inventories comprises costs of purchase, costs of processing and other costs. The actual cost of inventories transferred out is determined using the weighted average method. Turnover materials include low value consumables and packing materials, which are amortised using immediate write off.

Inventories are accounted for using the perpetual inventory system.

At the balance sheet date, inventories are measured at the lower of cost and net realisable value. If the cost is higher than the new realizable value, provision for impairment of inventories is made and recognized in profit or loss for the period. If the factors that give rise to the provision in prior years are not in effect in the current year, as a result that the net realisable value of inventories is higher than their carrying amount, the original amount of the written-down is reversed within previously impaired amount and the reversed amount is included in profit or loss for the period.

Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion, the estimated selling expenses and relevant taxes. Provision is considered on a category basis for inventories in large quantity and with relatively low unit prices and on an individual basis for all other inventories.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

16. Contract assets

(1). Method and standard for determination of contract assets

☒ Applicable ☐ Not applicable

The Group lists contract assets or contract liabilities in the balance sheet based on the relationship between performance obligations and customer payments. The Group will present the net amount after offsetting the contract assets with the contract liabilities under the same contract.

Contractual assets are the right to receive consideration for goods or services that have been transferred to a customer, and that right depends on other factors beyond the passage of time.

(2). Methods for determining and accounting of ECL of contract assets

☒ Applicable ☐ Not applicable

For details of how to determine the expected credit losses of contractual assets and accounting treatment methods, please refer to Note V.10.

17. Asset held for sale

☐ Applicable ☒ Not applicable

18. Debt investments

Methods for determining and accounting of ECL of debt investments

☒ Applicable ☐ Not applicable

Please refer to Note V.10.

19. Other debt investments

Methods for determining and accounting of ECL of other debt investments

☐ Applicable ☒ Not applicable

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

20. Long-term receivables

Methods for determining and accounting of ECL of long-term receivables

☒ Applicable ☐ Not applicable

Please refer to Note V.10.

21. Long-term equity investments

☒ Applicable ☐ Not applicable

Long-term equity investments include equity investments in subsidiaries, joint ventures and associates.

Long-term equity investments are initially measured at its initial investment cost when acquired. For a long-term equity investment acquired through business combination involving enterprises under common control, the initial investment cost is the attributable share of the carrying amount of the shareholders' equity of the acquiree in the ultimate controlling party's consolidated financial statements on the date of combination. The difference between initial investment cost and the carrying amount of the consolidated consideration is adjusted to capital reserve (if the balance of capital reserve is not sufficient to absorb the difference, any excess shall be adjusted to retained earnings). For other comprehensive income before the combination date, the same basis as direct disposal of the related assets or liabilities of the investee is adopted when the investment is disposed of. Shareholders' equity recognised as a result of changes in Shareholders' equity other than net profit or loss, other comprehensive income and profits distribution of the investee is transferred to profit or loss for the period when the investment is disposed of. Among which, after the disposal, the long-term equity investments will still be carried forward in proportion, and if it is converted into financial instruments after the disposal, it will be carried forward in full. For a long-term equity investment acquired through business combination not involving enterprises under common control, the combination cost is taken as the initial investment cost (if the business combination not involving enterprises under common control is realised step by step through multiple transactions, the initial investment cost will be the sum of the carrying amount of the equity investment held by the acquiree prior to the acquisition date and the new investment cost on the acquisition date). The combination cost includes the sum of the assets paid by the purchaser, the liabilities incurred or assumed, and the fair value of the issued equity securities. For other comprehensive income held before the acquisition date and recognised as a result of the adoption of the equity method, the same basis as direct disposal of the related assets or liabilities of the invest is adopted when the investments are disposed of. Shareholders' equity recognised as a result of changes in Shareholders' equity other than net profit or loss, other comprehensive income and profit distribution of the investee is transferred to the profit or loss for the period when the investment is disposed of. Among which, after the disposal, the long-term equity investments will still be transferred in proportion, and if it is converted into financial instruments after the disposal, it will be transferred in full. In addition to the long-term equity investments acquired by the long-term investment formed by business combination, the initial investment cost is determined according to the following methods: if acquired by cash payment, the actual purchase price and the expenses, taxes and other required expenditures directly related to the long-term equity investment will be take as the initial investment cost; if acquired through issuing equity securities, the fair value of the issued equity instruments will be taken as the initial investment cost.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

21. Long-term equity investments (Continued)

The long-term equity investments that the Company can exercise control over the investee is accounted for using the cost method in the Company's individual financial statements. Control refers to having the power to the investee to enjoy variable returns by participating in the relevant activities of the investee and having the ability to use the power of the investee to influence the amount of returns.

Under the cost method, a long-term equity investment is measured at initial investment cost. When additional investment is made or the investment is recouped, the cost of the long-term equity investment shall be adjusted. The cash dividends or profits declared by the Investee are recognised as investment income for the period.

When the Group has joint control or significant influence over the investee, the long-term equity investments shall be accounted for using the equity method. Joint control is the contractually agreed sharing of control over an arrangement, and exists only when the decision making about the relevant activities requires the unanimous consent of the parties sharing control. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

Under the equity method, where the initial investment cost of a long-term equity investment exceeds the Group's share of the fair value of the investee's identifiable net assets at the time of acquisition, it will be classified as the initial investment cost of the long-term equity investment. Where the initial investment cost of the long-term investment is less than the Group's share of the fair value of the investee's identifiable net assets at the time of investment, the difference is recognised in profit or loss for the period, and the cost of the long-term equity investment is adjusted accordingly.

Under the equity method, after a long-term equity investment is acquired, the Group recognises its share of the net profit or loss and other comprehensive income of the investee for the period as investment income or loss and other comprehensive income for the period, respectively, and adjusts the carrying amount of the long-term equity investment. When recognizing the share of the net profit or loss of the investee to be entitled, based on the fair value of the investee's identifiable assets at the time of acquiring the investment, in accordance with the Group's accounting policies and accounting periods, the Group will offset the profits or losses arising from internal transactions between associates and joint ventures to calculate the portion attributable to the investor in proportion to be enjoyed (but if the losses of internal transaction are asset impairment losses, they shall be fully recognised). The net profit of the investee is recognised after the adjustment, except that the assets that are invested or sold constitute businesses. The portion to be enjoyed shall be calculated according to the profit or cash dividend declared to be distributed by the investee, and the carrying amount of the long-term equity investment shall be reduced accordingly. The Group discontinues recognising its share of net losses of the investee after the carrying amount of the long-term equity investment together with any long-term interests that in substance form part of its net investment in the investee is reduced to zero, except that the Group has incurred obligations to assume additional losses. For changes in shareholders' equity other than net profit or loss, other comprehensive income and profit distribution of the investee, the carrying amount of long-term equity investment shall be adjusted and recognised in shareholders' equity.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

21. Long-term equity investments (Continued)

For disposal of a long-term equity investment, the difference between the carrying amount and the actual price is recognised in profit or loss for the period. For long-term equity investments under the equity method, if the equity method is adopted due to the termination of the disposal, other comprehensive income related to the original equity method is accounted for on the same basis as the investee's directly disposes of the related assets or liabilities. Shareholders' equity recognised as a result of changes in Shareholders' equity other than net profit or loss, other comprehensive income and profit distribution of the investee is all transferred to profit or loss for the period; under the equity method, other comprehensive income related to the original equity method is accounted for on the same basis as the investee's direct disposal of relevant assets or liabilities, and is transferred to the profit or loss for the period in proportion. Shareholders' equity recognised as a result of changes in Shareholders' equity other than net profit or loss, other comprehensive income and profit distribution of the investee is transferred to the profit or loss for the period according to the corresponding proportion.

22. Investment properties

(1). In respect of investment properties measured at cost:

Depreciation or amortisation method

An investment property is a property held to earn rentals or for capital appreciation or for both purposes. It includes buildings held for lease.

An investment property is measured initially at cost. Subsequent expenditures incurred for such investment properties are included in the cost of the investment properties when it is probable that economic benefits associated with an investment property will flow to the Group and the cost can be measured reliably. Otherwise, they are recognised in profit or loss for the period in which they are incurred.

The Group uses the cost model for subsequent measurement of investment properties, and adopts a depreciation or amortisation policy for the investment properties which is consistent with that for buildings and land use rights.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

23. Fixed assets

(1). Recognition criteria

☒ Applicable ☐ Not applicable

A fixed asset is recognised only when it is probable that economic benefits associated with the asset will flow to the Group and the cost of the asset can be measured reliably. Subsequent expenditures incurred for the fixed asset that meet the recognition criteria shall be included in the cost of the fixed asset, and the carrying amount of the component of the fixed asset that is replaced shall be derecognised. Otherwise, such subsequent expenditures shall be recognised in profit or loss for the period in which they are incurred.

Fixed assets are initially measured at cost. The purchase cost of a fixed asset comprises its purchase price, related taxes and any directly attributable expenditure for bringing the asset to its working condition for its intended use.

(2). Depreciation method

☒ Applicable ☐ Not applicable

Categories	Depreciation method	Useful life (year)	Residual value rate	Annual depreciation rate
Houses and buildings	Average age method	20-40 years	3%-10%	2.25%-4.85%
Machinery equipment	Average age method	5-10 years	3%-10%	9.00%-19.40%
Means of transportation vehicles	Average age method	5-8 years	3%-10%	11.25%-19.40%
Electronic equipment and others	Average age method	3-10 years	3%-10%	9.00%-32.33%

The Group reviews the useful life, estimated net residual value of a fixed asset and the depreciation method applied at least once at each year-end, and make adjustments when necessary.

NOTES TO FINANCIAL STATEMENTS

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

23. Fixed assets (Continued)

- (3). The basis, valuation and depreciation method for the fixed assets acquired under financing leases

☐ Applicable ☒ Not applicable

24. Construction in progress

☒ Applicable ☐ Not applicable

Construction in progress is recognised based on the actual construction expenditures incurred. It includes all types of expenditures necessary to be incurred during the construction period, capitalised borrowing costs on related borrowings before the asset is ready for intended use, and other relevant expenditures.

Construction in progress is transferred to fixed assets, intangible assets, investment properties or long-term prepaid expenses when the asset is ready for its intended use.

25. Borrowing costs

☒ Applicable ☐ Not applicable

Borrowing costs refer to interest and other related costs arising from the Group's borrowing. Borrowing costs include interest, amortisation of discounts or premiums, ancillary expenses and exchange differences arising from foreign currency borrowings.

Borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset are capitalised when such costs fulfil the conditions of capitalisation, whereas other borrowing costs are recorded in profit or loss for the period. Qualifying assets are assets (fixed assets, inventories, etc.) that necessarily take a substantially long period of time for acquisition, construction or production to get ready for their intended use or sale.

The capitalisation of borrowing costs commences only when all of the following conditions are satisfied:

- (1) Expenditures for the asset have been incurred;
- (2) Borrowing costs have been incurred; and
- (3) Activities relating to the acquisition, construction or production of the asset that are necessary to bring the asset to get ready for its intended use or sale have commenced.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

25. Borrowing costs (Continued)

Capitalisation of borrowing costs ceases when the qualifying asset being acquired, constructed or produced becomes ready for its intended use or sale. Any borrowing costs subsequently incurred shall be recognised in profit or loss for the period in which they are incurred.

During the capitalisation period, the amount of interest to be capitalised for each accounting period shall be determined as follows:

- (1) for specific borrowings, the borrowing costs eligible for capitalisation are the actual interest costs incurred during the current period deducted by any temporary interest or investment income;
- (2) for general borrowings, the borrowing costs eligible for capitalisation are determined by applying a capitalisation rate to the excess amounts of cumulative expenditures on the asset over the weighted average of cumulative expenditures on the asset of specific borrowings multiplying the weight average rate of general borrowings.

Capitalisation of borrowing costs shall be suspended during periods in which the acquisition, construction or production of qualifying assets is interrupted abnormally for a continuous period of more than three months except the necessary procedures for the assets to get ready for their intended use or sale. The borrowing costs incurred during the suspension period shall be recognised as expenses in profit or loss for the period until the acquisition, construction or production of the asset is resumed.

26. Biological assets

☐ Applicable ☒ Not applicable

27. Oil and gas assets

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

28. Right-of-use assets

✓ Applicable ☐ Not applicable

The Group's right-of-use assets include houses and buildings, means of transportation vehicles.

On the commencement date of the lease term, the Group recognises its right to use the leased assets over the lease term as right-of-use assets, the amount of which includes: the amount of the initial measurement of the lease liability; any lease payments made at or before the commencement date of the lease term less any lease incentives already received; any initial direct costs incurred by the lessee; an estimate of costs to be incurred by the lessee in dismantling and removing the leased asset, restoring the site on which it is located or restoring the leased asset to the condition required by the terms and conditions of the lease. The Group depreciates the right-of-use assets by using the straight-line method. If it is reasonable to determine the ownership of the leased asset at the expiration of the lease term, the Group shall depreciate the leased assets over the remaining useful life. If it is not reasonable to determine that the ownership of the leased assets can be obtained at the expiry of the lease term, the Group shall depreciate the leased assets over the lease term or the remaining useful life of the leased assets, whichever is shorter.

The Group shall remeasure lease liabilities according to the present value of the changed lease payments and adjust the book value of the right-of-use assets accordingly. However, if the carrying amount of the right-of-use assets is reduced to zero, yet there is still a further reduction in the measurement of the lease liabilities, the Group recognises any remaining amount of the remeasurement in profit or loss for the period.

29. Intangible assets

(1). Valuation methods, useful life and impairment test

✓ Applicable ☐ Not applicable

Intangible assets are recognised only when it is probable that the economic benefits associated with the asset will flow into the Group and the costs can be measured reliably. Intangible assets are measured initially at cost. Intangible assets acquired through business combination not involving enterprises under common control with a fair value that can be reliably measured are recognised separately as intangible assets and measured at fair value.

The useful life of the intangible assets shall be determined according to the period over which it is expected to generate economic benefits for the Group. An intangible asset shall be regarded as having an indefinite useful life when there is no foreseeable limit to the period over which the asset is expected to generate economic benefits for the Group.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

29. Intangible assets (Continued)

(1). Valuation methods, useful life and impairment test (Continued)

The useful lives of each category of intangible assets are as follows:

Item	Useful life
Land use rights	50 years
Patents	5-8 years
Software	5 years
Unfinished contract	2-3 years
Customer relationships	5-9 years

Land use rights obtained by the Group are usually accounted for as intangible assets. The land use rights of the self-developed buildings including plants are measured as intangible assets and buildings are measured as fixed assets, respectively. With respect to the land use rights purchased together with buildings, the acquisition cost is allocated between the two parts proportionately, or otherwise, is wholly accounted for as fixed assets.

Intangible assets with finite useful lives are amortised over their useful lives using the straight-line method. The Group reviews the useful lives and the amortisation method for intangible assets with finite useful lives at least once at each year-end, and makes adjustments when necessary.

(2). Accounting policies for internal research and development expenditure

☒ Applicable ☐ Not applicable

The Group classifies the expenditure in an internal research and development project into expenditure at the research phase and expenditure at the development phase. Expenditure at the research phase is recognised in profit or loss for the period in which it is incurred. Expenditure at the development phase is capitalised when the Group can demonstrate all of the followings: the technical feasibility of completing the intangible asset so that it will be available for use or sale; the intention to complete the intangible asset and use or sell it; how the intangible asset will generate probable future economic benefits. Among other things, the Group can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset; the availability of adequate technical, financial and other resources to complete the development and the ability to use or sell the intangible asset; and its ability to measure reliably the expenditure attributable to the intangible asset during its development. Expenditure at the development phase that does not meet the above criteria is recognised in profit or loss for the period in which it is incurred.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

30. Long-term impairment of assets

☒ Applicable ☐ Not applicable

The Group determines the impairment of assets other than inventories, contract assets, deferred income taxes and financial assets based on the following methods:

The Group assesses at the balance sheet date whether there is any indication that the assets may be impaired. If any indication exists that such assets may be impaired, the Group estimates the recoverable amount of the asset and performs impairment tests. Goodwill arising in a business combination and an intangible asset with an indefinite useful life shall be tested for impairment at least at each year end, irrespective of whether there is any indication that the asset may be impaired. Intangible assets that have not been ready for intended use are tested for impairment each year.

The recoverable amount of an asset is the higher of its fair value less costs to sell and the present value of the future cash flows expected to be derived from the asset. The Group estimates the recoverable amount on an individual basis. If it is difficult to estimate the recoverable amount of an individual asset, the Group determines the recoverable amount of the asset group to which the asset belongs. Identification of an asset group shall be based on whether major cash inflows generated by the asset group are independent from the cash inflows from other assets or asset groups.

When the recoverable amount of an asset or asset group is less than its carrying amount, the carrying amount shall be reduced to its recoverable amount by the Group. The reduced amount is recognised in profit or loss for the current period. A provision for impairment loss of the asset is recognised accordingly.

For the purpose of impairment testing for goodwill, the carrying amount of goodwill acquired in a business combination is allocated from the acquisition date on a reasonable basis to each of the related asset groups; if it is difficult to allocate to the related asset groups, it is allocated to each of the related set of asset groups. Each of the related asset groups or set of asset groups is an asset group or set of asset groups that is able to benefit from the synergies of the business combination and is not larger than a reportable segment determined by the Group.

In testing an asset group or a set of asset groups including goodwill for impairment, if there is indication of impairment, the Group shall first test the asset group or the set of asset groups excluding goodwill for impairment. It shall determine and compare the recoverable amount with the related carrying amount and recognise any impairment loss. After that, the Group shall test the asset group or set of asset groups including goodwill for impairment. The carrying amount of the related asset group or set of asset group is compared to its recoverable amount. If the recoverable amount of the asset group or set of asset groups is lower than its carrying amount, an impairment loss is first reduced by the carrying amount of the goodwill allocated to the asset group or set of asset groups and then, the carrying amount of other assets (excluding goodwill) within the asset group or set of asset groups pro rata based on the carrying amount of each asset.

Once the above impairment loss is recognised, it shall not be reversed in subsequent accounting periods.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

31. Long-term prepayments

☒ Applicable ☐ Not applicable

Long-term prepayments are amortised on the straight-line basis. The amortisation period is as follows:

	Amortisation period
Costs of improvements to fixed assets under operating leases	2-5 years

32. Contract liabilities

(1). Methods for determining contract liabilities

☒ Applicable ☐ Not applicable

Contractual liabilities are the obligation spent to transfer goods or services to customers at a price received or receivable, such as amounts that the business has received prior to the transfer of promised goods or services.

The Group will present the net amount after offsetting the contract assets with the contract liabilities under the same contract.

33. Employee benefits

Employee compensation includes short-term compensation, and after-service benefits, termination benefits and other long-term employee benefits provided in various forms of consideration other than share-based payment given by the Group in exchange for service rendered by employees or compensations for the termination of employment relationship. The benefits that the Group provides to the spouse, children and dependents of the employees, the late employees' family and other beneficiaries also shall be deemed as employee benefits.

(1). Accounting methods for short-term remuneration

☒ Applicable ☐ Not applicable

During an accounting period when employees render services, short-term remuneration actually incurred are recognised as a liability, and charged to profit or loss or in related costs of assets for the current period.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

33. Employee benefits (Continued)

(2). Accounting methods for post-employment benefits

✓ Applicable ☐ Not applicable

Post-employment benefits (defined contribution plan)

The employees of the Group participate in the pension insurance and unemployment insurance plans managed by local governments. The Group makes contributions to the social security insurance at the applicable rates based on the amounts stipulated by the local government, the relevant expenditures are recorded in the relevant asset costs or profit or loss for the current period when incurred. In addition to these basic social pension plans, the employees of the Group join in the Enterprise Annuity Plan of China Railway Signal & Communication Corporation Limited established by the Group according to the state enterprise annuity system, the relevant expenditures are recorded in the relevant asset costs or profit or loss for the current period when incurred. The contribution made by the Group for its employees are calculated based on a certain percentage of the total salary of the employees and the length of service. The Group may not utilize any forfeited contributions to reduce the current contributions.

Post-employment benefits (defined benefit plans)

In addition to the above-mentioned benefit plans, the Group provides supplementary retirement benefits to its retired employees. These plans include monthly pension benefits, medical reimbursement benefits, annual medical insurance premiums and funeral benefits for employees after their retirement. The amount of the subsidies is determined based on the period during which the employee serves the Group and the relevant subsidy benefit policy.

These benefit plans beyond the scope of overall planning are considered to be based on a defined benefit plan. The defined benefit plan is calculated annually by an independent actuary using the projected unit credit method. The present value of the defined benefit obligations determined at the market yield of the government bonds during the defined benefit obligation period, and discounted over estimated future cash outflow. If there is an asset in the defined benefit plan, the present value of the defined benefit obligation minus the fair value of the asset of the defined benefit plan will be recognised as the net liability or net asset of the defined benefit plan. The change in the net liability or net asset of the defined benefit plan is divided into three parts: service cost, net interest on the net liability or net asset of the defined benefit plan, and changes due to re-measurement of net liability or net asset of the defined benefit plan for other comprehensive income.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

33. Employee benefits (Continued)

(2). Accounting methods for post-employment benefits (Continued)

Post-employment benefits (defined benefit plans) (Continued)

Any remeasurement caused by the defined benefit plans, including actuarial gains or losses, changes in the impact of the asset cap (net of the amounts included in the net interest on defined benefit plan obligation) and return on the asset in the plan (net of the amounts included in the net interest on defined benefit plan obligation) is recognised in the balance sheet immediately and recorded in shareholders' equity through other comprehensive income in the accounting period the re-measurement occurred, and shall not be reversed to profit or loss in the subsequent accounting periods.

The previous service costs should be recognised as current expenses at the earlier of the following dates: when the Group modifies the defined benefit plans; and when the Group recognises relevant restructuring costs or termination benefits.

Net interest equals to the net liability or asset in defined benefit plan multiply by the discount rate. The Group recognised changes in the net defined benefit plan obligation as management expenses in the statement of profit or loss and other comprehensive income. Those changes include service costs, including current service costs, previous service costs and gains and losses on settlement, and net interest, including the interest income of the asset in the plan, interest expenses of the obligation under the plan and interest of the impact of the asset cap.

(3). Accounting methods for termination benefits

☒ Applicable ☐ Not applicable

The Group recognises a liability for employee remuneration arising from termination benefits, and charged to current profit or loss at the earlier of the following dates: when the Group can no longer withdraw the offer of those benefits unilaterally due to proposed termination of employment or proposal for rundown; and when the entity recognises costs or expenses for restructuring that related to the payment of termination benefits.

For the employee's internal retirement plan, the Group will use the salary of the early retired employee to be paid by the enterprise on a monthly basis and the social insurance premium as the termination benefits from the period when the employee stops providing the service to the normal retirement date, and account for them adopting the same principle as the above-mentioned termination benefits. The specific terms of each termination benefit and the employee's internal retirement plan vary according to the relevant employee's position, service years and regions and other factors.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

33. Employee benefits (Continued)

(4). Accounting methods for other long-term employee benefits

☐ Applicable ☒ Not applicable

34. Lease liabilities

☒ Applicable ☐ Not applicable

On the commencement date of the lease term, the Group recognises the present value of the lease payments that have not been paid as lease liabilities, except for short-term leases and low-value asset leases. In calculating the present value of the lease payments, the Group uses the leased interest rate as the discount rate; if the interest rate of the lease cannot be determined, the lessee's incremental borrowing rate is used as the discount rate. The Group calculates interest expenses of lease liabilities in each period of the lease term based on the constant periodic interest rate and recognises the interest expenses in profit or loss for the current period, except for those that are stipulated to be recognised in related asset costs. The variable lease payments that are not included in the measurement of the lease liabilities are recognised in profit or loss when incurred, except for those that are stipulated to be recognised in related asset costs.

After the commencement date of the lease term, in the event of change in the actual fixed payment amount, change in the amount expected to be payable under a residual value guaranteed, change in the index or ratio used to determine the lease payment, or change in the assessment results or actual exercise rights of the call option, renewal option or termination option, the Group re-measures the lease liability based on the present value of the changed lease payments.

35. Provisions

☒ Applicable ☐ Not applicable

Except for contingent consideration and contingent liabilities assumed in business combinations involving enterprises not under common control, the Group recognises an obligation related to a contingency as a provision when all of the following conditions are satisfied:

- (1) the obligation is a present obligation assumed by the Group;
- (2) it is probable that an outflow of economic benefits from the Group will be required to settle the obligation;
- (3) the amount of the obligation can be measured reliably.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

35. Provisions (Continued)

A provision is initially measured at the best estimate of the expenditure required to settle the related present obligation, with a comprehensive consideration of factors such as the risks, uncertainty and time value of money relating to a contingency. The carrying amount of a provision is reviewed at each balance sheet date. If there is clear evidence that the carrying amount does not reflect the current best estimate, the carrying amount is adjusted to the best estimation.

36. Share-based payment

☐ Applicable ☒ Not applicable

37. Preference shares, perpetual bonds and other financial instruments

☒ Applicable ☐ Not applicable

The perpetual bonds issued by the Group have no maturity date. After the maturity date, the Group has the right to make unlimited renewals. For coupon interest of perpetual bonds, the Group has the right to make deferred payment. Those that the Group has no contractual obligation to pay cash or other financial assets shall be classified as equity instruments.

38. Revenue

(1). Accounting policies adopted for revenue recognition and measurement

☒ Applicable ☐ Not applicable

The Group recognises revenue when a performance obligation is satisfied, i.e. when “control” of the goods or services underlying the particular performance obligation is transferred to the customer. Acquiring “control” of the goods or services means being able to dominate the use of the goods or the provision of the services and obtain almost all of the economic benefits therefrom.

Sales agreement of goods

The sales agreement of goods entered into between the Group and its customers usually only includes the performance obligations of the transferred goods. The Group usually recognises the revenue at the time of transfer of control, taking into account the following factors: obtaining the current collection rights of the goods, transfer of the key risks and rewards of the ownership of the goods, transfer of the legal ownership of the goods, transfer of physical assets of goods and customers' acceptance of the goods.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

38. Revenue (Continued)

(1). Accounting policies adopted for revenue recognition and measurement (Continued)

Service agreement

The service agreement entered into between the Group and its customers usually includes performance obligations such as system integration. As the services provided by the Group during the performance of the agreement have irreplaceable uses, and during the entire contract period, the Group has the right to take the revenue from the completion of performance of the agreement accumulated to date as the performance obligation performed within a certain period of time, and recognise the revenue based on the performance progress, except where the performance progress cannot be reasonably determined. The Group determines the performance progress for the services provided in accordance with the input method. When the performance progress cannot be reasonably determined, if the costs incurred by the Group are expected to be compensated, the revenue will be recognised based on the amount of costs incurred, until the performance progress can be reasonably determined.

Construction contract

The construction contract entered into between the Group and its customers usually includes performance obligations such as construction services. As the customers can control the assets under construction in the performance of the Group, the Group considers them as performance obligations within a certain period of time, and recognises the revenue based on the performance progress, except where the performance progress cannot be reasonably determined. The Group determines the performance progress for the services provided in accordance with the input method and the costs occurred. When the performance progress cannot be reasonably determined, if the costs incurred by the Group are expected to be compensated, the revenue will be recognised based on the amount of costs incurred, until the performance progress can be reasonably determined.

Variable considerations

The contracts between the Group and its certain customers containing changes, claims and reward arrangements, which forms a variable consideration. The Group determines the best estimate of the variable consideration based on the expected value or the most probable value. However, the sales price including variable considerations should not exceed the amount accumulatively recognised which is not likely to be significantly reversed when the uncertainty disappears.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

38. Revenue (Continued)

(1). Accounting policies adopted for revenue recognition and measurement (Continued)

Return clauses

In connection with sales with a return clause, revenue is recognised according to the amount of consideration it expects to be entitled to for the transfer to a customer when the customer acquires control of the relevant. Amounts expected to be refunded for the return of sales are recognised as estimated liabilities. At the same time, the balance of the carrying value of the product expected to be returned upon transfer less expected costs for the recall of such product (including impairment loss of the recalled product) shall be recognised as an asset (i.e. cost of return receivables), and the net amount of the carrying value of the transferred product upon the transfer less the aforesaid asset cost shall be transferred to cost. At each balance sheet date, the Group reassesses the future return of sales and re-measures the above assets and liabilities.

Significant financing component

If the contract includes significant financing component, the Group determines the transaction price based on the amount payable under the assumption that the customer pays that amount payable in cash when “control” of the goods is obtained by the customer. By discounting the nominal amount of the contract consideration to the discount rate of the current selling price of the goods, the difference between the transaction price determined and the contract consideration of the contract committed shall be amortised within the contract period using effective interest rate method.

If the Group expects that the period between when the Group transfers a promised good to a customer and when the customer pays for that good will be one year or less, the Group needs not to consider the significant financing component.

Quality assurance obligation

According to the contractual agreement, legal provisions, etc., the Group provides quality assurance for the goods sold or assets constructed. For assurance-type quality assurance to the customers to ensure that the goods sold meet the established standards, the Group performs accounting treatment in accordance with Note V. 35. For service-type quality assurance for a separate service provided in addition to ensuring to the customers that the goods sold meet the established standards, the Group considers it as a single performance obligation, and according to the relative proportion of the individual selling prices for providing quality assurance for goods and services, amortises part of the transaction price to the service-type quality assurance, and recognises the revenue when the customer obtains control of the service. In assessing whether the quality assurance provides a separate service in addition to ensuring to the customers that the goods sold meet the established standards, the Group considers whether the quality assurance is a statutory requirement, a quality assurance period and the nature of the Group's commitment to perform its tasks and other factors.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

38. Revenue (Continued)

(1). Accounting policies adopted for revenue recognition and measurement (Continued)

Principal/agent

For the Group to obtain control of the goods or other assets from a third party and then transfer it to the customer, the Group has the right to determine the price of the goods traded at its own discretion, that is, the Group is a principal if it controls the specified good before that good is transferred to a customer, and the revenue shall be recognised based on the total consideration received or receivable; otherwise, the Group is an agent, and the revenue shall be recognised based on the amount of commission or handling fee that is expected to be charged, and such amount shall be determined based on the net amount of the total consideration received or receivable after deducting the prices payable to other related parties or according to the established commission amount or proportion.

Change in contract

When there is a change to the construction contract entered into between the Group and its customers:

- (1) If the change in contract adds a clearly distinguishable construction service and contract price, and the new contract price reflects the individual selling price of the new construction service, the Group will consider the change in contract as a separate contract for accounting treatment;
- (2) If the change in contract does not fall within the circumstances stated in item (1) above, and the transferred construction service and the construction service which has not been transferred can be clearly distinguished at the date of change in contract, the Group considers it as termination of the original contract, and at the same time, the non-performance part of the original contract and the modified part of the contract will be combined into a new contract for accounting treatment;
- (3) If the change in contract does not fall within the circumstances stated in item (1) above, and the transferred construction service and the construction service which has not been transferred cannot be clearly distinguished at the date of change in contract, the Group will make the modified part of the contract as an integral part of the original contract for accounting treatment, of which the impact on the recognised revenue as a result of such change will be adjusted as the revenue for the period on the date of change in contract.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

38. Revenue (Continued)

(1). Accounting policies adopted for revenue recognition and measurement (Continued)

Franchise contract ("BOT Contract")

The franchise activities under the BOT Contract usually include building, operation and transfer.

During the construction phase, the Group recognizes the contractual income for construction services in accordance with the accounting policy of the construction contract above and determines whether the Group is a principal responsible person or an agent in accordance with the accounting policy of the principal responsible person/agent above, and if the Group is the principal responsible person, the revenue of the construction service is recognized for performance progress. The Group recognises contract assets while recognising the revenue to the extent that it has an unconditional contractual right to receive a definite amount of cash or another financial asset from the grantor within a certain period after the completion of the infrastructure prescribed in the contract; If the Group is an agent, the construction service revenue is not recognised, and contract assets shall be recognised after considering the provisions in the contract with reference to the project consideration payable in the course of construction.

During the operation phase, the contract assets and the revenue are both recognised when services are provided and a receivable is recognised to the extent that the Group has the right to receive the consideration (such right is conditional only on the passage of time); the daily maintenance or repair costs incurred are recognised as current expenses.

Build and transfer contract ("BT Contract")

The activities under the BT Contract usually include building and transfer. For the construction services provided by the Group, during the construction phase, the relevant construction service contract revenue is recognised in accordance with the accounting policies of the construction contract mentioned above. The construction contract revenue is measured at the fair value of the consideration receivable and the "long-term receivable" is recognised by using the effective interest rate and measured at amortized cost, and is eliminated upon the receipt of payment from the owner.

(2). Differences between the accounting policies for revenue recognition due to different business models adopted by similar business

☐ Applicable ☒ Not applicable

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

39. Contract costs

☐ Applicable ☒ Not applicable

40. Government grants

☒ Applicable ☐ Not applicable

Government grants are recognised only when the attached conditions are met and they can be received. Government grants are measured at the amount received or receivable when in the form of a monetary asset, and at fair value when in the form of a non-monetary asset. Where the fair value is not reliably determinable, the government grants are measured at the nominal amount.

Government documents stipulate that if the long-term assets are obtained by acquisitions, constructions or other forms, the grants should be recognised as the government grants related to assets. If the government documents are unclear, they should be judged on the basis of the basic conditions necessary for obtaining such grants, if the long-term assets are obtained by acquisitions, constructions or other forms, the grants should be recognised as the government grants related to assets, and the others should be recognised as income-related government grants.

For government grants related to income, where the grant is a compensation for related expenses or losses to be incurred in the subsequent periods, the grant is recognised as deferred income, and included in profit or loss over the periods in which the related costs are recognised or adjusted against the relevant cost; where the grant is a compensation for related expenses or losses already incurred by the Group, the grant is recognised immediately in profit or loss for the current period or is adjusted against the relevant cost.

Government grants related to assets are adjusted against the book value of the assets or recognised as deferred income and evenly distributed in profit or loss over the useful period of related assets in a reasonable and systematic way. Government grants measured at their nominal amounts shall be recognised immediately in profit or loss for the current period. If the relevant assets are sold, transferred, disposed of or ruined before their useful life ends, the undistributed relevant deferred income shall be transferred to the gain from asset disposal for the current period.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

41. Income tax

☒ Applicable ☐ Not applicable

Income tax comprises current and deferred tax. Income tax is recognised as income tax expense or income in profit or loss for the current period, except for the adjusted goodwill resulting from a business combination or those relating to a transaction or event which is included directly in shareholders' equity, they are included in the shareholder's equity.

Current income tax liabilities or assets for the current and prior periods are measured at the amount of income tax expected to be paid or recovered according to the requirements of tax laws.

For temporary differences between the carrying amounts of assets and liabilities at the balance sheet date and tax bases, and temporary differences between the carrying amounts and the tax bases of items which have not been recognised as assets and liabilities but the tax bases of which can be determined for tax purposes, deferred taxes are provided using the liability method of the balance sheet.

A deferred tax liability is recognised for all taxable temporary differences, except:

- (1) where the taxable temporary differences arise from the initial recognition of goodwill, or the initial recognition of an asset or liability in a transaction which contains both of the following characteristics: the transaction is not a business combination; and at the time of the transaction, it affects neither accounting profit nor taxable profit or deductible loss;
- (2) in respect of taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not be reversed in the foreseeable future.

A deferred tax asset is recognised for deductible temporary differences, carry forward of unused deductible tax losses and tax credits, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carryforward of deductible tax losses and tax credits can be utilised, except:

- (1) where the deferred tax asset arises from a transaction that is not a business combination and, at the time of the transaction, neither the accounting profit nor taxable profit or deductible loss is affected;
- (2) in respect of the deductible temporary differences associated with investments in subsidiaries, associates and joint ventures that satisfy all of the following conditions simultaneously, a deferred tax asset is only recognised to the extent that it is probable that the temporary differences will be reversed in the foreseeable future and taxable profit will be available for deducting against the deductible temporary differences in the future.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

41. Income tax (Continued)

At the balance sheet date, deferred tax assets and deferred tax liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, according to the requirements of tax laws. The measurement of deferred tax assets and deferred tax liabilities reflects the tax consequences of the manner by which the Group expects to recover the assets or settle the liabilities at the balance sheet date.

The carrying amount of deferred tax assets is reviewed at the balance sheet date and reduced to the extent that it is no longer probable to obtain sufficient taxable profit in future periods to deduct the income of deferred income tax assets. Deferred tax assets which have not been recognised are reassessed at the balance sheet date and are recognised to the extent that it is probable to have sufficient taxable profit available to deduct all or part of the deferred tax asset to be recovered.

When all of the following conditions are satisfied simultaneously, the deferred income tax assets and deferred income tax liabilities are listed in the net amount after offsetting: the Group has a legal right to settle current tax assets and income tax liabilities on a net basis; the deferred income tax assets and deferred income tax liabilities are related to the income tax payable by the same tax payer to the same taxation authority or related to different tax payers, but during the period when each of the significant deferred income tax assets and deferred income tax liabilities is reversed, the tax payer involved intends to settle the current income tax asset and current income tax liability on a net basis, or simultaneously obtain assets and pay off the debts.

42. Leases

(1). Accounting method for operating leases

☒ Applicable ☐ Not applicable

Recognition of lease

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of one or more identified assets for a period of time in exchange of consideration. To determine whether the right to control the use of identified assets within a certain period of time under a contract has been transferred, the Group assesses whether a client in the contract has the right to use almost all of the economic benefits arising from the use of the identified assets during the period of use, and has the right to dominate the use of identified assets during this period of use.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

42. Leases (Continued)

(1). Accounting method for operating leases (Continued)

Recognition of separate lease

Where a contract concurrently contains multiple separate leases, the Group splits the contract and conducts accounting treatment for all separate leases respectively. Where the following conditions are concurrently met, use of the rights of identified assets shall constitute a separate lease in the contract:

- (1) A lessee may earn profits from separate use of the assets or joint use with other resources readily available;
- (2) There is no high dependence or high correlation between the assets and other assets in the contract.

Split of leased and non-leased parts

Where a contract concurrently includes both leased and non-leased parts, the Group, as the lessor, shall split the leased and non-leased parts and conduct accounting treatment.

Assessment of lease term

The lease term is the period during which the Group has the right to use the leased asset and is irrevocable. The Group has the option to renew the lease, that is, it has the right to choose to renew the lease, and reasonably determine that the option will be exercised. The lease term also includes the period covered by the option to renew the lease. The Group has the option to terminate the lease, that is, it has the right to choose to terminate the lease of the asset but reasonably determine that the option will not be exercised. The lease term includes the period covered by the option to terminate the lease. In the event of a major event or change within the Group's controllable scope, and affecting whether the Group reasonably determines that the option will be exercised, the Group reassesses whether it reasonably determines that it will exercise the option to renew the lease, call option or not to exercise the option to terminate the lease.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

42. Leases (Continued)

(1). Accounting method for operating leases (Continued)

As a lessee

For the general accounting treatment of the Group as a lessee, please refer to Note V. 28 and Note V. 34.

Modification of lease

Modification of lease is the modification of lease scope, lease consideration, and lease term beyond the original contract terms, including the addition or termination of the rights of use of one or more leased assets, and the extension or shortening of the lease period stipulated in the contract.

If the modification of lease happens and meets the following conditions, the Group will conduct accounting treatment for the modification of lease as a separate lease:

- (1) the modification of lease expands the scope of lease by increasing the rights of use of one or more leased assets;
- (2) the increased consideration and the individual price of the expanded part of lease are equivalent after adjustment is made in accordance with the contract situation.

If accounting treatment for the modification of lease as a separate lease is not conducted, the Group shall redetermine the lease term on the effective date of modification of lease and discount the modified lease payments using the revised discount rate, in order to remeasure the lease liabilities. When calculating the present value of the lease payments after modification, the Group adopts the interest rate contained in the lease for the remaining lease periods as the discount rate; if the lease interest rate contained in the lease for the remaining lease periods cannot be readily determined, the Group's incremental borrowing rate shall then be used as the discount rate on the effective date of modification of lease.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

42. Leases (Continued)

(1). Accounting method for operating leases (Continued)

As a lessee (Continued)

Modification of lease (Continued)

In view of the consequences of the above adjustment of the lease liabilities, the Group conducts accounting treatment based on each of the following cases accordingly:

- (1) if the modification of lease results in a narrower scope of lease or a shorter lease term, the Group reduces the book value of the right-of-use assets to reflect the partial or complete termination of the lease. The Group recognises the gain or loss relevant to the partial or complete termination of the leases in the current profit or loss;
- (2) for other modification of lease, the Group adjusts the book value of the right-of-use assets accordingly.

Short-term leases and low-value asset leases

On the commencement date of the lease term, the Group shall recognise leases with a lease term of less than 12 months and not including a call option as a short-term lease; single leases with a value of less than RMB50,000 when being a new asset are recognised as low-value asset leases. If the Group subleases or expects to sublease the leased assets, the original leases shall not be recognised as low-value asset lease. The Group chooses not to recognise short-term leases and low-value asset leases as right-of-use assets and lease liabilities. During each period over the lease term, short-term leases and low-value asset leases shall be recognised in the related asset cost or current profit and loss on a straight-line basis.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

42. Leases (Continued)

(1). Accounting method for operating leases (Continued)

As a lessor

On the commencement date of the lease term, all leases with risks and rewards incident to the ownership of the leased assets are substantially transferred into finance leases, and all other leases are operating leases. The Group classifies the sublease with reference to the right-of-use assets arising from the original lease as a sub-lessor.

As a lessor of a finance lease

At the commencement date of the lease term, the Group recognises finance lease receivables and derecognises financial leased assets. The Group initially measures finance lease receivables in the amount of net investment in the lease. Net investment in the lease is the sum of unguaranteed residual value and the present value of lease payments not received at the commencement date being discounted at the interest rate contained in the lease.

The Group calculates and recognises interest income in each period during the lease term based on a constant periodic rate of interest. The variable lease payments that are not included in the measurement of the net investment in the lease are recognised in profit or loss when incurred.

As the lessor of an operating lease

Lease payments under an operating lease are recognised in current profit or loss on a straight-line basis in each period over the lease term. Contingent rents are recognised in profit or loss in the period in which they actually arise.

In case of modification of an operating lease changes, the Group shall treat it as a new lease from the effective date of modification, and the amount of the advance receipt or receivable related to the lease before the modification shall be regarded as the collection amount of the new lease.

(2). Accounting method for financing leases

☐ Applicable ☒ Not applicable

(3). Methods for determining and accounting of lease under new lease standards

☒ Applicable ☐ Not applicable

Please refer to Note V. 42(1) for details.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates

☒ Applicable ☐ Not applicable

(1) Hedge accounting

For the purposes of hedging accounting, the Group's hedging is classified as cash flow hedging, which is a hedge against the risk of changes in cash flow derived from a particular type of risk associated with an identified asset or liability, an expected transaction that is likely to occur, or exchange rate risks contained in an unrecognized determination of commitments.

At the inception of a hedge relationship, the Group officially designates the hedge relationship and prepares formal written documentation of the hedge relationship, risk management objectives and risk management strategies. The documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Group will assess the hedging instrument's effectiveness. Hedge effectiveness is the extent to which the changes in cash flow of hedging instruments can offset the cash flow of hedged items caused by hedged risk. Such hedges are assessed on an ongoing basis to meet the requirements for hedge effectiveness on the initial designated date and beyond.

If the hedging instrument expires or is sold, terminated or exercised (but the rollover or replacement of part of a hedging instrument under the hedging strategy is not treated as an expiration or a contract termination), or due to a change in the risk management objective, the hedging relationship no longer meets the risk management objective, or when the hedging no longer meets other conditions of the hedge accounting method, the Group terminates the use of hedge accounting.

Where the hedging relationship no longer meets the hedging effectiveness requirements due to the hedging ratio, but the risk management objectives for the designated hedging relationship have not changed, the Group rebalances the hedging relationship.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(1) Hedge accounting (Continued)

Hedges which meet the criteria for hedge accounting are accounted for as follow:

Cash flow hedge

The effective portion of the gain or loss on the hedging instrument is recognised directly in other comprehensive income in the cash flow hedge reserve, while any ineffective portion is recognised in profit or loss for the period.

If an anticipated transaction under hedge is subsequently recognised as non-financial assets or non-financial liabilities, or an anticipated transaction of non-financial assets or non-financial liabilities forms a definitive undertaking in fair value hedging, cash flow hedging reserve previously recognised in other comprehensive income shall be transferred out and included in the amount of initial recognition of such assets or liabilities. In respect of the remaining cash flow hedge, if an anticipated sale occurs in the same period when the expected cash flow under hedge affects profit or loss, cash flow hedging reserve recognised in other comprehensive income shall be transferred out and included in current profit or loss.

When stops using hedging accounting for cash flow hedge, if the hedged future cash flow is still expected to occur, the amount previously included in other comprehensive income will not be transferred out until the expected transaction occurs or the commitment is confirmed to be fulfilled. If the hedged future cash flow is expected to no longer occur, the amount of accumulated cash flow hedging reserve recognised in other comprehensive income shall be transferred out and included in current profit and loss.

Cost of hedging

The Group separates the intrinsic value and time value of an option contract and designates as the hedging instrument only the change in intrinsic value of an option; or separates the forward element from the spot element of a forward contract and designates as the hedging instrument only the change in the value of the spot element; or separates the foreign currency basis spread of the financial instruments and designates as the hedging instrument only the financial instruments which foreign currency basis spread is separated, the Group recognises the time value of an option, forward element of a forward contract and the part of the hedged items that are relevant to the fair value changes of foreign currency basis spread of the financial instrument into other comprehensive income. If the characteristics of the hedged items are related to the transaction, the same accounting treatment with the cash flow hedge reserve shall be applied. If the characteristics of the hedged items are related to the period of time, the above fair value change shall be amortised on a systematic and reasonable basis over the time when the hedged item affects the profit or loss or other comprehensive income, transferred from other comprehensive income to profit or loss for the current period.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(2) Profit distribution

The Company's cash dividends are recognised as liabilities upon approval by the Shareholders' general meeting.

(3) Production safety expenses

Production safety expenses provided for as required were included in cost of product or the current profit and loss, and credited in special reserve. And the funds are treated separately depending on whether fixed assets are resulted when being used: funds related to expenditure is offset against special reserve directly while those forming fixed assets will consolidate expenditure incurred and recognized as fixed assets when such assets are ready for their intended use, at the same time offsetting equivalent amounts in the special reserve and recognizing equivalent amounts of accumulated depreciation.

(4) Fair value measurement

The Group measures receivables for financing and other equity instruments investment at fair value at each balance sheet date. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place in the principal market for the asset or liability or in the most advantageous market for the asset or liability when a principal market is absent. The principal or the most advantageous market must be accessible to by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data and other supporting information are available to measure fair value, giving priority to the use of relevant observable inputs, and using unobservable inputs only when observable inputs are unavailable or not feasible to obtain.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(4) Fair value measurement (Continued)

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole: Level 1-Quoted (unadjusted) market prices in active markets for identical assets or liabilities; Level 2-Input that is observable for related assets or liabilities, either directly or indirectly, but other than the input of the Level 1; Level 3-Input that is unobservable for related assets or liabilities.

For assets and liabilities that are measured at fair value and recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation at each balance sheet date.

(5) Significant accounting judgments and estimates

The preparation of the financial statements requires management to make judgements, estimations and assumption that affect the reported amounts and disclosures of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities at the balance sheet date. However, uncertainty about these assumptions and estimations could result in outcomes that could require a material adjustment to the carrying amounts of the assets or liabilities affected in the future.

Judgements

In the process of applying the Group's accounting policies, management has made the following judgements which have the most significant effect on the amounts recognised in the financial statements:

Operating leases – the Group as lessor

The Group has entered into operating leases on its investment property portfolio. The Group has determined, based on an evaluation of the terms and conditions of the arrangements, that it retains all the significant risks and rewards of ownership of these properties which are leased out on operating leases.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(5) Significant accounting judgments and estimates (Continued)

Judgements (Continued)

Determination of progress towards completion of the performance of obligations for construction contracts

The Group uses the input method to determine the progress towards completion of the performance obligations for the construction contracts. To be specific, the Group determines the progress towards completion of the performance obligations on the basis of the percentage of the accumulative actual construction costs incurred to the expected total costs. The accumulative actual costs include the direct and indirect costs incurred during the process of transferring goods to the customers. The Group believes that the construction contract price with the customers is determined on the basis of the construction costs, and the actual construction costs as a percentage of the estimated total costs can accurately reflect the progress of the construction service. The Group determines the progress of contract performance based on the proportion of the cumulative actual construction costs to the estimated total costs, and recognizes revenue accordingly. In view of the long duration of construction contracts, which may span several accounting periods, the Group will review and revise the budget as the construction contracts progress, and adjust the income recognition amount accordingly.

The division of research stage and development stage of research and development project

The Group distinguishes between the research and development stages of internal research and development projects, the research phase for original planned surveys to acquire and understand new scientific or technical knowledge, and the application of research results or other knowledge to a programme or design prior to commercial production or use to produce new or substantially improved materials, installations, products, etc.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(5) Significant accounting judgments and estimates (Continued)

Estimation uncertainty

The key assumptions concerning the future and other key sources of estimation uncertainty at the balance sheet date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the future accounting periods, are described below.

Construction contracts and labour service results

The Group recognises revenue based on the percentage of completion of individual contracts providing construction contracts and labour services. The management estimates the percentage of project completion based on the actual costs involved in the total budgeted costs and also estimates the relevant contract revenue. Due to the nature of the activities carried out in the contracts, the dates of the activities and the dates of completion of the activities are usually classified into different accounting periods. The Group will review and revise the budget and contract cost estimates as the contracts progress (if the actual contract revenue is less than the estimated or actual contract costs, provision for the estimated contract losses is to be made).

Impairment of financial instruments and contract assets

The Group has adopted the expected credit loss model to evaluate the impairment of financial instruments and contract assets. The application of the expected credit loss model requires significant judgement and estimates and the consideration of all reasonable and soundly based information, including forward-looking information. In making such judgement and estimates, the Group estimates the projected movements of the debtor's credit risk according to past repayment records, economic policies, macro-economic indicators and industry risks, etc. Differences in estimates may have an impact on the provision for Impairment. A provision for impairment may not be equal to the actual amount of impairment losses in the future.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(5) Significant accounting judgments and estimates (Continued)

Estimation uncertainty (Continued)

Impairment of non-current assets other than financial assets (excluding goodwill)

The Group assesses whether there are any indicators of impairment for non-current assets other than financial assets as at the balance sheet date. Non-current assets other than financial assets are tested for impairment when there are indicators that the carrying amounts may not be recoverable. An impairment exists when the carrying value of an asset or asset group exceeds its recoverable amount, which is the higher of its fair value less costs to sell and its present value of future cash flows. The calculation of the fair value less costs to sell is based on available data from binding sales transactions in an arm's length transaction of similar assets or observable market prices less incremental costs for disposing of the asset. When value in use calculations are undertaken, management must estimate the expected future cash flows from the asset or asset group and choose a suitable discount rate in order to calculate the present value of those cash flows.

Impairment of goodwill

Goodwill is tested for impairment at least annually. For the purpose of impairment testing, the present value of future cash flows, which are generated from asset groups or sets of asset groups considered together with allocated goodwill, is estimated. The Group estimates the present value of future cash flows from asset groups or sets of asset groups by forecasting the related cash flow and selecting a suitable discount rate.

Fair value of non-listed equity investments

Non-listed equity investments are valued as expected future cash flows based on the current discount rate of other financial instruments with similar contractual terms and risk characteristics. This requires the Group to estimate future cash flows, credit risks, fluctuations and discount rates and is therefore uncertain.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(5) Significant accounting judgments and estimates (Continued)

Estimation uncertainty (Continued)

Impairment of inventories

The Group determines the write-down for obsolescence of inventories. These estimates are made with reference to aged inventory analyses, projections of expected future sales of goods and management experience and judgement. Based on this review, write-down of inventories will be made when the carrying amounts of inventories decline below their estimated net realizable values. Due to changes in market conditions, actual sales of goods may be different from estimation and profit or loss in the current period could be affected by differences in this estimation.

Development expenditures

Determination of the capitalisation amount requires estimation of future cash flows of the related assets, choosing a suitable discount rate and estimation of beneficial useful lives in order to calculate the present value by management.

Deferred tax assets

Deferred tax assets are recognised for all unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilised. Significant management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of future taxable profits together with future tax planning strategies.

Measurement of defined benefit scheme obligations

The Group has recognised the supplementary retirement benefits under the defined benefit scheme as a liability. The estimated amount of these welfare expenses and liabilities shall be calculated and paid on the basis of various assumptions. These assumptions include the discount rate, the growth rate of welfare expenses during relevant period, as well as other factors. Deviations between actual results and actuarial assumptions will affect the accuracy of the relevant accounting estimates. Although the management believes that the above assumptions are reasonable, any changes in assumptions shall still affect the estimated liabilities of the relevant supplementary pension insurance and other external welfare plans.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(5) Significant accounting judgments and estimates (Continued)

Estimation uncertainty (Continued)

Useful lives and residual values of fixed assets

The useful lives of fixed assets are estimated based on historical experience of the Group with similar assets used in a similar way. If useful lives of the fixed assets are estimated to be shorter than previously estimated, the Group will increase the depreciation rates accordingly, or dispose of those assets that are idle or technically obsolete.

In determining the useful lives and net residual values of fixed assets, the Group periodically reviews the changes in market conditions, estimated physical wear and tear, and the maintenance of an asset. The estimation of the useful life of the asset is based on historical experience of the Group with similar assets that are used in a similar way. The depreciation amount will be adjusted if the estimated useful lives and/or the net residual values of fixed assets are less than previous estimation. Useful lives and net residual values are reviewed, at each settlement date, based on changes in circumstances.

Lessee's incremental borrowing rate

For a lease whose rate cannot be readily determined, the Group adopts lessee's incremental borrowing rate as the discount rate in estimating the present value of the lease payment. When determining the incremental borrowing interest rate, the Group uses the observable interest rate as a reference basis for determining the incremental borrowing rate according to the economic environment in which it is located and, on this basis, adjusts the reference interest rate according to the specific circumstances of the lease business, such as its own conditions, the underlying asset's condition, the lease term and the amount of the lease liability for obtaining an appropriate incremental borrowing rate.

Quality guarantee

The Group will make a reasonable estimate of the warranty rate for the contract combination with similar characteristics based on historical warranty data and current warranty conditions, taking into account all relevant information such as product improvement and market changes. The estimate of the warranty rate may not be equal to the actual warranty rate in the future. The Group re-evaluates the warranty rate at least on each balance sheet date and determines the estimated liabilities based on the re-evaluated warranty rate.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

44. Changes in significant accounting policies and estimates

(1). Changes in significant accounting policies

✓ Applicable ☐ Not applicable

Accounting treatment of PPP project contract

A PPP project contract refers to a contract entered into between the Group and the government in respect of cooperation in a PPP project in accordance with laws and regulations, which also has the following features (the “Dual Features”):

- (1) The Group uses PPP project assets to offer public products and services on behalf of the government during the operation period prescribed in the contract;
- (2) The Group receives compensation for the public products and services offered by it within the period prescribed in the contract.

Since 1 January 2021, the Accounting Standards for Business Enterprises Interpretation No. 14 regulates PPP project contracts that satisfy simultaneously the following criteria (the “Dual Control”):

- (1) The government controls or regulates the types, recipients and prices of public products and services that must be offered by the private investors in the PPP project assets;
- (2) When the PPP project contract is terminated, the government controls the significant remaining interests in the PPP project assets through ownership, income rights or other means.

Construction, operation and handover activities are usually included under PPP contracts. During the construction phase, the Group recognizes the contractual income for construction services in accordance with the accounting policy of the construction contract and determines whether the Group is the principal responsible person or agent in accordance with the accounting policy of the principal responsible person/agent, and if the Group is the principal responsible person, the contractual income and contractual assets of the construction services are recognized accordingly, wherein the construction services recognize the revenue at the progress of performance. At the operational stage, the Group is recognized as accounts receivable when it has the right to collect the consideration, which depends only on factors over time, and is accounted for in accordance with the above-mentioned accounting policies for financial instruments.

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Year ended 31 December 2021

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

44. Changes in significant accounting policies and estimates (Continued)

(1). Changes in significant accounting policies (Continued)

Accounting treatment of PPP project contract (Continued)

The Group made retrospective adjustments to the relevant PPP project contracts that have not been completed as of 1 January 2021 in accordance with the above standards, and the cumulative impact amounts arising from the adoption of the above standards will be included in the retained earnings and other related items in the financial statements as at 1 January 2021. The information for the comparable period was not adjusted.

The impacts of adopting the above changes in the accounting policies on the financial statements are as follows:

The Group

Unit: Yuan Currency: RMB

	Prior to the changes in the accounting policies 31 December 2020	Impacts of the changes in the accounting policies	After the changes in the accounting policies 1 January 2021
Long-term receivables	8,384,707,579.19	-4,381,554,467.95	4,003,153,111.24
Other non-current assets	203,923,885.50	4,381,554,467.95	4,585,478,353.45
	8,588,631,464.69	—	8,588,631,464.69

The adoption of the above changes in the accounting policies has no impact on the financial statements of the Company.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

44. Changes in significant accounting policies and estimates (Continued)

(1). Changes in significant accounting policies (Continued)

Accounting treatment of PPP project contract (Continued)

The major impacts of retrospective adjustments due to the above changes in accounting policies on the financial statements for the year ended 31 December 2021 are as follows:

31 December 2021

The Group

Unit: Yuan Currency: RMB

	Amounts reported	Amounts as per original standards	Impacts
Long-term receivables	3,713,734,908.20	8,429,557,565.79	-4,715,822,657.59
Other non-current assets	<u>5,004,496,508.18</u>	<u>288,673,850.59</u>	<u>4,715,822,657.59</u>
	<u>8,718,231,416.38</u>	<u>8,718,231,416.38</u>	<u>—</u>

The adoption of the above changes in the accounting policies has no impact on the financial statements of the Company.

(2). Changes in significant accounting estimates

☐ Applicable ☒ Not applicable

(3). Relevant information about adjustment to the initial adoption of financial statement of the beginning of the current year by the initial adoption of new lease standards since 2021

☐ Applicable ☒ Not applicable

(4). Description of retrospective adjustment of the previous comparative data by the initial adoption of new lease standards since 2021

☐ Applicable ☒ Not applicable

45. Others

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VI. TAXATION

1. Main taxes and tax rates

Main taxes and tax rates

☒ Applicable ☐ Not applicable

Category	Tax determination basis	Tax rate
Value-added tax	Except for construction and installation enterprises of the Group, if the Group is recognized as general VAT taxpayer, it shall pay output tax at the tax rate of 6%, 9% and 13% of the taxable income, and the value-added tax is paid according to the difference after deducting the input tax amount that is allowed to be deducted in the current period.	6%-13%
Urban maintenance and construction tax	Levied on the basis of 5%-7% turnover taxes paid.	5%-7%
Educational surcharge	Levied on the basis of 3% turnover taxes paid.	3%
Local educational surcharge	Levied on the basis of 1%-2% turnover taxes paid.	1%-2%
Property tax	Based on 1.2% of the residual value of the original value of the property minus 10%-30%, or 12% of the rental income of the property.	—
Stamp duty	Based on the taxable amount and the applicable tax rate stated on the tax payment certificate.	—
Land use tax	Based on the actual area of land occupied and the applicable tax rate of the location of the land.	—

Each of the overseas subsidiaries of the Company calculates and pays taxes in accordance with applicable taxes and tax rates required by local tax laws.

Disclosure statement of taxable entities subject to different enterprise income tax rates

☒ Applicable ☐ Not applicable

Please refer to note VI.2 for details.

VI. TAXATION (Continued)

2. Tax preferential

☒ Applicable ☐ Not applicable

Refund-upon-collection policy for VAT for software enterprises

According to the Notice of the State Council on Issuing Several Policies on Further Encouraging the Development of the Software and Integrated Circuit Industries (Guo Fa [2011] No. 4) issued by the State Council, CRSC Research & Design Institute Group Co., Ltd., CASCO Signal Ltd., CRSC Communication & Information Group Company Ltd., and CRSC Wanquan Signal Equipment Company Ltd. enjoy the refund-upon-collection policy for VAT for software enterprises.

Tax preferential policy for high-new technology enterprises

Beijing Xiandai Signal & Communication Engineering Consultant Ltd.:

Beijing Xiandai Signal & Communication Engineering Consultant Ltd. applied in 2014 and was finally recognised as a high-new technology enterprise on 30 October 2014. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 21 October 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

Shenyang Railway Signal Co., Ltd.:

Shenyang Railway Signal Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2012. The company submitted the high-tech enterprise qualification review materials to the competent authorities in July 2021, and obtained the updated high-new technology enterprise certificate on 14 December 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

Tianjin Railway Signal Co., Ltd.:

Tianjin Railway Signal Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2012. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 9 October 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2018 to 2021.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VI. TAXATION (Continued)

2. Tax preferential (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

Xi'an Railway Signal Co., Ltd.:

Xi'an Railway Signal Co., Ltd. applied in 2015 and was finally recognised as a high-new technology enterprise on 19 November 2015. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 17 December 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

Beijing Railway Signal Co., Ltd.:

Beijing Railway Signal Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2011. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 2 December 2020. The certificate is valid for three years. The company paid corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

Shanghai Railway Communication Co., Ltd.:

Shanghai Railway Communication Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2011. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 12 November 2020. The certificate is valid for three years. The company paid corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

Shanghai Deuta Electronic & Electrical Equipment Co., Ltd.:

Shanghai Deuta Electronic & Electrical Equipment Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2012. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 13 September 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

VI. TAXATION (Continued)

2. Tax preferential (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

Tianshui Railway Cable Co., Ltd.:

Tianshui Railway Cable Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2012. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 16 September 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

Jiaozuo Railway Cable Co., Ltd.:

Jiaozuo Railway Cable Co., Ltd. was finally recognised as a high-new technology enterprise in 2013. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2019, and obtained the updated high-new technology enterprise certificate on 3 December 2019. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2019 to 2022.

CRSC Research & Design Institute Group Co., Ltd.:

CRSC Research & Design Institute Group Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2011. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 2 December 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

Beijing Nera Stentofon Communication Equipment Co., Ltd.:

Beijing Nera Stentofon Communication Equipment Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2011. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 2 December 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

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VI. TAXATION (Continued)

2. Tax preferential (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

CRSC Communication & Information Group Company Ltd.:

CRSC Communication & Information Group Company Ltd. applied and was finally recognised as a high-new technology enterprise in 2011. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 2 December 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

Shanghai China Railway Communication & Signal Testing Co., Ltd.:

Shanghai China Railway Communication & Signal Testing Co., Ltd. applied in 2015 and was finally recognised as a high-new technology enterprise on 30 October 2015. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and passed the vetting process of the Administration of the High-Tech Enterprises Certification of Shanghai Office on 18 November 2021, with the result announced. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

CRSC Wanquan Signal Equipment Co., LTD.:

CRSC Wanquan Signal Equipment Co., LTD. applied and was finally recognised as a high-new technology enterprise in 2012. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 16 December 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

CASCO Signal Ltd.:

CASCO Signal Ltd. applied in 2014 and was finally recognised as a high-new technology enterprise in 4 September 2014. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 12 November 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

VI. TAXATION (Continued)

2. Tax preferential (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

CRSC Communication & Information Group Shanghai Company Ltd.:

CRSC Communication & Information Group Shanghai Company Ltd. applied in 2014 and was finally recognised as a high-new technology enterprise on 4 September 2014. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 18 November 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

CRSC Information Industry Co., Ltd.:

CRSC Information Industry Co., Ltd. applied in 2015 and was finally recognised as a high-new technology enterprise on 21 July 2015. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 25 October 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

Shanghai Xinhai Information Transportation Information Technology Co., Ltd.:

Shanghai Xinhai Information Transportation Information Technology Co., Ltd. applied in 2016 and was finally recognised as a high-new technology enterprise on 24 November 2016. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2019, and obtained the updated high-new technology enterprise certificate on 28 October 2019. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2019 to 2022.

Chengdu Railway Communication Equipment Co., Ltd.:

Chengdu Railway Communication Equipment Co., Ltd. applied in 2014 and was finally recognised as a high-new technology enterprise on 9 July 2014. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020, and obtained the updated high-new technology enterprise certificate on 11 September 2020. The certificate is valid for three years. The Company shall pay corporate income tax at a preferential tax rate of 15% from 2020 to 2023.

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VI. TAXATION (Continued)

2. Tax preferential (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

CRSCE Beijing Research & Design Experiment Center Ltd.:

CRSCE Beijing Research & Design Experiment Center Ltd. applied in 2015 and was finally recognised as a high-new technology enterprise on 24 November 2015. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 21 December 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

CRSC Engineering Bureau Group Information Technology Co., Ltd.:

CRSC Engineering Bureau Group Information Technology Co., Ltd. applied in 2015 and was finally recognised as a high-new technology enterprise on 21 July 2015. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 25 October 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

CRSC Engineering Bureau Group Construction Engineering Co., Ltd.:

CRSC Engineering Bureau Group Construction Engineering Co., Ltd. applied to the Hunan Provincial Science & Technology Department, Hunan Provincial Department of Finance, Hunan Provincial Tax Service, State Taxation Administration and Hunan Provincial Local Taxation Bureau in 2016 and was finally recognised as a high-new technology enterprise on 6 December 2016. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2019, and obtained the updated high-new technology enterprise certification on 20 September 2019 and the certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2019 to 2022.

CRSC (Changsha) Railway Traffic Control Technology Co., Ltd.:

CRSC (Changsha) Railway Traffic Control Technology Co., Ltd. applied to the Hunan Provincial Science & Technology Department, Hunan Provincial Department of Finance, Hunan Provincial Tax Service, State Taxation Administration and Hunan Provincial Local Taxation Bureau in 2017 and was finally recognised as a high-new technology enterprise on 1 December 2017. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2020 and obtained updated high-new technology enterprise certification on 11 September 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

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VI. TAXATION (Continued)

2. Tax preferential (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

CRSC Engineering Bureau Group Tianjin Equipment Engineering Ltd.:

CRSC Engineering Bureau Group Tianjin Equipment Engineering Ltd. applied to Tianjin Science and Technology Committee, Tianjin Municipal Finance Bureau, Tianjin Municipal Office, SAT and Tianjin Municipal Local Taxation Bureau in 2016 and was finally recognised as a high-new technology enterprise on 9 December 2016. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2019, and obtained the updated high-new technology enterprise certification on 28 October 2019 and the certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2019 to 2022.

CRSC Institute Smart City Research & Design:

CRSC Institute Smart City Research & Design applied to Beijing Science and Technology Committee, Beijing Municipal Finance Bureau, Beijing Municipal Tax Service, State Taxation Administration and Beijing Municipal Local Taxation Bureau in 2018 and was finally recognised as a high-new technology enterprise in 19 July 2018. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 25 October 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

CRSC Railway Vehicles Co., Ltd.:

CRSC Railway Vehicles Co., Ltd. applied to Beijing Science and Technology Committee, Beijing Municipal Finance Bureau, Beijing Municipal Office, SAT and Beijing Municipal Local Taxation Bureau in 2019 and was finally recognised as a high-new technology enterprise on 20 September 2019. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2019 to 2022.

Beijing Guo Tie Hua Chen Communication Technology Co., Ltd.:

Beijing Guo Tie Hua Chen Communication Technology Co., Ltd. applied to Beijing Science and Technology Committee, Beijing Municipal Finance Bureau, Beijing Municipal Tax Service, SAT and Beijing Municipal Local Taxation Bureau in 2020 and was finally recognised as a high-new technology enterprise on 2 December 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

CRSC Urban Rail Transit Technology Co., Ltd.:

CRSC Urban Rail Transit Technology Co., Ltd. applied to Beijing Science and Technology Committee, Beijing Municipal Finance Bureau, Beijing Municipal Tax Service, SAT and Beijing Municipal Local Taxation Bureau in 2020 and was finally recognised as a high-new technology enterprise on 21 October 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

Changsha Architectural Design Institute Co., Ltd.:

Changsha Architectural Design Institute Co., Ltd. applied to the Hunan Provincial Science & Technology Department, Hunan Provincial Department of Finance, Hunan Provincial Tax Service, State Taxation Administration and Hunan Provincial Local Taxation Bureau in 2020 and was finally recognised as a high-new technology enterprise on 3 December 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

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VI. TAXATION (Continued)

2. Tax preferential (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

CRSC Guangdong-Hong Kong-Macao (Guangzhou) Transportation Technology Co., Ltd.:

CRSC Guangdong-Hong Kong-Macao (Guangzhou) Transportation Technology Co., Ltd. applied to the Department of Science and Technology of Guangdong Province, the Department of Finance of Guangdong Province, and Guangdong Provincial Tax Service, State Taxation Administration in 2020 and was finally recognised as a high-new technology enterprise on 9 December 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

CRSC Engineering Group Electric Engineering Co., Ltd.:

CRSC Engineering Group Electric Engineering Co., Ltd. applied in 2015 and was finally recognised as a high-new technology enterprise on 8 December 2015. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2021, and obtained the updated high-new technology enterprise certificate on 9 October 2021. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2021 to 2024.

CRSC Hezhou Assembly Construction Co., Ltd.:

CRSC Hezhou Assembly Construction Co., Ltd. applied to the Guangxi Provincial Science and Technology Department, Department of Finance of Guangxi, and Guangxi Tax Service, State Taxation Administration in 2020 and was recognised as a high-new technology enterprise on 10 September 2020. The certificate is valid for three years. The company shall pay corporate income tax at the preferential tax rate of 15% from 2020 to 2023.

Preferential taxation policies for the western development

According to the Announcement of the Ministry of Finance, the State Taxation Administration and the National Development and Reform Commission on Continuation of the Enterprise Income Tax policies of Western Development (MOF Announcement (2020) No.23), from 1 January 2021 to 31 December 2030, an enterprise in western area engaged in industries encouraged is subjected to the enterprise income tax rate of 15%. Xi'an Railway Signal Co., Ltd. and Xi'an Quanlutonghao Equipment Research Co., Ltd. are eligible for the preferential tax policies related to the western development strategy.

Preferential taxation policies for small low-profit enterprises

According to the Announcement of the State Administration of Taxation on Issues Concerning the Implementation of Preferential Income Tax Policies to Support the Development of Small Low-Profit Enterprises and individual business (SAT Announcement [2021] No. 8): from 1 January 2021 to 31 December 2022, for small low-profit enterprises whose annual taxable income is less than RMB1 million (including RMB1 million), their income tax shall be based on the taxable income minus 12.5% and at the enterprise income tax rate of 20%. Xi'an Tonghao Railway Signal Product Inspection Station Co., Ltd. and Kunming Zhongtie Innovation Construction Project Management Ltd. were eligible for the preferential tax policies for small low-profit enterprises.

3. Others

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS

1. Cash and bank balances

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Cash on hand	455,141.96	714,559.72
Bank deposits	22,481,508,143.11	22,553,878,450.32
Other monetary funds	500,621,987.32	186,038,677.04
Total	22,982,585,272.39	22,740,631,687.08
Including: Total amount deposited abroad	1,075,162,755.53	1,055,918,155.65

Unit: Yuan Currency: RMB

	31 December 2021	31 December 2020
Closing balance of monetary funds for the year	22,982,585,272.39	22,740,631,687.08
Less: Non-pledged/secured and unrestricted time deposits with maturity of three months or above	4,886,239,178.33	4,369,731,936.97
Less: Other monetary funds with restricted use	500,621,987.32	186,038,677.04
Closing balance of cash and cash equivalents for the period/year	17,595,724,106.74	18,184,861,073.07
Less: Opening balance of cash and cash equivalents for the period/year	18,184,861,073.07	17,854,952,684.12
Net (decrease)/increase in cash and cash equivalents	-589,136,966.33	329,908,388.95

As at 31 December 2021, the Group's cash and bank balances deposited abroad were RMB1,075,162,755.53 (31 December 2020: RMB1,055,918,155.65).

As at 31 December 2021, the Group's cash and bank balances with title restrictions were RMB500,621,987.32 (31 December 2020: RMB186,038,677.04), please see Note VII. 81.

Interest income from demand deposits is earned at the bank's interest rate on the demand deposits. The Group determines the period of maturity of short-term time deposit on the basis of its needs for cash and earns the interest income at the bank's corresponding interest rate on the time deposits.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. Held-for-trading financial assets

☐ Applicable ☒ Not applicable

3. Derivative financial assets

☐ Applicable ☒ Not applicable

4. Notes receivable

(1). Classified presentation of notes receivable

☐ Applicable ☒ Not applicable

(2). Notes receivable pledged by the Company at the end of the period

☐ Applicable ☒ Not applicable

(3). Notes receivable endorsed or discounted by the Company at the end of the period and not yet due on the balance sheet date

☐ Applicable ☒ Not applicable

(4). Notes transferred to accounts receivable by the Company due to the drawer's failure to perform the contract at the end of the period

☐ Applicable ☒ Not applicable

(5). Disclosure by classification with the method of provision of bad debts

☐ Applicable ☒ Not applicable

Single provision for bad debt:

☐ Applicable ☒ Not applicable

Provision withdrawn for bad debt on a combination basis:

☐ Applicable ☒ Not applicable

If provisions for bad debts are made as per the general model of ECL, please make disclosure with reference to other receivables:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. Notes receivable (Continued)

(6). Provision for bad debts

☐ Applicable ☒ Not applicable

(7). The situation of the write-off of notes receivable for the period

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

5. Accounts receivable

(1). Disclosure by ageing

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Aging	Closing gross carrying amount	Opening gross carrying amount
Within 1 year	15,228,073,847.61	13,946,081,208.74
1 to 2 years	3,063,044,071.95	2,878,538,196.13
2 to 3 years	1,249,039,727.99	1,304,304,788.12
Over 3 years	1,157,937,970.20	844,987,732.06
Total	20,698,095,617.75	18,973,911,925.05

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Accounts receivable (Continued)

(1). Disclosure by ageing (Continued)

Movements in the provision for bad debts of accounts receivable are listed as follows:

Unit: Yuan Currency: RMB

	2021	2020
Opening balance for the year	682,958,823.38	649,888,871.06
Provision for the year	196,783,657.09	149,711,197.22
Reversal for the year	-34,838,464.58	-116,044,346.90
Write-off for the year	-565,716.42	-596,898.00
Closing balance for the year	844,338,299.47	682,958,823.38

(2). Disclosure by the method of provision of bad debts

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Categories	Closing balance					Opening balance				
	Gross carrying amount		Provision for bad debt			Gross carrying amount		Provision for bad debt		
	Amount		Percentage of			Amount		Percentage of		
	Amount	Proportion	Amount	Proportion	Book value	Amount	Proportion	Amount	Proportion	Book value
Single provision for bad debt	1,083,646,735.75	5.24	64,217,847.44	5.93	1,019,428,888.31	847,286,696.05	4.47	52,137,991.88	6.15	795,148,704.17
Provision withdrawn for bad debt on a combination basis	19,614,448,882.00	94.76	780,120,452.03	3.98	18,834,328,429.97	18,126,625,229.00	95.53	630,820,831.50	3.48	17,495,804,397.50
Total	20,698,095,617.75	100.00	844,338,299.47	4.08	19,853,757,318.28	18,973,911,925.05	100.00	682,958,823.38	3.60	18,290,953,101.67

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Accounts receivable (Continued)

(2). Disclosure by the method of provision of bad debts (Continued)

Single provision for bad debt:

☒ Applicable ☐ Not applicable

31 December 2021

Unit: Yuan Currency: RMB

Name	Closing balance			
	Gross carrying amount	Provision for bad debt	Percentage of provision (%)	Reasons for provision
Accounts receivable of single provision for bad debt	1,083,646,735.75	64,217,847.44	5.93	Note
Total	1,083,646,735.75	64,217,847.44	5.93	/

31 December 2020

Unit: Yuan Currency: RMB

Name	Closing balance			
	Gross carrying amount	Provision for bad debt	Percentage of provision (%)	Reasons for provision
Accounts receivable of single provision for bad debt	847,286,696.05	52,137,991.88	6.15	Note
Total	847,286,696.05	52,137,991.88	6.15	/

Descriptions of single provision for bad debt:

☒ Applicable ☐ Not applicable

Note: The Group shall make provision for bad debts in whole or in part based on its aging and business conditions with other companies.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Accounts receivable (Continued)

(2). Disclosure by the method of provision of bad debts (Continued)

Provision withdrawn for bad debt on a combination basis:

☒ Applicable ☐ Not applicable

Items of provision on group basis: aging group

31 December 2021

Unit: Yuan Currency: RMB

Name	Closing balance		
	Accounts receivable	Provision for bad debt	Percentage of provision (%)
Within 1 year	14,497,625,107.33	72,488,125.54	0.50
1 to 2 years	2,952,585,283.00	147,629,264.15	5.00
2 to 3 years	1,189,485,334.89	118,948,533.49	10.00
Over 3 years	974,753,156.78	441,054,528.85	45.25
Total	19,614,448,882.00	780,120,452.03	/

31 December 2020

Unit: Yuan Currency: RMB

Name	Closing balance		
	Accounts receivable	Provision for bad debt	Percentage of provision (%)
Within 1 year	13,849,110,814.57	69,245,554.08	0.50
1 to 2 years	2,476,224,407.24	123,811,220.36	5.00
2 to 3 years	1,043,185,063.92	104,318,506.39	10.00
Over 3 years	758,104,943.27	333,445,550.67	43.98
Total	18,126,625,229.00	630,820,831.50	/

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Accounts receivable (Continued)

(2). Disclosure by the method of provision of bad debts (Continued)

Recognition standards and descriptions of provision withdrawn for bad debt on a combination basis:

☐ Applicable ☒ Not applicable

If provisions for bad debts are made as per the general model of ECL, please make disclosure with reference to other receivables:

☐ Applicable ☒ Not applicable

(3). Provision for bad debts

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Category	Opening balance	Provision	Increase/decrease during the period			Closing balance
			Recovery or reversal	Write-off or cancellation	Other changes	
Accounts receivable	682,958,823.38	196,783,657.09	34,838,464.58	565,716.42	-	844,338,299.47
Total	682,958,823.38	196,783,657.09	34,838,464.58	565,716.42	-	844,338,299.47

Significant amounts recovered or reversed to bad debts in the period:

☐ Applicable ☒ Not applicable

(4). The situation of the write-off of accounts receivable for the period

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(5). Top five accounts receivable by closing balance collection of the borrowers

✓ Applicable ☐ Not applicable

As at 31 December 2021, top five debtors with the largest balance of accounts receivables are as follows:

Unit: Yuan Currency: RMB

Name of entity	Closing balance	Percentage of total closing balance of accounts receivable (%)	Closing balance of provision for bad debt
Aggregation of the top five borrowers with the largest closing balance of accounts receivables	<u>1,957,739,664.24</u>	<u>9.46</u>	<u>130,774,379.03</u>
Total	<u>1,957,739,664.24</u>	<u>9.46</u>	<u>130,774,379.03</u>

As at 31 December 2020, top five debtors with the largest balance of accounts receivables are as follows:

Unit: Yuan Currency: RMB

Name of entity	Gross carrying amount	Percentage of total closing balance of accounts receivable (%)	Provision for bad debt
Aggregation of the top five borrowers with the largest closing balance of accounts receivables	<u>1,814,689,208.29</u>	<u>9.56</u>	<u>75,658,020.96</u>
Total	<u>1,814,689,208.29</u>	<u>9.56</u>	<u>75,658,020.96</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Accounts receivable (Continued)

(6). Accounts receivable derecognized due to the transfer of financial assets

☒ Applicable ☐ Not applicable

In 2021, the Group had no receivables derecognized as a result of factoring to financial institutions on a non-recourse basis (2020: RMB618,740,764.35), and no related gains or losses (2020: RMB23,907,670.65) were recognized in investment income.

(7). Amount of assets or liabilities resulting from accounts receivable transfer and its continuing involvement

☐ Applicable ☒ Not applicable

Other explanation:

☒ Applicable ☐ Not applicable

As at 31 December 2021, the Group's book value of other non-current assets of RMB4,426,249,414.22 and the book value of accounts receivable of RMB201,458,572.34 (31 December 2020: book value of long-term receivables of RMB4,092,306,736.92), which were formed by the earning rights of the franchise pledged and all proceeds thereunder it, were used to obtain long-term loans of RMB2,336,791,575.20 (31 December 2020: RMB1,900,360,668.00), please refer to Notes VII. 45 and 81.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Receivables for financing

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Bank acceptance bills	685,394,281.11	863,523,297.58
Commercial acceptance bills	1,079,909,469.63	1,366,601,160.03
Other credit instruments measured at fair value through other comprehensive income	377,689,363.26	—
Total	2,142,993,114.00	2,230,124,457.61

As at 31 December 2021, the ownership of notes receivable with book value of RMB48,875,684.59 (as at 31 December 2020, book value of RMB52,492,742.32) was restricted, see Note VII. 81.

Pledged bills receivable are as follows:

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Bank acceptance bills	8,875,684.59	2,561,294.29
Commercial acceptance bills	40,000,000.00	49,931,448.03
Total	48,875,684.59	52,492,742.32

The Group endorses or discounts some of the bank acceptance bills in the daily fund management. The business model for managing the above-mentioned acceptances receivable and other credit instrument is aimed at both collection of contractual cash flow and the sale. As a result, the Group reclassifies the notes receivable and other credit instrument as financial assets measured at fair value through other comprehensive income, and states them as receivables for financing.

The Group has no bank acceptance bills and commercial acceptance bills and other credit Instruments with single provision for bad debt. As at 31 December 2021, the Group measured the bad debt provision at the lifetime expected credit loss, and the relevant amount was RMB4,694,317.38 (31 December 2020: RMB4,099,803.48). The Group believes that there is no significant credit risk in the bank acceptance bills and commercial acceptance bills held by the Group, and will not cause significant loss due to the default of the acceptor.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Receivables for financing (Continued)

The bills receivable that has been endorsed or discounted but have not expired on the balance sheet date are listed as follows:

Unit: Yuan Currency: RMB

	Closing balance		Opening balance	
	Derecognized	Not derecognized	Derecognized	Not derecognized
Bank acceptance bills	466,753,794.07	179,573,211.17	934,167,212.36	179,206,712.21
Commercial acceptance bills	—	270,243,426.09	—	211,897,708.43
Total	466,753,794.07	449,816,637.26	934,167,212.36	391,104,420.64

The increase/decrease and fair value change of receivables for financing in the period:

☐ Applicable ☒ Not applicable

If provisions for bad debts are made as per the general model of ECL, please make disclosure with reference to other receivables:

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. Prepayments

(1). Prepayments set out by aging

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

	Closing balance		Opening balance	
	Amount	Amount Proportion (%)	Amount	Amount Proportion (%)
Aging				
Within 1 year	740,701,431.28	81.53	472,144,564.94	77.94
1 to 2 years	93,202,191.91	10.26	91,270,604.64	15.07
2 to 3 years	38,248,853.77	4.21	22,292,073.25	3.68
Over 3 years	36,359,377.87	4.00	20,050,459.45	3.31
Total	908,511,854.83	100.00	605,757,702.28	100.00

As at 31 December 2021, large-amount prepayments with an age of over one year are as follows:

Unit: Yuan Currency: RMB

	Gross carrying amount
Total prepayments of the top five debtors aged more than one year	79,273,205.05

As at 31 December 2020, large-amount prepayments with an age of over one year are as follows:

Unit: Yuan Currency: RMB

	Gross carrying amount
Total prepayments of the top five debtors aged more than one year	53,334,566.91

Reasons for delayed settlement of significant prepayments with an age of over one year:

The above large prepayments aged more than one year are not settled in time mainly due to relevant projects were not completed or the materials and equipment were not received.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. Prepayments (Continued)

(1). Prepayments set out by aging (Continued)

As at 31 December 2021, the top five prepayments in terms of amounts owed were as follows:

Unit: Yuan Currency: RMB

	Gross carrying amount	Proportion of total prepayments (%)
Aggregate closing balance of top five prepayments	<u>173,030,500.19</u>	<u>19.05</u>

As at 31 December 2020, the top five prepayments in terms of amounts owed were as follows:

Unit: Yuan Currency: RMB

	Gross carrying amount	Proportion of total prepayments (%)
Aggregate closing balance of top five prepayments	<u>182,562,853.11</u>	<u>30.14</u>

Other explanation

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables

Presentation of item

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Dividends receivable	6,525,000.00	14,040,000.00
Other receivables	1,087,070,430.95	1,462,236,378.69
Total	1,093,595,430.95	1,476,276,378.69

Other explanation:

☐ Applicable ☒ Not applicable

Interests receivable

(1). Classification of interest receivable

☐ Applicable ☒ Not applicable

(2). Significant overdue interest

☐ Applicable ☒ Not applicable

(3). Provision for bad debts

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

Dividends receivable

(4). Dividends receivable

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item (or investee)	Closing balance	Opening balance
Siemens Signaling Company Ltd.	<u>6,525,000.00</u>	<u>14,040,000.00</u>

(5). Significant dividends receivable with an age over 1 year

☐ Applicable ☒ Not applicable

(6). Provision for bad debts

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

Other receivables

(7). Disclosure by ageing

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Aging	Closing book balance	Opening book balance
Within 1 year	694,245,259.29	927,892,982.96
1 to 2 years	155,041,253.12	316,965,342.43
2 to 3 years	138,939,517.84	96,318,738.55
Over 3 years	219,697,624.11	248,784,561.00
Less: Provision for bad debts of other receivables	-120,853,223.41	-127,725,246.25
Total	1,087,070,430.95	1,462,236,378.69

(8). Classified by nature

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Nature of accounts	Closing book balance	Opening Book balance
Performance and tender bonds	574,478,299.28	739,114,286.03
Advance payments	305,462,203.46	403,588,447.38
Various deposits	125,469,060.56	117,916,591.33
Dividends receivable	6,525,000.00	14,040,000.00
Others	202,514,091.06	329,342,300.20
Less: provision for bad debts of other receivables	-120,853,223.41	-127,725,246.25
Total	1,093,595,430.95	1,476,276,378.69

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(9). Provision for bad debts

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

	Stage 1	Stage 2	Stage 3	
	12-month ECL	Lifetime ECL (non-credit impaired)	Lifetime ECL (credit-impaired)	Total
Provision for bad debt				
Amounts due as at				
1 January 2021	43,195,172.95	18,646,010.20	65,884,063.10	127,725,246.25
Amounts due for the period as at				
1 January 2021				
– Transferred to stage 2	-11,247,930.40	11,247,930.40	–	–
– Transferred to stage 3	–	-18,646,010.20	18,646,010.20	–
Provision for the period	6,151,714.68	7,229,171.00	26,452,873.88	39,833,759.56
Reversal for the period	-6,413,458.00	–	–	-6,413,458.00
Cancellation for the period	–	–	-40,292,324.40	-40,292,324.40
Amounts due as at				
31 December 2021	<u>31,685,499.23</u>	<u>18,477,101.40</u>	<u>70,690,622.78</u>	<u>120,853,223.41</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(9). Provision for bad debts (Continued)

2020

	Unit: Yuan Currency: RMB			
	Stage 1	Stage 2	Stage 3	
		Lifetime ECL		
		(non-credit	Lifetime ECL	
		impaired)	(credit-impaired)	Total
Provision for bad debt	12-month ECL			
Amounts due as at 1 January 2020	31,058,385.67	55,329,140.77	70,931,265.45	157,318,791.89
Amounts due for the year as at				
1 January 2020				
Provision for the year	21,617,877.48	—	—	21,617,877.48
Reversal for the year	-9,481,090.20	-36,683,130.57	-5,047,202.35	-51,211,423.12
Amount as at				
31 December 2020	<u>43,195,172.95</u>	<u>18,646,010.20</u>	<u>65,884,063.10</u>	<u>127,725,246.25</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(9). Provision for bad debts (Continued)

Explanation about obvious changes in gross carrying amounts of other receivables for which loss provision has changed in the period:

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

	Stage 1 12-month ECL	Stage 2 Lifetime ECL (non-credit impaired)	Stage 3 Lifetime ECL (credit-impaired)	Total
Amounts due as at 1 January 2021	1,495,263,496.53	23,307,512.74	71,390,615.67	1,589,961,624.94
Amounts due for the period as at 1 January 2021				
– Transferred to stage 2	-36,232,060.42	36,232,060.42	–	–
– Transferred to stage 3	-18,394,409.00	-23,307,512.74	41,701,921.74	–
Increase for the period	630,626,810.21	–	–	630,626,810.21
Derecognized	-972,372,456.39	–	–	-972,372,456.39
Cancellation for the period	–	–	-40,292,324.40	-40,292,324.40
Amounts due as at 31 December 2021	<u>1,098,891,380.93</u>	<u>36,232,060.42</u>	<u>72,800,213.01</u>	<u>1,207,923,654.36</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(9). Provision for bad debts (Continued)

2020

	Unit: Yuan Currency: RMB			
	Stage 1 12-month ECL	Stage 2 Lifetime ECL (non-credit impaired)	Stage 3 Lifetime ECL (credit-impaired)	Total
Amounts due as at				
1 January 2020	1,178,723,209.79	55,329,140.77	71,390,615.67	1,305,442,966.23
Amounts due for the year as at				
1 January 2020				
Increase for the year	860,120,112.68	—	—	860,120,112.68
Derecognized	<u>-543,579,825.94</u>	<u>-32,021,628.03</u>	<u>—</u>	<u>-575,601,453.97</u>
Amounts due as at				
31 December 2020	<u>1,495,263,496.53</u>	<u>23,307,512.74</u>	<u>71,390,615.67</u>	<u>1,589,961,624.94</u>

Amount of provision for bad debt for the period and basis for evaluating whether credit risk of financial instruments increase significantly:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(10). Provision for bad debts

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Category	Opening balance	Increase/decrease during the period			Closing balance
		Provision	Recovery or reversal	Write-off or cancellation	
Changes in bad debts of other receivables	127,725,246.25	39,833,759.56	6,413,458.00	40,292,324.40	120,853,223.41
Total	127,725,246.25	39,833,759.56	6,413,458.00	40,292,324.40	120,853,223.41

In 2021, provisions for bad debts of RMB39,833,759.56 (2020: RMB21,617,877.48) were made, and provisions for bad debts of RMB6,413,458.00 (2020: RMB51,211,423.12) were recovered or reversed.

Including significant amounts of provision for bad debts recovered or reversed in the period:

☐ Applicable ☒ Not applicable

(11). The situation of the write-off of other receivables for the period

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Write-off amount
Other receivables actually written off	40,292,324.40

Write-off of other significant receivables:

☐ Applicable ☒ Not applicable

Explanation on the write-off of other receivables:

☒ Applicable ☐ Not applicable

In 2021, the write-off of other receivables amounted to RMB40,292,324.40 (2020: Nil), which was generated from unrelated transactions.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(12). Top five accounts receivable by closing balance collection of the borrowers

☒ Applicable ☐ Not applicable

31 December 2021

Unit: Yuan Currency: RMB

Name of entity	Nature of receivable	Closing balance	Aging	Proportion of the closing balance of other receivables (%)	Provision for bad debt Closing balance
Aggregate closing balance of top five other receivables	Receivable current payments	185,147,731.52	/	15.33	728,796.04

31 December 2020

Unit: Yuan Currency: RMB

Name of entity	Nature of receivable	Closing balance	Aging	Proportion of the closing balance of other receivables (%)	Provision for bad debt Closing balance
Aggregate closing balance of top five other receivables	Receivable current payments	278,537,314.40	/	17.52	40,541,324.40

(13). Receivables involving government subsidies

☐ Applicable ☒ Not applicable

(14). Other receivables derecognized due to the transfer of financial assets

☒ Applicable ☐ Not applicable

In 2021, none of the Group's other receivables were derecognized due to being factored to financial institutions with no right of recourse (2020: Nil).

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(15). Amount of assets or liabilities resulting from transfer of other receivables and continuing involvement

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

9. Inventories

(1). Inventory classification

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance			Opening balance		
	Gross carrying amount	Provision for decline in value of inventories/ provision for impairment of contract performance cost	Carrying amount	Gross carrying amount	Provision for decline in value of inventories/ provision for impairment of contract performance cost	Carrying amount
Raw materials	949,223,792.88	5,362,466.80	943,861,326.08	1,032,481,415.00	5,782,725.14	1,026,698,689.86
Work-in progress	675,132,893.24	252,878.98	674,880,014.26	587,445,245.10	335,739.16	587,109,505.94
Finished goods	864,524,012.79	847.85	864,523,164.94	863,227,861.78	49,216.54	863,178,645.24
Turnover materials	9,488,266.30	299.08	9,487,967.22	12,201,160.95	788.27	12,200,372.68
Total	<u>2,498,368,965.21</u>	<u>5,616,492.71</u>	<u>2,492,752,472.50</u>	<u>2,495,355,682.83</u>	<u>6,168,469.11</u>	<u>2,489,187,213.72</u>

As at 31 December 2021 and 31 December 2020, the Group had no capitalized borrowing costs in the closing balance of inventories and no inventories with restricted ownership.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. Inventories (Continued)

(2). Provision for decline in value of inventories and provision for impairment of contract performance cost

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase during the period		Decrease during the period		Closing balance
		Provision	Others	Reversal or write-off	Others	
Raw materials	5,782,725.14	-	-	420,258.34	-	5,362,466.80
Work-in progress	335,739.16	-	-	82,860.18	-	252,878.98
Finished goods	49,216.54	-	-	48,368.69	-	847.85
Turnover materials	788.27	-	-	489.19	-	299.08
Total	6,168,469.11	-	-	551,976.40	-	5,616,492.71

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase during the period		Decrease during the period		Closing balance
		Provision	Others	Reversal or write-off	Others	
Raw materials	5,619,190.97	198,718.35	-	35,184.18	-	5,782,725.14
Work-in progress	-	335,739.16	-	-	-	335,739.16
Finished goods	523,909.72	49,216.54	-	523,909.72	-	49,216.54
Turnover materials	-	788.27	-	-	-	788.27
Total	6,143,100.69	584,462.32	-	559,093.90	-	6,168,469.11

(3). Explanation about inclusion of capitalized amount of the borrowing cost in the closing balance of inventories

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. Inventories (Continued)

(4). Explanation about current amortization amount of contract performance cost

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

10. Contract assets

(1). Information of contract assets

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance			Opening balance		
	Gross carrying amount	Provision for impairment	Carrying amount	Gross carrying amount	Provision for impairment	Carrying amount
Completed but not yet settled	37,501,436,001.48	-183,186,502.16	37,318,249,499.32	36,161,573,166.49	-118,181,959.60	36,043,391,206.89
Total	37,501,436,001.48	-183,186,502.16	37,318,249,499.32	36,161,573,166.49	-118,181,959.60	36,043,391,206.89

(2). Amount of and reason for significant change in carrying amount within the reporting period

☐ Applicable ☒ Not applicable

(3). Provision for impairment of contract assets in the period

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Provision for the period	Reversal for the period	Cancellation or write-off for the period	Reason
Provisions for impairment of contract assets	84,052,654.24	-19,048,111.68	—	/
Total	84,052,654.24	-19,048,111.68	—	/

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

10. Contract assets (Continued)

(3). Provision for impairment of contract assets in the period (Continued)

Contract assets of the Group are derived from provision of construction services to customers and recognition of revenue over a period of time. At time of settlement of project-related payments, any such contract asset turns into the unconditional right to collect payments and is transferred into the receivables.

As at 31 December 2021, the expected credit loss rate of the contract assets was 0.49% (31 December 2020: 0.33%).

If provisions for bad debts are made as per the general model of ECL, please make disclosure with reference to other receivables

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

11. Assets held for sale

☐ Applicable ☒ Not applicable

12. Non-current assets due within one year

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Project quality deposit due within one year	52,948,266.17	146,078,975.30
Less: Provision for bad debt	-33,345.57	-235,806.14
Total	52,914,920.60	145,843,169.16

Significant debt investments and other debt investments at the end of the period:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

13. Other current assets

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
VAT input to be deducted	1,163,971,696.57	1,028,755,807.04
Prepaid corporate income tax	16,133,725.80	12,481,868.92
Others	7,071,243.44	5,306,296.72
Total	1,187,176,665.81	1,046,543,972.68

14. Debt investment

(1). Information of debt investment

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance			Opening balance		
	Gross carrying amount	Provision for impairment	Carrying amount	Gross carrying amount	Provision for impairment	Carrying amount
Shandong Railway Development Fund Co., Ltd. (山東鐵路發展基金有限公司)	273,172,183.50	-	273,172,183.50	273,172,183.50	-	273,172,183.50
Total	273,172,183.50	-	273,172,183.50	273,172,183.50	-	273,172,183.50

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

14. Debt investment (Continued)

(1). Information of debt investment (Continued)

The Company completed its investment in Shandong Railway Development Fund Co., Ltd. On 28 January 2019, with the investment return to be paid by Shandong Development Fund as per 10% off the benchmark interest rate for more-than-5-year loans issued by PBoC (the prevailing interest rate $4.9\% \times 0.9 = 4.41\%$), and the interest was commenced on a phased basis from the date on which such investment capital was received, subject to adjustment according to interest rate of the central bank in the end period. At the end of the tenth anniversary of the date on which the project cooperation is commenced (i.e., 28 January 2029), Shandong Railway Development Fund Co., Ltd. will receive the equity equivalent to the Company's original capital contribution in lump sum. Therefore, the Company mainly holds the investment for the purpose of obtain contractual cash flows, and cash flows generated on specific dates are solely for the payment of the investment principal and interests incurred from the outstanding amount, and they fall into financial assets measured at amortized cost, therefore, the investment is stated as debt investment.

The Company has assessed that its credit risk has not significantly increased since the initial recognition on the balance sheet date, therefore the Company did not make provision for impairment according to the amount equivalent to the ECL for the next 12 months.

(2). Significant debt investments at the end of the period

☐ Applicable ☒ Not applicable

(3). Provision for impairment

☐ Applicable ☒ Not applicable

Amount of provision for impairment for the period and basis for evaluating whether credit risk of financial instruments increase significantly

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

15. Other debt investment

(1). Other debt investment

☐ Applicable ☒ Not applicable

(2). Other significant debt investments at the end of the period

☐ Applicable ☒ Not applicable

(3). Provision for impairment

☐ Applicable ☒ Not applicable

Amount of provision for the period and basis for evaluating whether credit risk of financial instruments increase significantly

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

16. Long-term receivables

(1). Long-term receivables

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance			Opening balance			Discount rate
	Gross carrying amount	Provision for bad debt	Carrying amount	Gross carrying amount	Provision for bad debt	Carrying amount	
Receivables of "Build-Transfer" project (Note 1)	118,805,273.89	-594,026.37	118,211,247.52	132,273,640.83	-661,368.21	131,612,272.62	
Receivables of "Build-Operate-Transfer" project (Note 2)	-	-	-	4,431,461,527.52	-49,907,059.57	4,381,554,467.95	
Project receivables	3,608,773,013.19	-13,249,352.51	3,595,523,660.68	3,886,430,002.18	-14,889,163.56	3,871,540,838.62	
Total	3,727,578,287.08	-13,843,378.88	3,713,734,908.20	8,450,165,170.53	-65,457,591.34	8,384,707,579.19	/

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

16. Long-term receivables (Continued)

(1). Long-term receivables (Continued)

Note 1: The Group signed repurchase agreements in relation to municipal engineering investment and construction with the relevant government bodies, under which those bodies authorize companies of the Group undertaking “build-transfer” projects to implement the investment and financing functions on their behalf to develop municipal projects. Those companies shall, after the completion of the “build-transfer” projects, hand over the projects to such bodies, and then those agencies shall pay the repurchase price within the time limit specified in the repurchase agreement.

Note 2: The Group signed construction and franchise agreements in relation to municipal engineering with the relevant government bodies, under which those bodies authorize companies of the Group undertaking “build-operate-transfer” projects to implement the investment and financing functions on their behalf to develop municipal projects and maintain franchised operation. Those companies shall, after the end of the franchise period, hand over the projects to such bodies, and then those agencies shall pay the repurchase price within the time limit specified in the repurchase agreement. The balance of long-term receivables of this type of project has been reclassified to other non-current assets at the end of the current year. Please refer to Note VII. 31 for details.

The Group evaluated whether or not the credit risk of the said long-term receivables has been significantly increased since the initial recognition on each balance sheet date. If such credit risk has not significantly increased since the initial recognition, the Group made provisions for loss at the amount equivalent to ECL for the next 12 months; and if the credit risk has significantly increased since the initial recognition but no credit impairment has occurred, the Company made provisions for loss at the amount equivalent to the lifetime ECL.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

16. Long-term receivables (Continued)

(2). Provision for bad debts

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Opening balance for the year	Increase/decrease during the year			Closing balance for the year
	Provision	Recovery or reversal	Write-off or cancellation	
65,457,591.34	18,233.38	-1,725,386.27	-49,907,059.57	13,843,378.88

2020

Unit: Yuan Currency: RMB

Opening balance for the year	Increase/decrease during the year			Closing balance for the year
	Provision	Recovery or reversal	Write-off or cancellation	
57,390,093.29	8,266,702.45	-199,204.40	—	65,457,591.34

Explanation about obvious changes in gross carrying amount of long-term receivables for which loss provision has changed in the period:

☐ Applicable ☒ Not applicable

Amount of provision for bad debt for the period and basis for evaluating whether credit risk of financial instruments increase significantly:

☐ Applicable ☒ Not applicable

(3). Long-term receivables derecognized due to the transfer of financial assets

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

16. Long-term receivables (Continued)

(4). Amount of assets or liabilities resulting from transfer of long-term receivables and its continuing involvement

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

17. Long-term equity investments

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

	31 December 2021	31 December 2020
Investments in joint ventures	229,687,703.77	232,579,525.12
Investments in associates	1,148,536,043.29	876,453,691.23
Subtotal	1,378,223,747.06	1,109,033,216.35
Less: Provision for impairment of long-term equity investment	—	—
Total	1,378,223,747.06	1,109,033,216.35

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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Unit: Yuan Currency: RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

2021

Investee	Increase/decrease for the period					Closing balance of provision for impairment	
	Opening balance	Increase in investment	Decrease in investment	Investment gains/losses confirmed under equity method	Other equity changes		Declared and paid cash dividends or profits
I. Joint ventures							
Xian Schaltbau Electric Corp., Ltd. ("Schaltbau") (西安沙爾特實電氣有限公司)	153,773,635.03	-	-	18,829,036.00	-	25,000,000.00	147,602,671.03
Wenzhou-Hangwen High-Speed Railway Investment Partnership (LLP) ("Wenzhou-Hangwen High-Speed Railway") (溫州杭溫高鐵投資合夥企業 (有限合夥))	76,503,772.49	-	-	-	-	-	76,503,772.49
CRSC Smart Data Technology (Beijing) Co., Ltd. ("CRSC Smart Technology") (通智數據科技(北京)有限公司)	2,302,117.60	675,000.00	-	2,604,142.65	-	-	5,581,260.25
Subtotal	232,579,525.12	675,000.00	-	21,433,178.65	-	25,000,000.00	229,687,703.77

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Investee	Increase/decrease for the period						Closing balance of provision for impairment
	Opening balance	Increase in investment	Decrease in investment	Investment gains/losses confirmed under equity method	Other equity changes	Declared and paid cash dividends or profits	
II. Associates							
Sping Integrated Pipeline Construction Co., Ltd. ("Sping Pipeline") (四平市綜合管廊建設運營有限公司)	224,763,946.36	-	-	-	-	-	224,763,946.36
Zhuhai Huatong Private Equity Fund Management Enterprise (Limited Partnership) ("Zhuhai Huatong") (珠海華通私募基金管理企業 (有限合夥)) note 1	9,711,635.41	-	-	882,237.76	-	1,500,000.00	9,093,873.17
Siemens Signalling Company Ltd. ("SSCX") (西門子信號有限公司)	72,797,559.78	-	-	11,411,067.00	-	13,050,000.00	71,158,626.78
CSCEC Foshan Joint Investment Co., Ltd. ("CSCEC Foshan") (佛山中建交通聯合投資有限公司)	12,503,152.61	-	-	113,080.77	-	-	12,616,233.38
Tianshui Tram Co., Ltd. (Phase II) ("Tianshui Tram") (天水有軌電車有限責任公司(二期)) note 2	-	72,000,000.00	-	-	-	-	72,000,000.00
Beijing Solong Electronic Technology Co., Ltd. ("Solong Electronic") (北京索隆電子科技有限公司) note 3	2,760,868.61	-	-	7,836.46	-	-	2,768,705.07
Guangdong Ultrust Financial Leasing Co., Ltd. ("Guangdong Ultrust Financial Leasing") (廣東粵財金融租賃股份有限公司)	329,544,657.82	-	-	19,046,428.93	-	4,500,000.00	344,091,086.75
China Tietong Railway Operation Co., Ltd. ("China Tietong Railway") (中國通軌道運營有限公司)	23,690,581.36	-	-	1,025,870.17	196,056.36	2,250,000.00	22,270,395.17
CRSC Tianshui Tram Co., Ltd. ("CRSC Tianshui") (天水通號有軌電車 有限責任公司)	174,259,545.42	-	-	32,053,931.63	-	-	206,313,477.05

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Investee	Increase/decrease for the period						Closing balance of provision for impairment
	Opening balance	Increase in investment	Decrease in investment	Investment gains/losses confirmed under equity method	Other equity changes	Declared and paid cash dividends or profits	
Tianjin Jingui Huihai Technology Development Co., Ltd. ("Tianjin Jingui") (天津津海匯海科技發展有限公司) note 4	-	3,000,000.00	-	-59,959.10	-	-	-
Zhejiang Jiaotou Intelligent Transportation Technology Co., Ltd. ("Zhejiang Jiaotou") (浙江交投智能交通科技有限公司) note 5	-	4,800,000.00	-	-	-	-	-
Henan Huazhou Railway Co., Ltd. ("Huazhou Railway") (河南滑州鐵路有限公司) note 6	-	149,360,290.00	-	98,487.00	-	-	-
Zhongguancun Chipsea Prioritizing Technology Co., Ltd. ("Chipsea Prioritizing") (中關村芯海擇優科技有限公司)	20,000,000.00	-	-	13,112.48	-	2,006.41	-
China Liantou (Shanghai) Data Intelligent Technology Co., Ltd. ("China Liantou Technology") (中聯投(上海)數據智能科技有限公司)	6,000,000.00	-	-	249,775.59	-	-	-
CRSC Changxing (Zhejiang) Technology Co., Ltd. ("CRSC Changxing Technology") (通號興行(浙江)科技股份有限公司)	421,743.86	-	275,791.34	-145,952.52	-	-	-
Subtotal	876,453,691.23	229,160,290.00	275,791.34	64,695,916.17	196,056.36	21,302,006.41	-
Total	1,109,033,216.35	229,835,290.00	275,791.34	86,129,094.82	196,056.36	46,302,006.41	-

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

2020

Unit: Yuan							Currency: RMB
Investee	Opening balance	Increase/decrease for the period					Closing balance of provision for impairment
		Increase in investment	Investment gains/ losses confirmed under equity method	Other equity changes	Declared and paid cash dividends or profits	Others	
I. Joint ventures							
Xian Schalbau Electric Corp., Ltd. ("Schalbau") (西安沙爾特電氣有限公司)	159,544,366.71	-	19,729,268.32	-	25,500,000.00	-	153,773,635.03
Wenzhou-Hangwen High-Speed Railway Investment Partnership (LLP) ("Wenzhou-Hangwen High-Speed Railway") (溫州杭溫高速鐵路投資合夥企業 (有限合夥))							
	76,503,772.49	-	-	-	-	-	76,503,772.49
CRSC Smart Data Technology (Beijing) Co., Ltd. ("CRSC Smart Technology") (通智數據科技(北京)有限公司)							
	-	675,000.00	1,627,117.60	-	-	-	2,302,117.60
Subtotal	236,048,139.20	675,000.00	21,356,385.92	-	25,500,000.00	-	232,579,525.12

Unit: Yuan Currency: RMB

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Investee	Opening balance	Increase/decrease for the period					Closing balance of provision for impairment
		Increase in investment	Investment gains/ losses confirmed under equity method	Other equity changes	Declared and paid cash dividends or profits	Others	
II. Associates							
Sping Integrated Pipeline Construction Co., Ltd. ("Sping Pipeline") (四平) 哈達管廊建設有限公司	134,715,266.36	90,048,680.00	-	-	-	224,763,946.36	-
CRSC Private Equity Fund (Limited Partnership) ("CRSC Hengqin") (橫琴) 通號股權投資基金(有限合夥) note 1	5,274,704.87	-	4,436,930.54	-	-	9,711,635.41	-
Siemens Signalling Company Ltd. ("SSCX") (西門子信號有限公司)	73,632,221.76	-	13,205,338.02	-	14,040,000.00	72,797,559.78	-
CSCEC Foshan Joint Investment Co., Ltd. ("CSCEC Foshan") (佛山) 中交交通聯合投資有限公司	18,001,674.57	-	3,405,413.92	-	8,903,935.88	12,503,152.61	-
CRSC (Beijing) Electronic Technology Co., Ltd. ("CRSC Electronic") (通號) 北京電子科技有限公司 note 3	2,750,331.71	-	10,536.90	-	-	2,760,868.61	-
Guangdong Ultrust Financial Leasing) (廣東粵財金融租賃股份有限公司)	313,638,566.72	-	15,906,091.10	-	-	329,544,657.82	-
China Tietong Railway Operation Co., Ltd. ("China Tietong Railway") (中鐵) 通號運營有限公司	19,941,435.04	-	5,823,375.68	175,770.64	2,250,000.00	23,690,581.36	-
CRSC Tianshui Tram Co., Ltd. ("CRSC Tianshui") (天水) 通號有軌電車有限公司	177,539,261.27	-	-3,279,715.85	-	-	174,259,545.42	-
Zhongguancun Chipsea Prioritizing Technology Co., Ltd. ("Chipsea Prioritizing") (中關村) 芯海擇優科技有限公司	-	20,000,000.00	-	-	-	20,000,000.00	-
China Liantou (Shanghai) Data Intelligent Technology Co., Ltd. (China Liantou Technology) (中聯投) (上海) 數據智能科技有限公司	-	6,000,000.00	-	-	-	6,000,000.00	-
CRSC Changxing (Zhejiang) Technology Co., Ltd. ("CRSC Changxing Technology") (通號) 興行(浙江) 科技股份有限公司	-	1,656,200.00	-500,000.00	-	-	734,456.14	-
Subtotal	745,493,462.30	117,704,880.00	39,007,970.31	175,770.64	25,193,935.88	876,453,691.23	-
Total	981,541,601.50	118,379,880.00	60,364,356.23	175,770.64	50,693,935.88	1,109,093,216.35	-

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Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Key information of joint ventures and associates

2021

	Principal place of business/place of registration	Nature of business	Registered capital	Shareholding by the Group (%)		Voting ratio of the Group (%)
				Direct	Indirect	
Joint venture						
Schaltbau	Xi'an City	Manufacturing of product	US\$4,400,000.00	–	50.00	33.00
Wenzhou-Hangzhou High-Speed Railway	Wenzhou City	Commercial services	5,001,000,000.00	29.99	–	29.99
CRSC Smart Technology	Beijing City	Technology development	10,000,000.00	–	45.00	45.00
Associates						
SSCX	Xi'an City	Manufacturing of product	€8,184,200.00	–	30.00	30.00
CSCEC Foshan	Guangzhou City	Investment project construction	16,000,000.00	11.00	–	20.00
Siping Pipeline	Siping City	Project contracting	1,125,608,500.00	20.00	–	20.00
Zhuhai Huatong	Zhuhai City	Equity investment management	20,000,000.00	–	40.00	33.00
Solong Electronic	Beijing City	Manufacturing of product	10,000,000.00	–	49.00	49.00
Guangdong Utrust Financial Leasing	Guangzhou City	Financial leasing	1,000,000,000.00	30.00	–	30.00
China Tietong Railway	Wenzhou City	Rail transit operation	50,000,000.00	–	30.00	30.00
CRSC Tianshui	Tianshui City	Project contracting	498,400,000.00	35.63	–	40.00
Tianshui Tram	Tianshui City	Project contracting	200,000,000.00	–	36.00	36.00
Huazhou Railway	Anyang City	Project contracting	339,455,200.00	–	44.00	44.00
Tianjin Jingui	Tianjin City	Rail transit operation	50,000,000.00	–	20.00	20.00
Zhejiang Jiaotou	Hangzhou City	Technology development	50,000,000.00	–	40.00	40.00
CRSC Changxing Technology	Taizhou City	Rail transit supplies	22,000,000.00	–	49.00	49.00
Zhonglian Investment Technology	Shanghai City	Data technology	100,000,000.00	–	20.00	20.00
Chipsea Prioritizing	Beijing City	Technology development	100,000,000.00	–	20.00	20.00

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Key information of joint ventures and associates (Continued)

2020

	Principal place of business/place of registration	Nature of business	Registered capital	Shareholding by the Group (%)		Voting ratio of the Group (%)
				Direct	Indirect	
Joint venture						
Schaltbau	Xi'an City	Manufacturing of product	US\$4,400,000.00	–	50.00	33.00
Wenzhou-Hangzhou High-Speed Railway	Wenzhou City	Commercial services	5,010,000,000.00	29.99	–	29.99
CRSC Smart Technology	Beijing City	Technology development	10,000,000.00	–	45.00	45.00
Associates						
SSCX	Xi'an City	Manufacturing of product	€5,220,000.00	–	30.00	30.00
CSCEC Foshan	Guangzhou City	Investment project construction	16,000,000.00	11.00	–	20.00
Siping Pipeline	Siping City	Project contracting	1,125,608,500.00	20.00	–	20.00
CRSC Hengqin	Zhuhai City	Equity investment management	200,000,000.00	–	40.00	33.00
CRSC Electronic	Beijing City	Manufacturing of product	10,000,000.00	–	49.00	49.00
Guangdong Utrust Financial Leasing	Guangzhou City	Financial leasing	1,000,000,000.00	30.00	–	30.00
China Tietong Railway	Wenzhou City	Rail transit operation	50,000,000.00	–	30.00	30.00
CRSC Tianshui	Tianshui City	Project contracting	498,400,000.00	35.63	–	40.00
CRSC Changxing Technology	Taizhou City	Rail transit supplies	22,000,000.00	–	49.00	49.00
Zhonglian Investment Technology	Shanghai City	Data technology	100,000,000.00	–	20.00	20.00
Chipsea Prioritizing	Beijing City	Technology development	100,000,000.00	–	20.00	20.00

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Key information of joint ventures and associates (Continued)

- Note 1: CRSC Private Equity Fund (Limited Partnership) (橫琴通號股權投資基金(有限合夥)) changed its company name to Zhuhai Huatong Private Equity Fund Management Enterprise (Limited Partnership) (珠海華通私募基金管理企業(有限合夥)) on 6 May 2021. The above change has been approved by the partners' meeting.
- Note 2: Led by Tianshui Municipal People's Government (天水市人民政府), Innovation Investment, China Railway 11th Bureau Group Co., Ltd. (中鐵十一局集團有限公司), China Railway Fifth Survey and Design Institute Group Co., Ltd. (中鐵第五勘察設計院集團有限公司) and other companies jointly funded the establishment of Tianshui Tram Co., Ltd. (天水有軌電車有限責任公司) in January 2021. Among them, five subsidiaries of the Group hold a total shareholding of 36.0%, while China Railway 11th Bureau Group Co., Ltd. holds 28.0% and China Railway Fifth Survey and Design Institute Group Co., Ltd. holds 1.0%. According to the Company's articles of association, the general meeting shall be the highest authority of the Company. At the general meeting, shareholders are entitled to exercise their voting rights in proportion to their respective subscribed capital contribution. At the general meeting, except for special matters that shall be adopted by more than two thirds of the voting rights held by shareholders, the other matters shall be adopted by a majority of the voting rights held by shareholders. The board of directors is the decision-making organ in respect of operation and management of the Company and is comprised by five directors, of which two members shall be appointed by each of Innovation Investment and Tianshui Urban Rail Transit Investment, Construction and Operation Co., Ltd. (天水市城市軌道交通投資建設經營有限責任公司) and one member shall be appointed by China Railway 11th Bureau Group Co., Ltd. (中鐵十一局集團有限公司). Except for special matters that shall be adopted by more than two thirds of all the directors, other resolutions shall take effect only with the consents of a majority of all directors. Based on the above considerations, the Company classified it as an associate company.
- Note 3: CRSC (Beijing) Electronic Technology Co., Ltd. changed its company name to Beijing Solong Electronic Technology Co., Ltd. (北京索隆電子科技有限公司) on 26 October 2021. The above change has been approved by the general meeting.
- Note 4: On 9 August 2021, CRSCS, a subsidiary of the Group, and four other companies including Tianjin Rail Transit Group Co., Ltd. (天津市軌道交通集團有限公司) jointly funded the establishment of Tianjin Jingui Huihai Technology Development Co., Ltd. (天津津軌匯海科技發展有限公司). The registered capital of the company is RMB50 million, and the shareholdings of each party are 46.0%, 26.0%, 20.0%, 5.0% and 3.0% respectively. As of 31 December 2021, CRSCS has completed its initial investment of RMB3 million in accordance with the investment agreement. According to the Articles of Association, the general meeting is the supreme authority of the company. Except for special matters that need to be approved by all shareholders representing more than four-fifths of the voting rights, other matters shall be approved by shareholders representing more than half of the voting rights, and the voting rights are exercised in proportion to the actual paid-in capital. The Board of Directors shall be composed of five directors, of which the Rail Group (軌道集團) shall appoint two directors, and each of CRSCS, Dongfang Electronics (東方電子) and South Railway Station Technology (南站科技) shall appoint one directors respectively. Except for special matters that need to be approved by more than two-thirds of all directors to be effective, other resolutions shall be approved by more than half of all directors to be effective. Based on the above considerations, the Company classified it as an associate company.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Key information of joint ventures and associates (Continued)

Note 5: On 14 December 2021, Urban Rail Transit and Zhejiang Economic Construction Investment Co., Ltd. (浙江省經濟建設投資有限公司) jointly funded the establishment of Zhejiang Jiaotou Intelligent Transportation Technology Co., Ltd. (浙江交投智能交通科技有限公司). The registered capital of the company is RMB50 million, and the shareholding ratio of Urban Rail Transit is 40.0% with a contribution of RMB20 million. As of 31 December 2021, Urban Rail Transit has completed its initial investment of RMB4.80 million in accordance with the investment agreement. According to the Articles of Association, the general meeting is the supreme authority of the company. Except for special matters that need to be approved by all shareholders representing more than two-thirds of the voting rights, other matters shall be approved by shareholders representing more than half of the voting rights, and the voting rights are exercised in proportion to the actual paid-in capital. The Board of Directors shall be composed of five directors, of which each of Zhejiang Economic Investment (浙江經投) and Urban Rail Transit shall appoint two directors, and representative director shall appoint one directors. Except for special matters that need to be approved by more than two-thirds of all directors to be effective, other resolutions shall be approved by more than half of all directors to be effective. Based on the above considerations, the Company classified it as an associate company.

Note 6: Huaxian Investment Co., Ltd., Zhengzhou Zhongyuan (a subsidiary of the Group) and Henan Railway Investment Co., Ltd. jointly funded the establishment of Henan Huazhou Railway Co., Ltd. in February 2021, and the aforesaid three parties contributed 45.0%, 44.0% and 11.0% to the capital, respectively. According to the Articles of Association, the general meeting is the authority of the company. Except for special resolutions that need to be approved by the shareholders representing more than two-thirds of the voting rights, the ordinary resolutions shall be approved by the shareholders representing more than half of the voting rights, and the voting rights are exercised in proportion to the actual paid-in capital. The Board of Directors is the decision-making body of the Company. The Board of Directors shall be composed of three directors, of which two are appointed by Zhengzhou Zhongyuan, and one is appointed by Huaxian Investment Co., Ltd. Except for special resolutions that will take effect after approval by all directors, other resolutions shall become effective after approval by more than half of all directors. Based on the above considerations, the Company classified it as an associate company.

As at 31 December 2021 and 31 December 2020, the ability of investees in which the Group hold long-term equity investments to transfer funds to the Group has not been restricted.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Key information of joint ventures and associates (Continued)

The following table sets out a summary of the financial information of the Group's insignificant joint ventures:

	Unit: Yuan Currency: RMB	
	2021	2020
Total book value of investment	<u>229,687,703.77</u>	<u>232,579,525.12</u>
Total amount of the following items calculated on the basis of shareholding percentage:		
Net profit	<u>21,433,178.65</u>	<u>21,356,385.92</u>
Total comprehensive income	<u>21,433,178.65</u>	<u>21,356,385.92</u>

The following table sets out a summary of the financial information of the Group's insignificant associates:

	Unit: Yuan Currency: RMB	
	2021	2020
Total book value of investment	<u>1,148,536,043.29</u>	<u>876,453,691.23</u>
Total amount of the following items calculated on the basis of shareholding percentage:		
Net profit	<u>64,695,916.17</u>	<u>39,007,970.31</u>
Total comprehensive income	<u>64,695,916.17</u>	<u>39,007,970.31</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

18. Other equity instrument investments

(1). Other equity instrument investments

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Beijing Yawan High Speed Railway Co., Ltd. (北京雅萬高速鐵路有限公司)	405,810,000.00	323,916,888.00
Ganzhou-Shenzhen Railway (Guangdong) Company Limited (贛深鐵路(廣東)有限公司)	100,000,000.00	100,000,000.00
Beijing Rail Transit Operation Control System National Engineering Research Center Co., Ltd. (北京軌道交通運行控制系統國家工程研究中心 有限公司)	2,141,159.20	2,141,159.20
Hunan Maglev Group Co., Ltd. (湖南磁浮集團股份有限公司)	100,000,000.00	100,000,000.00
Lunan High Speed Railway Co., Ltd. (魯南高速鐵路有限公司)	369,637,534.00	369,637,534.00
Taizhou-Hangshaotai High-Speed Railway Investment Management Partnership (LLP) (台州杭紹台高鐵投資管理合夥企業(有限合夥))	147,230,466.00	124,171,906.93
Total	<u>1,124,819,159.20</u>	<u>1,019,867,488.13</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

18. Other equity instrument investments (Continued)

(1). Other equity instrument investments (Continued)

2021

Unit: Yuan Currency: RMB

	Cost	Changes in fair value accumulated in other comprehensive income	Fair value	Dividend income for the period		Reason for designating as fair value through other comprehensive income
				Equity instruments derecognized in the period	Equity instrument still held	
Beijing Yawan High Speed Railway Co., Ltd. (北京雅萬高速鐵路有限公司)	405,810,000.00	-	405,810,000.00	-	-	It is expected to be strategically held for a long time
Ganzhou-Shenzhen Railway (Guangdong) Company Limited (贛深鐵路(廣東)有限公司)	100,000,000.00	-	100,000,000.00	-	-	It is expected to be strategically held for a long time
Beijing Rail Transit Operation Control System National Engineering Research Center Co., Ltd. (北京軌道交通運行控制系統國家工程研究中心有限公司)	2,141,159.20	-	2,141,159.20	-	-	It is expected to be strategically held for a long time
Hunan Maglev Group Co., Ltd. (湖南磁浮集團股份有限公司)	100,000,000.00	-	100,000,000.00	-	-	It is expected to be strategically held for a long time
Lunan High Speed Railway Co., Ltd. (魯南高速鐵路有限公司)	369,637,534.00	-	369,637,534.00	-	-	It is expected to be strategically held for a long time
Taizhou-Hangshaotai High-Speed Railway Investment Management Partnership (LLP) (台州杭紹台高鐵路投資管理合夥企業(有限合夥))	147,230,466.00	-	147,230,466.00	-	-	It is expected to be strategically held for a long time
Total	1,124,819,159.20	-	1,124,819,159.20	-	-	

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

18. Other equity instrument investments (Continued)

(1). Other equity instrument investments (Continued)

2020

Unit: Yuan Currency: RMB

	Cost	Changes in fair value accumulated in other comprehensive income	Fair value	Dividend income for the period			Reason for designating as fair value through other comprehensive income
				Equity instruments derecognized in the period	Equity instrument still held		
Beijing Yawan High Speed Railway Co., Ltd. (北京雅萬高速鐵路有限公司)	323,916,888.00	-	323,916,888.00	-	-		It is expected to be strategically held for a long time
Ganzhou-Shenzhen Railway (Guangdong) Company Limited (贛深鐵路(廣東) 有限公司)	100,000,000.00	-	100,000,000.00	-	-		It is expected to be strategically held for a long time
Beijing Rail Transit Operation Control System National Engineering Research Center Co., Ltd. (北京軌道交通運行控制 系統國家工程研究中心有限公司)	2,141,159.20	-	2,141,159.20	-	-		It is expected to be strategically held for a long time
Taizhou-Hangshaotai High-Speed Railway Investment Management Partnership (LLP) (台州杭紹台高鐵投資管理合夥企業 (有限合夥))	124,171,906.93	-	124,171,906.93	-	-		It is expected to be strategically held for a long time
Hunan Maglev Group Co., Ltd. (湖南磁浮集團股份有限公司)	100,000,000.00	-	100,000,000.00	-	-		It is expected to be strategically held for a long time
Lunan High Speed Railway Co., Ltd. (魯南高速鐵路有限公司)	369,637,534.00	-	369,637,534.00	-	-		It is expected to be strategically held for a long time
Total	<u>1,019,867,488.13</u>	<u>-</u>	<u>1,019,867,488.13</u>	<u>-</u>	<u>-</u>		

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

18. Other equity instrument investments (Continued)

(2). Information of non-trading equity instrument investment

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

19. Other non-current financial assets

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS

20. Investment properties

Measurement model for investment properties

(1). *Investment properties measured under cost method*

2021

Unit: Yuan Currency: RMB

Item	Buildings	Land use rights	Total
I. Original book value			
1. Opening balance	240,827,881.92	118,614,400.00	359,442,281.92
2. Increase during the current period	121,266,425.79	–	121,266,425.79
(1) Acquisition	–	–	–
(2) Inventories/fixed assets/transferred from construction in progress	121,266,425.79	–	121,266,425.79
3. Closing balance	362,094,307.71	118,614,400.00	480,708,707.71
II. Accumulated depreciation and accumulated amortization			
1. Opening balance	118,443,791.43	29,477,631.56	147,921,422.99
2. Increase during the current period	45,352,633.91	2,742,105.24	48,094,739.15
(1) Provision or amortization	15,143,806.11	2,742,105.24	17,885,911.35
(2) Inventories/fixed assets/transferred from construction in progress	30,208,827.80	–	30,208,827.80
3. Closing balance	163,796,425.34	32,219,736.80	196,016,162.14
III. Carrying amount			
1. Closing carrying amount	198,297,882.37	86,394,663.20	284,692,545.57
2. Opening carrying amount	122,384,090.49	89,136,768.44	211,520,858.93

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

20. Investment properties (Continued)

Measurement model for investment properties (Continued)

(1). Investment properties measured under cost method (Continued)

2020

Unit: Yuan Currency: RMB

Item	Buildings	Land use rights	Total
I. Original book value			
1. Opening balance for the year	234,163,170.34	118,614,400.00	352,777,570.34
2. Increase during the current year	7,747,529.72	—	7,747,529.72
(1) Acquisition	—	—	—
(2) Inventories/fixed assets/transferred from construction in progress	7,747,529.72	—	7,747,529.72
3. Decrease during the current year	1,082,818.14	—	1,082,818.14
(1) Disposal	1,082,818.14	—	1,082,818.14
4. Closing balance	240,827,881.92	118,614,400.00	359,442,281.92
II. Accumulated depreciation and accumulated amortization			
1. Opening balance for the year	108,508,367.54	26,735,526.29	135,243,893.83
2. Increase during the current year	10,302,318.79	2,742,105.27	13,044,424.06
(1) Provision or amortization	10,118,314.96	2,742,105.27	12,860,420.23
(2) Inventories/fixed assets/transferred from construction in progress	184,003.83	—	184,003.83
3. Decrease during the current year	366,894.90	—	366,894.90
(1) Disposal or retirement	366,894.90	—	366,894.90
4. Closing balance	118,443,791.43	29,477,631.56	147,921,422.99
III. Carrying amount			
1. Closing carrying amount	122,384,090.49	89,136,768.44	211,520,858.93
2. Opening carrying amount	125,654,802.80	91,878,873.71	217,533,676.51

Investment properties of the Group are the buildings in Mainland China, and these investment properties were leased to third parties under operating leases. They were valued on 31 December 2021 based on the valuation conducted by an external independent professionally qualified valuer, at RMB561,751,389.73 (31 December 2020: RMB471,045,500.00).

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

20. Investment properties (Continued)

Measurement model for investment properties (Continued)

(2). Information of investment properties to which a certificate of title has not been obtained

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

21. Fixed assets

Presentation of item

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Fixed assets	4,689,690,366.70	4,204,231,031.03
Disposal of fixed asset	—	—
Total	<u>4,689,690,366.70</u>	<u>4,204,231,031.03</u>

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

21. Fixed assets (Continued)

Fixed assets

(1). Information about fixed assets

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Buildings	Machinery equipment	Means of transportation vehicles	Electronic equipment and others	Total
I. Original book value:					
1. Opening balance	4,309,863,261.32	1,055,623,629.34	435,355,546.07	1,338,219,403.97	7,139,061,840.70
2. Increase during the current period	663,835,091.47	131,203,825.61	13,526,412.22	213,689,818.65	1,022,255,147.95
(1) Acquisition	16,470,019.85	50,043,742.97	12,890,420.82	175,507,583.96	254,911,767.60
(2) Transferred from construction in progress	647,365,071.62	81,160,082.64	635,991.40	38,182,234.69	767,343,380.35
3. Decrease during the current period	157,437,619.26	7,597,264.82	18,470,219.58	78,420,587.15	261,925,690.81
(1) Disposal or retirement	36,171,193.47	7,597,264.82	18,470,219.58	78,420,587.15	140,659,265.02
(2) Investment properties	121,266,425.79	—	—	—	121,266,425.79
4. Closing balance	4,816,260,733.53	1,179,230,190.13	430,411,738.71	1,473,488,635.47	7,899,391,297.84
II. Accumulated depreciation					
1. Opening balance	989,829,488.90	723,024,585.59	372,340,512.07	849,604,105.05	2,934,798,691.61
2. Increase during the current period	114,267,328.83	100,834,968.49	49,819,184.13	126,657,655.91	391,579,137.36
(1) Provision	114,267,328.83	100,834,968.49	49,819,184.13	126,657,655.91	391,579,137.36
3. Decrease during the current period	41,321,210.63	11,839,960.82	31,102,307.53	32,445,536.91	116,709,015.89
(1) Disposal or retirement	11,112,382.83	11,839,960.82	31,102,307.53	32,445,536.91	86,500,188.09
(2) Investment properties	30,208,827.80	—	—	—	30,208,827.80
4. Closing balance	1,062,775,607.10	812,019,593.26	391,057,388.67	943,816,224.05	3,209,668,813.08
III. Provision for impairment					
1. Opening balance	—	32,118.06	—	—	32,118.06
2. Closing balance	—	32,118.06	—	—	32,118.06
IV. Carrying amount					
1. Closing carrying amount	3,753,485,126.43	367,178,478.81	39,354,350.04	529,672,411.42	4,689,690,366.70
2. Opening carrying amount	3,320,033,772.42	332,566,925.69	63,015,034.00	488,615,298.92	4,204,231,031.03

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

21. Fixed assets (Continued)

Fixed assets (Continued)

(1). Information about fixed assets (Continued)

2020

Unit: Yuan Currency: RMB

Item	Buildings	Machinery equipment	Means of transportation vehicles	Electronic equipment and others	Total
I. Original book value:					
1. Opening balance	4,333,395,628.45	987,994,643.88	442,535,612.46	1,205,776,277.66	6,969,702,162.45
2. Increase during the current period	8,651,318.09	96,395,828.30	9,545,852.91	157,771,689.88	272,364,689.18
(1) Acquisition	8,282,006.42	43,758,017.61	9,466,206.89	157,203,728.38	218,709,959.30
(2) Transferred from construction in progress	369,311.67	52,637,810.69	79,646.02	567,961.50	53,654,729.88
3. Decrease during the current period	32,183,685.22	28,766,842.84	16,725,919.30	25,328,563.57	103,005,010.93
(1) Disposal or retirement	24,436,155.50	28,766,842.84	16,725,919.30	25,328,563.57	95,257,481.21
(2) Investment properties	7,747,529.72	—	—	—	7,747,529.72
4. Closing balance	4,309,863,261.32	1,055,623,629.34	435,355,546.07	1,338,219,403.97	7,139,061,840.70
II. Accumulated depreciation					
1. Opening balance	893,879,564.57	657,684,416.68	331,997,582.78	756,810,232.62	2,640,371,796.65
2. Increase during the current period	110,774,458.95	92,360,809.00	54,188,494.82	116,169,059.75	373,492,822.52
(1) Provision	110,774,458.95	92,360,809.00	54,188,494.82	116,169,059.75	373,492,822.52
3. Decrease during the current period	14,824,534.62	27,020,640.09	13,845,565.53	23,375,187.32	79,065,927.56
(1) Disposal or retirement	14,640,530.79	27,020,640.09	13,845,565.53	23,375,187.32	78,881,923.73
(2) Investment properties	184,003.83	—	—	—	184,003.83
4. Closing balance	989,829,488.90	723,024,585.59	372,340,512.07	849,604,105.05	2,934,798,691.61
III. Provision for impairment					
1. Opening balance	—	32,118.06	—	—	32,118.06
2. Closing balance	—	32,118.06	—	—	32,118.06
IV. Carrying amount					
1. Closing carrying amount	3,320,033,772.42	332,566,925.69	63,015,034.00	488,615,298.92	4,204,231,031.03
2. Opening carrying amount	3,439,516,063.88	330,278,109.14	110,538,029.68	448,966,045.04	4,329,298,247.74

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

21. Fixed assets (Continued)

Fixed assets (Continued)

(1). Information about fixed assets (Continued)

As at 31 December 2021, the original value of fixed assets of the Group which have been fully provided for depreciation but are still in use was RMB1,433,217,826.29 (31 December 2020: RMB1,378,535,858.20).

As at 31 December 2021 and 31 December 2020, none of main fixed assets for production and operation of the Group became temporarily idle.

As at 31 December 2021 and 31 December 2020, the Group had no fixed assets with title restriction.

(2). Temporarily-idle fixed assets

☐ Applicable ☒ Not applicable

(3). Fixed assets leased in through financial leases

☐ Applicable ☒ Not applicable

(4). Fixed assets leased out through operating leases

☐ Applicable ☒ Not applicable

(5). Fixed assets for which title certificates have not been obtained

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Book values	Reason why the title certificates have not been obtained
Buildings	<u>1,430,070,303.39</u>	<u>In process</u>

As of the approval date of this financial statement, the Group was applying for title certificate and handling registration or transfer procedures for houses and buildings with book values totaling RMB1,430,070,303.39 as of 31 December 2021. The management of the Group believed that the Group has the right to legally and effectively occupy and use the above-mentioned houses, and also believed that the above matters will not have any significant adverse impact on the overall financial position of the Group as at 31 December 2021.

Other explanation:

☐ Applicable ☒ Not applicable

Disposal of fixed assets

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

22. Construction in progress

Presentation of item

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Construction in progress	800,282,649.47	1,421,305,987.45
Construction materials	—	—
Total	800,282,649.47	1,421,305,987.45

Other explanation:

☐ Applicable ☒ Not applicable

Construction in progress

(1). Construction in progress

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance			Opening balance		
	Book balance	Provision for impairment	Carrying amount	Book balance	Provision for impairment	Carrying amount
Technology upgrade of rail transportation safety control system	10,287,385.88	—	10,287,385.88	85,566,760.59	—	85,566,760.59
CRSC Changsha Industrial Park Project	28,451,298.93	—	28,451,298.93	25,617,684.61	—	25,617,684.61
One Center Tower II (壹中心2號樓) Renovation Project	623,899,559.94	—	623,899,559.94	1,225,522,120.84	—	1,225,522,120.84
CRSC Electrochemical Science and Technology Mansion (通號電化科創大廈)	63,345,958.30	—	63,345,958.30	19,620,273.34	—	19,620,273.34
Others	74,298,446.42	—	74,298,446.42	64,979,148.07	—	64,979,148.07
Total	800,282,649.47	—	800,282,649.47	1,421,305,987.45	—	1,421,305,987.45

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

22. Construction in progress (Continued)

Construction in progress (Continued)

(2). Changes in important projects under construction for the current period

✓ Applicable □ Not applicable

2021

Unit: Yuan Currency: RMB

Project name	Opening balance	Increase during the period	Transferred into fixed assets during the period	Transferred into intangible assets during the period	Transferred into long-term prepaid expenses during the period	Closing balance	Proportion of total project investment in the budget (%)	Source of fund
Technology upgrade of rail transportation safety control system	85,566,760.59	6,785,393.47	-82,064,768.18	-	-	10,287,385.88	100.00	Equity fund
CRSC Changsha Industrial Park Project	25,617,684.61	2,833,614.32	-	-	-	28,451,298.93	94.45	Equity fund
One Center Tower II (壹中心2號樓)	1,225,522,120.84	52,002,760.23	-653,625,321.13	-	-	623,899,559.94	99.22	Equity fund
Renovation Project								
CRSC Electrochemical Science and Technology Mansion (通號電化科創大廈)	19,620,273.34	43,725,684.96	-	-	-	63,345,958.30	10.56	Equity fund
Others	64,979,148.07	47,598,073.57	-31,653,291.04	-3,525,000.00	-3,100,484.18	74,298,446.42	/	Equity fund
Total	1,421,305,987.45	152,945,526.55	-767,343,380.35	-3,525,000.00	-3,100,484.18	800,282,649.47	/	/

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

22. Construction in progress (Continued)

Construction in progress (Continued)

(2). Changes in important projects under construction for the current period (Continued)

2020

Project name	Opening balance	Increase during the period	Transferred into			Closing balance	Project progress	Source of fund
			Transferred into fixed assets during the period	Transferred into intangible assets during the period	Transferred into long-term prepaid expenses during the period			
Technology upgrade of rail transportation safety control system	82,457,989.34	3,108,771.25	-	-	-	85,566,760.59	99.82%	Equity fund
CRSC Changsha Industrial Park Project	12,503,476.88	13,114,207.73	-	-	-	25,617,684.61	99.53%	Equity fund
One Center Tower II (壹中心2號樓) Renovation Project	-	1,225,522,120.84	-	-	-	1,225,522,120.84	97.20%	Equity fund
CRSC Electrochemical Science and Technology Mansion (通號電化科創大廈)	1,232,794.32	18,387,479.02	-	-	-	19,620,273.34	9.81%	Equity fund
Others	64,546,063.09	57,105,022.17	-53,654,729.88	-2,424,176.17	-593,031.14	64,979,148.07	/	Equity fund
Total	160,740,323.63	1,317,237,601.01	-53,654,729.88	-2,424,176.17	-593,031.14	1,421,305,987.45	/	/

Unit: Yuan Currency: RMB

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

22. Construction in progress (Continued)

Construction in progress (Continued)

(3). *Provision for impairment of construction in progress made during the period*

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

Construction materials

(4). *Construction materials*

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

23. Productive biological assets

(1). Productive biological assets measured under cost method

☐ Applicable ☒ Not applicable

(2). Productive biological assets measured at fair value

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

24. Oil and gas assets

☐ Applicable ☒ Not applicable

25. Right-of-use assets

☒ Applicable ☐ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

25. Right-of-use assets (Continued)

2021

Unit: Yuan Currency: RMB

Item	Buildings	Means of transportation vehicles	Total
I. Original book value			
1. Opening balance	272,143,300.07	1,731,001.25	273,874,301.32
2. Increase during the current period	106,093,251.14	—	106,093,251.14
3. Decrease during the current period	822,670.70	—	822,670.70
4. Closing balance	377,413,880.51	1,731,001.25	379,144,881.76
II. Accumulated depreciation			
1. Opening balance	133,527,884.09	786,826.04	134,314,710.13
2. Increase during the current period	72,831,070.82	45,805.48	72,876,876.30
3. Decrease during the current period	674,161.73	—	674,161.73
4. Closing balance	205,684,793.18	832,631.52	206,517,424.70
III. Carrying amount			
1. Closing carrying amount	171,729,087.33	898,369.73	172,627,457.06
2. Opening carrying amount	138,615,415.98	944,175.21	139,559,591.19

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

25. Right-of-use assets (Continued)

2020

Unit: Yuan Currency: RMB

Item	Buildings	Means of transportation vehicles	Total
I. Carrying amount			
1. Opening balance	236,870,638.45	2,024,535.35	238,895,173.80
2. Increase during the current period	66,853,123.08	—	66,853,123.08
3. Decrease during the current period	<u>31,580,461.46</u>	<u>293,534.10</u>	<u>31,873,995.56</u>
4. Closing balance	<u>272,143,300.07</u>	<u>1,731,001.25</u>	<u>273,874,301.32</u>
II. Accumulated depreciation			
1. Opening balance	79,511,525.30	956,108.65	80,467,633.95
2. Increase during the current period	74,181,171.93	26,049.77	74,207,221.70
3. Decrease during the current period	<u>20,164,813.14</u>	<u>195,332.38</u>	<u>20,360,145.52</u>
4. Closing balance	<u>133,527,884.09</u>	<u>786,826.04</u>	<u>134,314,710.13</u>
III. Carrying amount			
1. Closing carrying amount	<u>138,615,415.98</u>	<u>944,175.21</u>	<u>139,559,591.19</u>
2. Opening carrying amount	<u>157,359,113.15</u>	<u>1,068,426.70</u>	<u>158,427,539.85</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

26. Intangible assets

(1). Information about intangible assets

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Land use rights	Patents	Software	Unfinished contract	Customer relationships	Total
I. Original book value						
1. Opening balance	2,451,378,126.02	644,286,691.29	344,277,693.65	169,921,119.24	244,325,834.78	3,854,189,464.98
2. Increase during the current period	-	194,905,362.92	30,880,516.50	-	-	225,785,879.42
(1) Acquisition	-	6,889,877.03	26,058,342.67	-	-	32,948,219.70
(2) Transferred from development expenditure	-	188,015,485.89	1,297,173.83	-	-	189,312,659.72
(3) Transferred from construction in progress	-	-	3,525,000.00	-	-	3,525,000.00
3. Decrease during the current period	-	3,458,805.80	2,854,437.39	-	-	6,313,243.19
(1) Disposal	-	3,458,805.80	2,854,437.39	-	-	6,313,243.19
4. Closing balance	2,451,378,126.02	835,733,248.41	372,303,772.76	169,921,119.24	244,325,834.78	4,073,662,101.21
II. Accumulated amortization						
1. Opening balance	393,269,528.30	320,376,951.68	300,141,696.61	169,921,119.24	163,283,589.84	1,346,992,885.67
2. Increase during the current period	50,988,495.44	75,462,453.42	47,340,896.91	-	27,014,081.64	200,805,927.41
(1) Provision	50,988,495.44	75,462,453.42	47,340,896.91	-	27,014,081.64	200,805,927.41
3. Decrease during the current period	-	3,451,534.01	397,119.13	-	-	3,848,653.14
(1) Disposal	-	3,451,534.01	397,119.13	-	-	3,848,653.14
4. Closing balance	444,258,023.74	392,387,871.09	347,085,474.39	169,921,119.24	190,297,671.48	1,543,950,159.94
III. Carrying amount						
1. Closing carrying amount	2,007,120,102.28	443,345,377.32	25,218,298.37	-	54,028,163.30	2,529,711,941.27
2. Opening carrying amount	2,058,108,597.72	323,909,739.61	44,135,997.04	-	81,042,244.94	2,507,196,579.31

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

26. Intangible assets (Continued)

(1). Information about intangible assets (Continued)

2020

Unit: Yuan Currency: RMB

Item	Land use rights	Patents	Software	Unfinished contract	Customer relationships	Total
I. Original book value						
1. Opening balance	2,460,811,798.92	435,973,623.12	312,220,509.63	169,921,119.24	244,325,834.78	3,623,252,885.69
2. Increase during the current period	2,437,379.15	208,313,068.17	32,234,230.89	—	—	242,984,678.21
(1) Acquisition	13,202.98	78,187.74	32,234,230.89	—	—	32,325,621.61
(2) Transferred from development expenditure	—	208,234,880.43	—	—	—	208,234,880.43
(3) Transferred from construction in progress	2,424,176.17	—	—	—	—	2,424,176.17
3. Decrease during the current period	11,871,052.05	—	177,046.87	—	—	12,048,098.92
(1) Disposal	11,871,052.05	—	—	—	—	11,871,052.05
(2) Other transfer to/out	—	—	177,046.87	—	—	177,046.87
4. Closing balance	2,451,378,126.02	644,286,691.29	344,277,693.65	169,921,119.24	244,325,834.78	3,854,189,464.98
II. Accumulated amortization						
1. Opening balance	344,949,858.92	296,515,686.09	258,987,766.47	169,921,119.24	136,069,658.20	1,206,444,088.92
2. Increase during the current period	51,186,500.63	23,861,265.59	41,330,977.01	—	27,213,931.64	143,592,674.87
(1) Provision	51,186,500.63	23,861,265.59	41,330,977.01	—	27,213,931.64	143,592,674.87
3. Decrease during the current period	2,866,831.25	—	177,046.87	—	—	3,043,878.12
(1) Disposal	2,866,831.25	—	—	—	—	2,866,831.25
(2) Other transfer to/out	—	—	177,046.87	—	—	177,046.87
4. Closing balance	393,269,528.30	320,376,951.68	300,141,696.61	169,921,119.24	163,283,589.84	1,346,992,885.67
III. Carrying amount						
1. Closing carrying amount	2,058,108,597.72	323,909,739.61	44,135,997.04	—	81,042,244.94	2,507,196,579.31
2. Opening carrying amount	2,115,861,940.00	139,457,937.03	53,232,743.16	—	108,256,176.58	2,416,808,796.77

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

26. Intangible assets (Continued)

(1). Information about intangible assets (Continued)

As at 31 December 2021 and 31 December 2020, the Group had no intangible assets with title restriction.

As at 31 December 2021, the intangible assets derived from internal research and development accounted for 7.48% of the closing carrying amount of intangible assets (31 December 2020: 8.31%).

As of the approval date of this financial statement, the Group has obtained the title certificates and completed the procedures for registration for the land use rights as at 31 December 2021.

(2). Information about land use rights for which a certificate of title has not been obtained

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

27. Development expenditure

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase during the period	Decrease during the period		Closing balance
		Internal development expenditure	Recognised as intangible assets	Transferred to profit or loss for the period	
Development expenditure	<u>139,208,125.21</u>	<u>720,842,161.43</u>	<u>189,312,659.72</u>	<u>457,487,423.81</u>	<u>213,250,203.11</u>

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase during the period	Decrease during the period		Closing balance
		Internal development expenditure	Recognised as intangible assets	Transferred to profit or loss for the period	
Development expenditure	<u>47,507,051.83</u>	<u>793,832,628.56</u>	<u>208,234,880.43</u>	<u>493,896,674.75</u>	<u>139,208,125.21</u>

The Group took the project defense as well as evaluation and review of expert team after the establishment of the development projects as the starting point for capitalization, and each R&D project was executed normally according to the progress of R&D milestones.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

28. Goodwill

(1). Original carrying amount of goodwill

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Name of investee or matters resulting in goodwill	Opening balance	Increase during the period Arising from business combination	Decrease during the period Disposal	Closing balance
CRSC CASCO	201,027,354.70	—	—	201,027,354.70
Changsha Architectural Design Institute Co., Ltd. (長沙市建築設計院 有限責任公司) ("Changsha Design Institute")	37,429,932.37	—	—	37,429,932.37
Zhengzhou Zhongyuan CRSC (Zhengzhou) Zhong'an Engineering Co., Ltd. (中國鐵路通 信信號(鄭州)中安工程有限公司) ("Zhengzhou Zhong'an")	30,525,980.16	—	—	30,525,980.16
CRSC Wanquan	27,673,509.65	—	—	27,673,509.65
CRSC First Construction Co., Ltd. (通號建設集團第一工程有限公司) ("First Construction")	3,865,524.80	—	—	3,865,524.80
Shanghai Deuta Electronic & Electrical Equipment Co., Ltd. (上 海德意達電子電器設備有限公司) ("Shanghai Deuta")	3,802,223.24	—	—	3,802,223.24
Others	669,345.89	—	—	669,345.89
	330,257.77	—	—	330,257.77
Total	305,324,128.58	—	—	305,324,128.58

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Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

28. Goodwill (Continued)

(1). Original carrying amount of goodwill (Continued)

2020

Unit: Yuan Currency: RMB

Name of investee or matters resulting in goodwill	Opening balance	Increase during the period Arising from business combination	Decrease during the period Disposal	Closing balance
CRSC CASCO	201,027,354.70	—	—	201,027,354.70
Changsha Architectural Design Institute Co., Ltd (長沙市建築設計院 有限責任公司) ("Changsha Design Institute")	37,429,932.37	—	—	37,429,932.37
Zhengzhou Zhongyuan	30,525,980.16	—	—	30,525,980.16
CRSC (Zhengzhou) Zhong'an Engineering Co., Ltd. (中國鐵路通 信信號(鄭州)中安工程有限公司) ("Zhengzhou Zhong'an")	27,673,509.65	—	—	27,673,509.65
CRSC Wanquan	3,865,524.80	—	—	3,865,524.80
CRSC First Construction Co., Ltd. (通號建設集團第一工程有限公司) ("First Construction")	3,802,223.24	—	—	3,802,223.24
Shanghai Deuta Electronic & Electrical Equipment Co., Ltd. (上 海德意達電子電器設備有限公司) ("Shanghai Deuta")	669,345.89	—	—	669,345.89
Others	330,257.77	—	—	330,257.77
Total	305,324,128.58	—	—	305,324,128.58

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

28. Goodwill (Continued)

(2). Provision for impairment of goodwill

☐ Applicable ☒ Not applicable

(3). Information about the asset group or combination of asset groups to which the goodwill belongs

☐ Applicable ☒ Not applicable

(4). Explain the process of goodwill impairment test, key parameters (e.g. forecast period growth rate, stable period growth rate, profit rate, discount rate, forecast period, etc. in case of present value of expected future cash flow, if applicable) and the recognition method of goodwill impairment loss

☒ Applicable ☐ Not applicable

The Group allocates the carrying amount of goodwill of CRSC CASCO to the asset group that can benefit from the synergies of the business combination, and performs impairment test on this basis. The recoverable amount of the asset group is determined based on the higher of its net fair value less costs of disposal and the present value of estimated future cash flows of the asset group; indicating that the asset group is not impaired if either of which is more than the carrying amount of the asset group.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

28. Goodwill (Continued)

- (4). Explain the process of goodwill impairment test, key parameters (e.g. forecast period growth rate, stable period growth rate, profit rate, discount rate, forecast period, etc. in case of present value of expected future cash flow, if applicable) and the recognition method of goodwill impairment loss (Continued)

The asset group of CRSC CASCO in this year is consistent with the asset group determined at the acquisition date and the goodwill impairment test in previous years. The determination of an asset group is based on whether the main cash inflow of the asset group is independent of other assets, as well as the way for the enterprise management to manage production and operation activities, and the decision-making method for the continued use or disposal of assets. In this year, CRSC CASCO confirmed that CRSC CASCO asset group portfolio was the smallest unit of asset groups with the combination of goodwill and its relevant assets based on the cash flow generated from goodwill. The cash flow generated from this asset group is independent of other assets or other asset groups, and the recoverable amount of the asset group is the present value of the estimated future cash flows of CRSC CASCO. The amounts of key assumptions of the asset group related to impairment tests were consistent with the Group's historical experience and external information. The key assumptions made by management in determining the present value of the cash flow forecast are as follows:

	31 December 2021	31 December 2020
Forecast period	5 years	5 years
Discount rate	15.04%	16.99%
Average growth rate of income in the forecast period	4.00%	5.00%

As at 31 December 2021 and 31 December 2020, the goodwill of the CRSC CASCO asset group has not been impaired and therefore no provision for impairment was required.

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Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

28. Goodwill (Continued)

- (4). Explain the process of goodwill impairment test, key parameters (e.g. forecast period growth rate, stable period growth rate, profit rate, discount rate, forecast period, etc. in case of present value of expected future cash flow, if applicable) and the recognition method of goodwill impairment loss (Continued)

The Group conducted impairment test on the allocation of goodwill resulting from the acquisition of CRSC Wanquan, Zhengzhou Zhong'an, Zhengzhou Zhongyuan, First Construction and Changsha Design Institute to the asset group. The combination of asset groups is the combination which the goodwill combined with smallest asset groups related to it, and the cash flow generated from this asset group was independent from other assets or other asset groups, which was consistent with the combination of asset groups determined at the date of purchase and during the impairment test for prior years. The recoverable amount was determined according to the present value of the expected future cash flows of those subsidiaries, and the expected future cash flows were determined according to the cash flow forecast based on the 5-year financial budget approved by the management. The pre-tax discount rates used in the cash flow forecast were 15.04%, 14.05%, 14.05%, 14.05% and 14.81% respectively (16.99%, 14.43%, 14.43%, 14.43% and 15.00% respectively in 2020). After testing, the management of the Group believes that the goodwill generated by the acquisition of CRSC Wanquan, Zhengzhou Zhong'an, Zhengzhou Zhongyuan, First Construction and Changsha Design Institute has not been impaired, so no provision for impairment is required.

Assumptions were used to calculate the present value of the expected future cash flows of CRSC CASCO, CRSC Wanquan, Zhengzhou Zhong'an, Zhengzhou Zhongyuan, First Construction and Changsha Design Institute as at 31 December 2021 and 31 December 2020. The following details the key assumptions made by the management in determining the cash flow forecast for goodwill impairment test:

Budget gross margin – The determination basis was to appropriately increase the average gross margin that was realized in the year before the budget year on the basis of the expected efficiency improvement and the expected market development.

Discount rate – The discount rate adopted was the pre-tax discount rate that reflects the specific risks of the relevant asset group.

The amounts of key assumptions of the asset group related to impairment tests were consistent with the Group's historical experience and external information.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

28. Goodwill (Continued)

(5). Impact of goodwill impairment test

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

29. Long-term prepaid expenses

☒ Applicable ☐ Not applicable

31 December 2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase during the period	Transferred from construction in progress	Amortisation for the period	Closing balance
Costs of improvements to fixed assets under operating leases	52,132,184.27	19,909,111.56	3,100,484.18	25,134,499.68	50,007,280.33
Total	52,132,184.27	19,909,111.56	3,100,484.18	25,134,499.68	50,007,280.33

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase during the period	Transferred from construction in progress	Amortisation for the period	Closing balance
Costs of improvements to fixed assets under operating leases	56,221,830.76	34,204,164.64	593,031.14	38,886,842.27	52,132,184.27
Total	56,221,830.76	34,204,164.64	593,031.14	38,886,842.27	52,132,184.27

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS

30. Deferred tax assets/liabilities

(1). Deferred tax assets not offset

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance		Opening balance	
	Deductible temporary difference	Deferred income tax assets	Deductible temporary difference	Deferred income tax assets
Provision for impairment of assets	1,203,514,009.49	264,049,363.06	950,141,971.66	199,951,041.14
Recognition of lease liabilities	162,800,666.72	29,294,300.98	–	–
Unrealized profits in intra-group transactions	117,051,523.38	28,262,880.84	164,914,639.63	41,228,659.90
Deferred income	160,098,912.68	26,988,834.46	148,076,033.16	26,008,505.94
Estimated liabilities	54,521,980.83	9,011,389.65	60,105,682.80	10,435,420.88
Unpaid employee benefits payable	48,020,478.00	9,521,795.02	43,180,336.63	8,507,615.61
Others	14,810,520.52	2,890,647.38	9,529,118.75	2,059,348.70
Total	<u>1,760,818,091.62</u>	<u>370,019,211.39</u>	<u>1,375,947,782.63</u>	<u>288,190,592.17</u>

(2). Deferred tax liabilities not offset

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance		Opening balance	
	Taxable temporary difference	Deferred income tax liabilities	Taxable temporary difference	Deferred income tax liabilities
Asset valuation appreciation of business combination not under common control	108,907,821.80	27,226,955.45	130,948,320.34	32,737,080.08
Recognition of right-of-use assets	181,494,017.69	29,039,042.83	–	–
Depreciation of fixed assets	46,562,831.77	6,984,424.77	56,201,327.99	8,430,199.21
Floating profit and loss in portion of positions of copper futures	179,100.00	26,865.00	3,013,450.00	452,017.50
Total	<u>337,143,771.26</u>	<u>63,277,288.05</u>	<u>190,163,098.33</u>	<u>41,619,296.79</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

30. Deferred tax assets/liabilities (Continued)

(3). Deferred tax assets or liabilities stated on a net basis after offset

☐ Applicable ☒ Not applicable

(4). Breakdown of unrecognised deferred tax assets

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Deductible temporary difference	33,392,975.11	26,539,688.22
Deductible loss	210,418,204.81	294,623,403.71
Total	243,811,179.92	321,163,091.93

(5). Deductible loss for which no deferred tax assets are recognised will become due in the following years

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Year	Closing balance	Opening balance	Remarks
2021	—	95,906,394.74	/
2022	100,020,681.17	100,020,681.17	/
2023	62,742,917.19	63,219,209.87	/
2024	13,098,485.21	13,098,485.21	/
2025	22,378,632.72	22,378,632.72	/
2026	12,177,488.52	—	/
Total	210,418,204.81	294,623,403.71	

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

31. Other non-current assets

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance			Opening balance		
	Gross carrying amount	Impairment provision	Carrying amount	Gross carrying amount	Impairment provision	Carrying amount
Project quality deposit	306,214,244.09	1,616,378.16	304,597,865.93	320,827,602.11	774,719.13	320,052,882.98
Prepayment for fixed assets	37,721,630.55	–	37,721,630.55	29,714,171.68	–	29,714,171.68
Construction period/PPP project payment without collection right	4,765,401,032.26	50,309,099.96	4,715,091,932.30	–	–	–
Less: Non-current assets due within one year	<u>-52,948,266.17</u>	<u>-33,345.57</u>	<u>-52,914,920.60</u>	<u>-146,078,975.30</u>	<u>-235,806.14</u>	<u>-145,843,169.16</u>
Total	<u>5,056,388,640.73</u>	<u>51,892,132.55</u>	<u>5,004,496,508.18</u>	<u>204,462,798.49</u>	<u>538,912.99</u>	<u>203,923,885.50</u>

Other explanation:

Changes in impairment provision for other non-current assets:

Unit: Yuan Currency: RMB

	2021	2020
Opening balance for the year	774,719.13	953,149.98
Transfer-in for the year	49,907,059.57	–
Provision for the year	1,880,385.46	459,241.59
Reversal for the year	<u>-636,686.04</u>	<u>-637,672.44</u>
Closing balance for the year	<u>51,925,478.12</u>	<u>774,719.13</u>

As at 31 December 2021, the Group's book balance of other non-current assets of RMB4,426,249,414.22 and book balance of receivables of RMB201,458,572.34 (31 December 2020: book balance of long-term receivables of RMB4,092,306,736.92), which were formed by the earning rights of the franchise pledged and all proceeds thereunder it, were used to obtain long-term loans of RMB2,336,791,575.20 (31 December 2020: RMB1,900,360,668.00). See Note VII. 16, 81 and 45 for details.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

32. Short-term borrowings

(1). Breakdown of short-term borrowings

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item		Closing balance	Opening balance
Pledged borrowings	Note 1	48,875,684.59	52,492,742.32
Credit borrowings		26,754,000.00	439,091,650.21
Total		75,629,684.59	491,584,392.53

Description of short-term borrowing classification:

Note 1: As at 31 December 2021, the book value of bank acceptance bills and commercial acceptance bills pledged by the Group were RMB8,875,684.59 and RMB40,000,000.00, respectively, which was used to obtain short-term loans of RMB48,875,684.59 (31 December 2020: the book value of bank acceptance bills and commercial acceptance bills pledged by the Group was RMB2,561,294.29 and RMB49,931,448.03, respectively, which was used to obtain short-term loans of RMB52,492,742.32. Please see note VII. 81).

As at 31 December 2021, the interest rate on the above borrowings ranged from 3.65% to 4.35% (As at 31 December 2020, such rate ranged from 2.50% to 4.35%).

As at 31 December 2021 and 31 December 2020, the Group had no unpaid overdue short-term borrowing balance payable.

(2). Overdue but unpaid short-term borrowings

☐ Applicable ☒ Not applicable

Major overdue but unpaid short-term borrowings:

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Financial liabilities held-for-trading

☐ Applicable ☒ Not applicable

34. Derivative financial liabilities

☐ Applicable ☒ Not applicable

35. Bills payable

(1). Breakdown of bills payable

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Type	Closing balance	Opening balance
Commercial acceptance	1,378,390,031.99	1,129,030,230.29
Bank acceptance	922,404,421.22	845,353,199.28
Total	2,300,794,453.21	1,974,383,429.57

As at 31 December 2021 and 31 December 2020, the Group had no unpaid overdue bills payable.

36. Accounts payable

(1). Breakdown of accounts payable

☒ Applicable ☐ Not applicable

Accounts payable bear no interest and are generally settled within 6 to 8 months.

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Within 1 year	38,334,305,236.02	37,368,575,551.13
1 to 2 years	4,640,322,277.65	4,429,474,511.68
2 to 3 years	2,070,833,881.05	1,706,698,954.74
Over 3 years	1,409,735,473.80	1,201,135,479.55
Total	46,455,196,868.52	44,705,884,497.10

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

36. Accounts payable (Continued)

(2). Major accounts payable aged over one year

☒ Applicable ☐ Not applicable

31 December 2021

Unit: Yuan Currency: RMB

Item	Closing balance	Reason for unsettlement or carrying forward
Total of the top five accounts payable aged over one year	647,646,905.46	Project payment and materials payment, not settled
Total	647,646,905.46	/

31 December 2020

Unit: Yuan Currency: RMB

Item	Closing balance	Reason for unsettlement or carrying forward
Total of the top five accounts payable aged over one year	429,242,346.54	Project payment and materials payment, not settled
Total	429,242,346.54	/

Other explanation

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

37. Receipts in advance

(1). Breakdown of advance receipts

☐ Applicable ☒ Not applicable

(2). Major advance receipts aged over one year

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

38. Contract liabilities

(1). Breakdown of contract liabilities

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Advances	1,761,791,337.26	1,864,042,735.13
Incomplete project, settled	5,476,554,721.50	4,968,123,883.98
Total	7,238,346,058.76	6,832,166,619.11

(2). Amount of and reason for significant change in carrying amount within the reporting period

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

39. Employee benefits payable

(1). Breakdown of employee benefits payable

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
I. Short-term benefits	529,364,508.45	4,894,522,660.26	4,841,475,545.46	582,411,623.25
II. Post-employment benefits (defined contribution plan)	22,799,554.90	659,077,523.00	651,506,111.95	30,370,965.95
III. Dismissal benefits	50,396.79	1,960,064.64	1,960,064.64	50,396.79
IV. Other benefits due within one year	47,921,000.00	41,951,000.00	45,103,000.00	44,769,000.00
Total	<u>600,135,460.14</u>	<u>5,597,511,247.90</u>	<u>5,540,044,722.05</u>	<u>657,601,985.99</u>

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
I. Short-term benefits	508,911,354.82	4,626,539,847.77	4,606,086,694.14	529,364,508.45
II. Post-employment benefits (defined contribution plan)	25,178,087.48	378,823,608.33	381,202,140.91	22,799,554.90
III. Dismissal benefits	50,396.79	4,598,187.52	4,598,187.52	50,396.79
IV. Other benefits due within one year	53,209,000.00	40,303,000.00	45,591,000.00	47,921,000.00
Total	<u>587,348,839.09</u>	<u>5,050,264,643.62</u>	<u>5,037,478,022.57</u>	<u>600,135,460.14</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

39. Employee benefits payable (Continued)

(2). Breakdown of short-term remunerations

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
I. Wages, bonuses, allowances and subsidies	82,657,923.75	3,567,987,999.28	3,539,572,170.49	111,073,752.54
II. Employee welfare benefits	237,875,376.84	318,522,343.22	305,954,051.22	250,443,668.84
III. Social insurance premiums	55,108,900.96	366,060,138.66	361,754,616.23	59,414,423.39
Including: Medical insurance premiums	53,670,433.98	343,002,652.05	338,008,918.38	58,664,167.65
Industrial injury insurance premiums	538,972.72	15,669,457.04	15,832,736.03	375,693.73
Maternity insurance premiums	899,494.26	7,388,029.57	7,912,961.82	374,562.01
IV. Housing provident fund	3,283,173.65	358,512,245.25	359,565,445.40	2,229,973.50
V. Labor union funds and staff education funds	150,197,946.72	103,927,623.92	95,267,619.38	158,857,951.26
VI. Other short-term remunerations	241,186.53	179,512,309.93	179,361,642.74	391,853.72
Total	<u>529,364,508.45</u>	<u>4,894,522,660.26</u>	<u>4,841,475,545.46</u>	<u>582,411,623.25</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

39. Employee benefits payable (Continued)

(2). Breakdown of short-term remunerations (Continued)

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
I. Wages, bonuses, allowances and subsidies	126,227,908.50	3,412,542,203.13	3,456,112,187.88	82,657,923.75
II. Employee welfare benefits	186,930,166.84	287,688,892.83	236,743,682.83	237,875,376.84
III. Social insurance premiums	56,448,781.27	310,136,874.99	311,476,755.30	55,108,900.96
Including: Medical insurance premiums	54,814,788.75	292,745,887.72	293,890,242.49	53,670,433.98
Industrial injury insurance premiums	625,117.75	7,147,058.47	7,233,203.50	538,972.72
Maternity insurance premiums	1,008,874.77	10,243,928.80	10,353,309.31	899,494.26
IV. Housing provident fund	992,638.99	340,480,395.11	338,189,860.45	3,283,173.65
V. Labor union funds and staff education funds	138,116,520.67	106,968,866.90	94,887,440.85	150,197,946.72
VI. Other short-term remunerations	195,338.55	168,722,614.81	168,676,766.83	241,186.53
Total	<u>508,911,354.82</u>	<u>4,626,539,847.77</u>	<u>4,606,086,694.14</u>	<u>529,364,508.45</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

39. Employee benefits payable (Continued)

(3). Breakdown of defined contribution plan

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
1. Basic pension insurance	11,201,815.15	479,528,601.79	474,146,672.56	16,583,744.38
2. Unemployment insurance	674,629.12	17,445,471.62	17,533,801.31	586,299.43
3. Enterprise annuity payment	10,923,110.63	162,103,449.59	159,825,638.08	13,200,922.14
Total	<u>22,799,554.90</u>	<u>659,077,523.00</u>	<u>651,506,111.95</u>	<u>30,370,965.95</u>

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
1. Basic pension insurance	14,912,018.30	222,711,237.15	226,421,440.30	11,201,815.15
2. Unemployment insurance	771,114.99	8,876,145.74	8,972,631.61	674,629.12
3. Enterprise annuity payment	9,494,954.19	147,236,225.44	145,808,069.00	10,923,110.63
Total	<u>25,178,087.48</u>	<u>378,823,608.33</u>	<u>381,202,140.91</u>	<u>22,799,554.90</u>

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

40. Taxes payable

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Value-added tax	500,379,362.36	446,934,275.58
Enterprise income tax	292,286,097.41	370,343,712.56
Individual income tax	72,253,279.61	72,934,389.07
Urban maintenance and construction tax	16,469,037.53	18,191,692.40
Educational surcharge	12,494,768.05	10,905,841.34
Land use tax and property tax	3,268,498.66	3,526,376.91
Others	2,491,627.79	7,751,167.71
Total	<u>899,642,671.41</u>	<u>930,587,455.57</u>

41. Other payables

Presentation of item

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Other payables	1,063,620,223.11	1,979,340,519.78
Total	<u>1,063,620,223.11</u>	<u>1,979,340,519.78</u>

Other explanation:

☐ Applicable ☒ Not applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

41. Other payables (Continued)

Interest payable

(1). Classified presentation

☐ Applicable ☒ Not applicable

Dividends payable

(2). Classified presentation

☐ Applicable ☒ Not applicable

Other payables

(1). Breakdown of other payables by nature

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Deposits and margins	528,577,321.17	1,178,444,909.70
Current payments	315,903,956.33	575,169,985.25
Acquisition of fixed assets	172,688,933.51	184,291,801.72
Public facility maintenance funds	18,891,114.03	17,800,854.64
Others	27,558,898.07	23,632,968.47
Total	1,063,620,223.11	1,979,340,519.78

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

41. Other payables (Continued)

Other payables (Continued)

(2). Other major accounts payable aged over one year

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Closing balance	Reason for unsettlement or carrying forward
Total of the top five other accounts payable aged over one year	78,208,306.64	Current payments, not settled
Total	78,208,306.64	/

2020

Unit: Yuan Currency: RMB

Item	Closing balance	Reason for unsettlement or carrying forward
Total of the top five other accounts payable aged over one year	84,342,526.58	Current payments, not settled
Total	84,342,526.58	/

Other explanation:

☒ Applicable ☐ Not applicable

Aging	31 December 2021	31 December 2020
Within 1 year	863,525,097.36	1,673,136,246.93
1 to 2 years	95,618,390.96	245,206,795.40
2 to 3 years	62,825,011.45	13,391,925.65
Over 3 years	41,651,723.34	47,605,551.80
Total	1,063,620,223.11	1,979,340,519.78

42. Liabilities held for sale

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

43. Non-current liabilities due within one year

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Long-term payables due within one year	37,438,695.03	42,421,794.65
Lease liabilities due within one year	65,052,808.37	44,953,894.42
Long-term borrowings due within one year	226,069,092.80	128,719,092.80
Total	328,560,596.20	216,094,781.87

44. Other current liabilities

Other current liabilities

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Estimated liabilities	20,990,155.96	20,230,658.56
Output VAT to be transferred	455,083,428.53	318,084,860.46
Total	476,073,584.49	338,315,519.02

Increase or decrease in short-term bonds payable:

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

45. Long-term borrowings

(1). Breakdown of long-term borrowings

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Pledged borrowings (Note 1)	2,336,791,575.20	1,900,360,668.00
Guaranteed borrowings	—	224,000,000.00
Credit borrowings (Note 2)	1,017,000,000.00	—
Less: Long-term borrowings due within one year	-226,069,092.80	-128,719,092.80
Total	3,127,722,482.40	1,995,641,575.20

Description of long-term borrowing classification:

Note 1: As at 31 December 2021, the Group's book balance of other non-current assets of RMB4,426,249,414.22 and book balance of accounts receivable of RMB201,458,572.34 (31 December 2020: book balance of long-term receivables of RMB4,092,306,736.92) derived from the pledged income right in and to the franchise and all proceeds thereunder were used to obtain long-term loans of RMB2,336,791,575.20 (31 December 2020: RMB1,900,360,668.00). For details, please see notes VII. 16, 31 and 81.

Note 2: As at 31 December 2021, the Group's credit borrowings amounted to RMB800,000,000.00 and RMB217,000,000.00 were the credit borrowings from the Export-Import Bank of China by the head office of the Company and the credit borrowings from the Bank of Chengdu were guaranteed by the Company's third-tier subsidiary First Construction for its subsidiary Yibin Tonghao Hongshun Project Management Co., Ltd., respectively.

As at 31 December 2021, the long-term borrowing balance due within one to five years was RMB2,346,506,371.20, and the long-term borrowing balance due over five years was RMB781,216,111.20. (As at 31 December 2020, the long-term borrowing balance due within one to five years was RMB764,900,000.00, and the long-term borrowing balance due over five years was RMB1,230,741,575.20.)

The above borrowings are bank borrowings and other borrowings made with variable annual interest rates ranging from 2.70% to 5.39%.

Other explanations, including interest rate range:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

46. Bonds payable

(1). Bonds payable

☐ Applicable ☒ Not applicable

(2). Increase or decrease in bonds payable (excluding preferred shares, perpetual bonds and other financial instruments classified as financial liabilities)

☐ Applicable ☒ Not applicable

(3). Explanation about the conditions and timing of conversion of convertible corporate bonds

☐ Applicable ☒ Not applicable

(4). Explanation about other financial instruments classified as financial liabilities

Basic information on preferred shares, perpetual bonds and other financial instruments that are outstanding at the end of the period

☐ Applicable ☒ Not applicable

Statement on changes in preferred shares, perpetual bonds and other financial instruments that are outstanding at the end of the period

☐ Applicable ☒ Not applicable

Explanation about basis for classifying other financial instruments as financial liabilities:

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

47. Lease liabilities

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Lease liabilities	162,800,666.72	125,631,000.71
Less: lease liabilities due within one year	65,052,808.37	44,953,894.42
Total	97,747,858.35	80,677,106.29

Other explanation:

The book value of lease liabilities and its changes for the year are as follows:

Unit: Yuan Currency: RMB

	Closing balance	Opening balance
Opening balance for the year	125,631,000.71	147,949,221.53
Increase for the year	106,093,251.14	64,708,268.93
Interest expense	8,797,303.53	7,800,474.53
Decrease for the year – modification of lease	-476,775.63	-11,190,314.37
Decrease for the year – lease payments	-77,244,113.03	-83,636,649.91
Closing balance for the year	162,800,666.72	125,631,000.71

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Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

48. Long-term payables

Presentation of item

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Long-term payables	62,593,424.21	77,846,656.30
Total	62,593,424.21	77,846,656.30

Other explanation:

☐ Applicable ☒ Not applicable

Long-term payables

(1). Breakdown of long-term payables by nature

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Closing balance
Construction quality guarantee deposits	100,032,119.24	120,268,450.95
Less: long-term payables due within one year	-37,438,695.03	-42,421,794.65
Total	62,593,424.21	77,846,656.30

Special payables

(2). Breakdown of special payables by nature

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee benefits payable

✓ Applicable ☐ Not applicable

(1). Statement on long-term employee benefits payable

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Net liabilities under defined benefit plans (supplemental retirement benefit)	554,500,000.00	599,609,000.00
Long-term dismissal benefits (internal retirement plan)	21,044,000.00	22,396,000.00
Less: Remunerations payable within one year	44,769,000.00	47,921,000.00
Total	530,775,000.00	574,084,000.00

The Group pays supplementary retirement benefits for its employees in Mainland China who retired on or before 31 December 2012 in addition to the contributions made to statutory insurance plans. Such supplementary retirement benefits are defined benefit plans. These plans include monthly pension benefits, medical reimbursement benefits, annual medical insurance premiums, and funeral benefits for employees who are retired. The Group's obligations in respect of supplementary retirement benefits are determined by estimating the amount of obligations that the Group is committed to paying to the employees after their retirement using actuarial techniques. The amount of the subsidy is determined based on the period during which the employee serves the Group and the relevant subsidy and welfare policy.

Some employees of the Group have gone through internal retirement. The internal retirement payables are accrued in the relevant legal entities within the Group during the period in which the Group has entered into relevant agreements/documents with relevant employees or informing individual employees of the specific internal retirement terms. The specific terms of internal retirement vary depending on factors such as the position of the relevant employee, length of service and the region of service.

The plan is subject to interest rate risk, risk of changes in life expectancy of pension beneficiaries, and stock market risks.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee benefits payable (Continued)

(1). Statement on long-term employee benefits payable (Continued)

Such supplementary retirement benefits are discounted with the discount rate which determined by referring to the yield rate of the PRC treasury bonds with the maturity date similar to the period of the obligations assumed by the Group at the end of the Reporting Period. The service cost and net interest income and expenditures from the supplementary retirement benefits are recorded in the profit or loss for the current period when incurred, while the changes in liabilities from the remeasurement of supplementary retirement benefits are recorded in other comprehensive income.

No planned asset has been established for the defined benefit plan by the Group as at 31 December 2021 and 31 December 2020.

The actuarial method and key assumption adopted for the calculation of the Group's supplementary retirement benefits and internal retirement payables in each year/period are as follows:

Name of the independent actuary:	Towers Watson Consulting (Shenzhen) Co., Ltd. (韜睿惠悅管理諮詢(深圳)有限公司), Wu Haichuan;
Qualifications:	Member of the Society of Actuaries, member of the American Academy of Actuaries, fellow of China Association of Actuaries and Chartered Enterprise Risk Analyst;
Actuarial method:	The Group has adopted expected accumulated benefit unit method in its annual actuarial valuation, and the rolling method in its interim actuarial valuation;
Key assumption:	The average annual growth rate of medical expenses, the annual growth rate of unreimbursed funeral costs, the annual growth rate of supplementary pension benefits for retired personnel, the annual growth rate of testament grant benefits, the annual growth rate of benefits for internal retired personnel and the death rate remain unchanged.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee benefits payable (Continued)

(1). Statement on long-term employee benefits payable (Continued)

The following table shows the main actuarial assumptions used on the balance sheet date:

	31 December 2021	31 December 2020
Discount rate	3.00%	3.25%
Mortality rate	Average mortality rate of residents in Mainland China	Average mortality rate of residents in Mainland China
Average life expectancy	16	16
Average annual growth rate of medical expenses	8.00%	8.00%
Growth rate of supplementary pension benefits for retired personnel	3.00%	3.00%
Annual growth rate of benefits for internal retired personnel	4.50%	4.50%

Relevant plans recognised in profit or loss are as follows:

Unit: Yuan Currency: RMB

	2021	2020
Historical service costs included in management expenses (Note)	—	-26,631,000.00
Actuarial loss/(profit) included in management expenses	4,090,000.00	-588,000.00
Net interests included in management expenses	19,393,000.00	22,202,000.00
	23,483,000.00	-5,017,000.00

Note: In 2020, the local government of Shenyang Railway Signal Co., Ltd., the Company's three-tier subsidiary, has assumed the funds for social management services for retirees of state-owned enterprises. Therefore, Shenyang Railway Signal Co., Ltd. cancelled the expenses beyond the scope of overall planning for retirees and reversed the past service costs included in management expenses totaling RMB26,631,000.00.

NOTES TO FINANCIAL STATEMENTS

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee benefits payable (Continued)

(1). Statement on long-term employee benefits payable (Continued)

Relevant plans recognised in other comprehensive income are as follows:

Unit: Yuan Currency: RMB

	2021	2020
Actuarial loss due to changes in financial assumptions	15,466,000.00	—
Actuarial profit due to empirical differences	-40,307,000.00	-40,842,000.00
	-24,841,000.00	-40,842,000.00

(2). Changes in defined benefit plans

Present value of obligations under defined benefit plans:

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
I. Opening balance	622,005,000.00	713,455,000.00
II. The defined benefit cost included in the current profit and loss	23,483,000.00	-5,017,000.00
1. Current service costs	—	-26,631,000.00
2. Past service costs	—	—
3. Actuarial loss/(profit) (losses indicated by “-”)	4,090,000.00	-588,000.00
4. Net interests	19,393,000.00	22,202,000.00
III. The defined benefits cost included in other comprehensive income	-24,841,000.00	-40,842,000.00
1. Actuarial gains (losses indicated by “-”)	-24,841,000.00	-40,842,000.00
IV. Other changes	-45,103,000.00	-45,591,000.00
1. Consideration paid at settlement	—	—
2. Benefits paid	-45,103,000.00	-45,591,000.00
V. Closing balance	575,544,000.00	622,005,000.00

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Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee benefits payable (Continued)

(2). Changes in defined benefit plans (Continued)

The following table provides a quantitative sensitivity analysis on the key assumptions used:

2021

Unit: Yuan Currency: RMB

		Increase/ (decrease) in obligations		Increase/ (decrease) in obligations
	Increase (%)	under defined benefit plans	Decrease (%)	under defined benefit plans
Discount rate	0.25	-15,584,000.00	0.25	16,344,000.00
Average growth rate of medical expenses	1.00	27,262,000.00	1.00	-22,711,000.00

2020

Unit: Yuan Currency: RMB

		Increase/ (decrease) in obligations		Increase/ (decrease) in obligations
	Increase (%)	under defined benefit plans	Decrease (%)	under defined benefit plans
Discount rate	0.25	-16,957,000.00	0.25	17,797,000.00
Average growth rate of medical expenses	1.00	31,842,000.00	1.00	-26,477,000.00

The above sensitivity analysis is to infer the impact of reasonable change occurring to the key assumptions on the balance sheet date on the obligations under the defined benefit plans. Sensitivity analysis is made on the basis of changes in significant assumptions while other assumptions remain unchanged. Since changes in assumptions are often not isolated from each other, sensitivity analysis might not represent actual changes in the obligations under defined benefit plans.

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee benefits payable (Continued)

(2). Changes in defined benefit plans (Continued)

Plan assets:

☐ Applicable ☒ Not applicable

Net liabilities (net assets) under defined benefit plans:

☐ Applicable ☒ Not applicable

Explanation about impacts of the details of the defined benefit plan and its associated risks on the Company's future cash flow, timing, and uncertainty:

☐ Applicable ☒ Not applicable

Explanation about key actuarial assumptions and sensitivity analysis results of defined benefit plans

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

50. Estimated liabilities

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening Balance	Closing balance	Cause of formation
Product quality guarantee	50,831,899.20	44,409,443.04	Note
Pending onerous contracts	10,847,823.53	10,112,537.79	/
Less: Estimated liabilities due within one year	-20,230,658.56	-20,990,155.96	/
Total	41,449,064.17	33,531,824.87	/

2020

Unit: Yuan Currency: RMB

Item	Opening balance for the year	Closing balance for the year	Cause of formation
Product quality guarantee	79,538,007.83	50,831,899.20	Note
Pending onerous contracts	12,651,022.35	10,847,823.53	/
Less: Estimated liabilities due within one year	-18,664,590.73	-20,230,658.56	/
Total	73,524,439.45	41,449,064.17	/

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

50. Estimated liabilities (Continued)

2021

Unit: Yuan Currency: RMB

	2021 Product quality guarantee deposits ^(note)	2021 Pending onerous contracts and others	2021 Total
Opening balance for the year	50,831,899.20	10,847,823.53	61,679,722.73
Increase for the year	16,828,259.84	—	16,828,259.84
Reversal for the year	-375,811.31	-735,285.74	-1,111,097.05
Use for the year	-22,874,904.69	—	-22,874,904.69
Closing balance for the year	44,409,443.04	10,112,537.79	54,521,980.83
Including: estimated liabilities due within one year	<u>-20,990,155.96</u>	<u>—</u>	<u>-20,990,155.96</u>
	<u>23,419,287.08</u>	<u>10,112,537.79</u>	<u>33,531,824.87</u>

2020

Unit: Yuan Currency: RMB

	2020 Product quality guarantee deposits ^(note)	2020 Pending onerous contracts and others	2020 Total
Opening balance for the year	79,538,007.83	12,651,022.35	92,189,030.18
Increase for the year	16,161,265.23	—	16,161,265.23
Reversal for the year	-15,213,564.95	-1,803,198.82	-17,016,763.77
Use for the year	-29,653,808.91	—	-29,653,808.91
Closing balance for the year	50,831,899.20	10,847,823.53	61,679,722.73
Including: estimated liabilities due within one year	<u>-20,230,658.56</u>	<u>—</u>	<u>-20,230,658.56</u>
	<u>30,601,240.64</u>	<u>10,847,823.53</u>	<u>41,449,064.17</u>

Note: The Group estimates the quality guarantee deposits according to the sales revenue and the estimated warranty rate taking into account the different stages of the product life cycle of different products. The estimated rate of warranty occurrence is based on the historical experience data of the actual occurrence of warranty for the same type of products, and may be estimated according to significant changes due to the different stages of product life cycle of different products and similar products. As at the balance sheet date, the quality guarantee deposits that the Group expects to incur in the future under the above method shall be included into the profit or loss for the period.

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

51. Deferred income

Deferred income situation

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Government grants related to assets	73,362,003.10	–	3,098,462.68	70,263,540.42
Government grants related to income	77,572,429.65	63,938,079.36	51,675,136.75	89,835,372.26
Total	<u>150,934,432.75</u>	<u>63,938,079.36</u>	<u>54,773,599.43</u>	<u>160,098,912.68</u>

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Government grants related to assets	74,951,361.26	537,357.00	2,126,715.16	73,362,003.10
Government grants related to income	80,869,491.66	35,911,733.59	39,208,795.60	77,572,429.65
Total	<u>155,820,852.92</u>	<u>36,449,090.59</u>	<u>41,335,510.76</u>	<u>150,934,432.75</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

51. Deferred income (Continued)

Item related to government grants:

☒ Applicable ☐ Not applicable

As at 31 December 2021, liabilities related to government grants were as follows:

Unit: Yuan Currency: RMB

Liability item	Opening balance	Additions of grants for the period	Included in non-operating income for the period	Included in other income for the period	Closing balance	Related to assets/income
Demolition grants	67,630,879.80	–	-1,808,959.03	–	65,821,920.77	Assets
Research grants	77,572,429.65	63,938,079.36	–	-51,675,136.75	89,835,372.26	Income
Others	5,731,123.30	–	–	-1,289,503.65	4,441,619.65	Assets

As at 31 December 2020, liabilities related to government grants were as follows:

Unit: Yuan Currency: RMB

Liability item	Opening balance	Additions of grants for the period	Included in non-operating income for the period	Included in other income for the period	Closing balance	Related to assets/income
Demolition grants	69,439,838.83	–	-1,808,959.03	–	67,630,879.80	Assets
Industrial development fund	15,200,000.00	–	–	-15,200,000.00	–	Income
Research grants	65,669,491.66	35,911,733.59	–	-24,008,795.60	77,572,429.65	Income
Others	5,511,522.43	537,357.00	–	-317,756.13	5,731,123.30	Assets

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

52. Other non-current liabilities

☐ Applicable ☒ Not applicable

53. Share capital

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

			Changes for the period (+,-)			
			Conversion of provident fund into shares	Others	Subtotal	Closing balance
Opening balance	New shares	Bonus shares				
CRSC Group	6,604,426,424.00	-	-	81,643,347.51	-	6,686,069,771.51
China National Machinery Industry Corporation (中國機械工業集團有限公司)	63,507,192.00	-	-	-	-	63,507,192.00
China Chengtong Holdings Group Limited (中國誠通控股集團有限公司)	63,507,192.00	-	-	-	-	63,507,192.00
China Guoxin Holding Co., Ltd. (中國國新控股有限責任公司)	63,507,192.00	-	-	-	-	63,507,192.00
CICC Jiacheng Investment Management Co., Ltd. (中金佳成投資管理有限公司)	26,070,000.00	-	-	-	-	26,070,000.00
National Council for Social Security Fund (全國社保基金理事會)	178,982,000.00	-	-	-	-	178,982,000.00
Overseas-listed H shares	1,789,819,000.00	-	-	-81,643,347.51	-	1,708,175,652.49
Domestic-listed A shares	1,800,000,000.00	-	-	-	-	1,800,000,000.00
Total number of shares	10,589,819,000.00	-	-	-	-	10,589,819,000.00

2020

Unit: Yuan Currency: RMB

			Changes for the period (+,-)			
			Conversion of provident fund into shares	Others	Subtotal	Closing balance
Opening balance	New shares	Bonus shares				
CRSC Group	6,604,426,424.00	-	-	-	-	6,604,426,424.00
China National Machinery Industry Corporation (中國機械工業集團有限公司)	63,507,192.00	-	-	-	-	63,507,192.00
China Chengtong Holdings Group Limited (中國誠通控股集團有限公司)	63,507,192.00	-	-	-	-	63,507,192.00
China Guoxin Holding Co., Ltd. (中國國新控股有限責任公司)	63,507,192.00	-	-	-	-	63,507,192.00
CICC Jiacheng Investment Management Co., Ltd. (中金佳成投資管理有限公司)	26,070,000.00	-	-	-	-	26,070,000.00
National Council for Social Security Fund (全國社保基金理事會)	178,982,000.00	-	-	-	-	178,982,000.00
Overseas-listed H shares	1,789,819,000.00	-	-	-	-	1,789,819,000.00
Domestic-listed A shares	1,800,000,000.00	-	-	-	-	1,800,000,000.00
Total number of shares	10,589,819,000.00	-	-	-	-	10,589,819,000.00

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Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

54. Other equity instruments

- (1). Basic information on preferred shares, perpetual bonds and other financial instruments that are outstanding at the end of the period

☒ Applicable ☐ Not applicable

As at 31 December 2021, the details of the Group's outstanding perpetual bonds are as follows:

	Issue date	Accounting classification	Interest rate	Issue price	Number	Offering amount	Cost	Carrying amount	Expiry date or renewal status	Condition of conversion	Transformation status
2021 First Tranche of Medium-term Notes of China Railway Signal & Communication Corporation Limited	15 December 2021	Perpetual bonds	3.32%	100.00	28,000,000	2,800,000,000.00	-3,064,339.62	2,796,935,660.38	Unexpired	None	No

The Group issued 2021 First Tranche of Medium-term Notes of China Railway Signal & Communication Corporation Limited in the amount of RMB2,800,000,000.00 on 15 December 2021. The net proceeds raised after deducting the underwriting expenses of RMB3,064,339.62 for the Medium-term Notes was RMB2,796,935,660.38. The Group recorded the Medium-term Notes with its net proceeds from the issuance net off underwriting expenses and included in other equity instruments. The initial investment period is 3 years, and the interest rate of the initial investment period is fixed at 3.32%. The Group has the right to choose to defer the interest payment. After the expiration, the Group has the right to choose renewal; the reset rate during the renewal period jumped 300 basis points based on the annual interest rate applicable to the previous investment period.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

54. Other equity instruments (Continued)

(1). Basic information on preferred shares, perpetual bonds and other financial instruments that are outstanding at the end of the period (Continued)

As at 31 December 2020, the details of the Group's outstanding perpetual bonds are as follows:

	Issue date	Accounting classification	Interest rate	Issue price	Number	Amount	Cost	Carrying amount	Expiry date or renewal status	Condition of conversion	Transformation status
Bridge-Hengyi 622 Collective Fund Trust Plan	3 August 2018	Perpetual bonds	6.70%	100.00	28,000,000	2,800,000,000.00	-	2,800,000,000.00	Expired on 3 August 2021	None	No

On 3 August 2018, Bridge Trust Co., Ltd. (百瑞信託有限責任公司) made a renewable debt investment to the Company using the fund under the trust plan, with an investment amount of RMB2,800,000,000.00. The initial investment period is 3 years, and the interest rate of the initial investment period is fixed at 6.7% per year. The Group has the right to choose to defer the interest payment. After the expiration, the Group has the right to choose renewal; the reset rate during the renewal period jumped 300 basis points based on the annual interest rate applicable to the previous investment period. In August 2021, the Group repaid the perpetual bonds of RMB2,800,000,000.00.

(2). Statement on changes in preferred shares, perpetual bonds and other financial instruments that are outstanding at the end of the period

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Outstanding financial instruments	Beginning of the period	Increase for the period	Decrease for the period	End of the period
Bridge-Hengyi 622 Collective Fund Trust Plan	2,800,000,000.00	-	-2,800,000,000.00	-
2021 First Tranche of Medium-term Notes of China Railway Signal & Communication Corporation Limited	-	2,796,935,660.38	-	2,796,935,660.38
Total	2,800,000,000.00	2,796,935,660.38	-2,800,000,000.00	2,796,935,660.38

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

54. Other equity instruments (Continued)

(2). Statement on changes in preferred shares, perpetual bonds and other financial instruments that are outstanding at the end of the period (Continued)

2020

Unit: Yuan Currency: RMB

	Balance at the beginning of the year	Increase for the year	Decrease for the year	Balance at the end of the year
2020				
Bridge-Hengyi 622 Collective Fund				
Trust Plan	2,800,000,000.00	—	—	2,800,000,000.00

The specific information of the perpetual bonds attributable to other equity holders is as follows:

Unit: Yuan Currency: RMB

	31 December 2021
Equity attributable to shareholders of the parent	
Equity attributable to ordinary shareholders of the parent	40,757,717,093.26
Equity attributable to other equity holders of the parent	2,796,935,660.38
Including: Dividends distributed during the period	118,143,333.33
Accumulated retained dividends	—

Changes (increase or decrease) during the period, reasons for such changes and basis for relevant accounting treatment of other equity instruments:

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

55. Capital reserve

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Capital premium (share capital premium)	15,538,873,267.94	—	—	15,538,873,267.94
Fiscal appropriation	8,670,000.00	—	—	8,670,000.00
Acquisition of minority interest of subsidiaries	9,240,638.86	—	—	9,240,638.86
Adjustment on long-term equity under interest method	856,743.11	—	196,056.36	660,686.75
Others	406,663,539.95	—	—	406,663,539.95
Total	<u>15,964,304,189.86</u>	<u>—</u>	<u>196,056.36</u>	<u>15,964,108,133.50</u>

56. Treasury stocks

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

57. Other comprehensive income

✓ Applicable □ Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Amount before income tax during the period	Amount for the period		Less: Income tax expenses	Amount attributable to the parent company after tax	Amount attributable to the minority shareholders after tax	Closing balance
			Less: Amount transferred to profit or loss from other comprehensive income	Less: Amount transferred to retained earnings from other comprehensive income				
I. Other comprehensive income not reclassified into profit or loss	-233,062,000.00	24,841,000.00	-	-	-	24,841,000.00	-	-208,221,000.00
Including: Changes of the re-measurement of defined benefit plan	-233,062,000.00	24,841,000.00	-	-	-	24,841,000.00	-	-208,221,000.00
II. Other comprehensive income reclassified to profit or loss	25,371,392.87	-786,045.55	-	-	-	-786,045.55	-	24,585,347.32
Including: Other comprehensive income that may be transferred to profit or loss under equity method	-	-	-	-	-	-	-	-
Provision for credit impairment of receivables financing	4,099,803.48	592,617.70	-	-	-	592,617.70	-	4,692,421.18
Hedging reserve arising from cash flows	21,772,817.52	-1,074,832.24	-	-	-	-1,074,832.24	-	20,697,985.28
Differences on translation of foreign currency financial statements	-501,228.13	-303,831.01	-	-	-	-303,831.01	-	-805,059.14
Total other comprehensive income	-207,690,607.13	24,054,954.45	-	-	-	24,054,954.45	-	-183,635,652.68

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

58. Special reserve

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Safety production expenses	306,215,150.31	383,119,362.80	421,454,163.98	267,880,349.13
Total	306,215,150.31	383,119,362.80	421,454,163.98	267,880,349.13

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Safety production expenses	412,165,921.09	360,781,827.98	466,732,598.76	306,215,150.31
Total	412,165,921.09	360,781,827.98	466,732,598.76	306,215,150.31

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

59. Surplus reserve

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Statutory surplus reserve	1,597,958,257.98	213,366,436.47	—	1,811,324,694.45
Total	1,597,958,257.98	213,366,436.47	—	1,811,324,694.45

2020

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Statutory surplus reserve	1,342,479,759.71	255,478,498.27	—	1,597,958,257.98
Total	1,342,479,759.71	255,478,498.27	—	1,597,958,257.98

According to the Company Law and the Articles of Association of the Company, the Company shall withdraw statutory surplus reserve fund at 10% of its net profit. If the accumulative amount of the statutory surplus reserve is more than 50% of the Company's registered capital, the statutory surplus reserve fund shall no longer be withdrawn.

Upon approval, the discretionary surplus reserve can be used to make up for losses of the preceding year or increase share capital.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

60. Retained earnings

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Current period	Last period
Retained earnings at the end of last period before adjustment	11,512,862,059.38	10,283,609,709.60
Total amount of retained earnings at the beginning of the adjustment period (increase +, decrease -)	—	—
Retained earnings at the beginning of the period after adjustment	11,512,862,059.38	10,283,609,709.60
Add: Net profits attributable to shareholders of the parent during the current period	3,274,672,689.28	3,819,046,319.02
Less: Appropriation to statutory surplus reserve	213,366,436.47	255,478,498.27
Cash dividends payable	2,117,963,800.00	2,117,963,800.00
Dividends paid to other equity holders	118,143,333.33	190,726,666.66
Appropriation to employee reward and welfare fund	29,840,610.00	25,579,050.00
Others	—	45,954.31
Retained earnings at the end of the period	12,308,220,568.86	11,512,862,059.38

Note 1: In accordance with the resolution at the 2020 annual general meeting of Company, on 11 June 2021, the Company declared a special dividend for the remaining distributable profits as of 31 December 2020, and distributed cash dividend of RMB0.20 per share (including tax), with total tax-inclusive amount of RMB2,117,963,800.00.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

61. Revenue and costs of sales

(1). Revenue and costs of sales

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period		Amount incurred during the previous period	
	Revenue	Cost	Revenue	Cost
Principal operations	37,995,464,971.24	29,589,474,872.44	39,844,355,186.07	31,098,237,769.80
Other operations	362,832,137.54	257,400,798.90	280,121,524.69	170,863,467.11
Total	<u>38,358,297,108.78</u>	<u>29,846,875,671.34</u>	<u>40,124,476,710.76</u>	<u>31,269,101,236.91</u>

Revenue is presented as follows:

Unit: Yuan Currency: RMB

	2021	2020
Rail transportation control system		
Equipment manufacturing	5,593,359,700.72	5,880,516,497.58
System implementation	12,868,789,308.02	13,526,563,517.75
Design and integration	9,619,324,550.64	9,290,727,700.54
Construction contracting	10,211,703,641.11	11,367,288,035.61
Others	65,119,908.29	59,380,959.28
	<u>38,358,297,108.78</u>	<u>40,124,476,710.76</u>

Cost of sales is listed as follows:

Unit: Yuan Currency: RMB

	2021	2020
Rail transportation control system		
Equipment manufacturing	3,421,823,804.96	3,565,894,296.92
System implementation	11,271,853,009.22	11,797,902,756.80
Design and integration	5,921,930,936.62	5,678,138,556.95
Construction contracting	9,193,313,039.98	10,190,889,819.77
Others	37,954,880.56	36,275,806.47
	<u>29,846,875,671.34</u>	<u>31,269,101,236.91</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

61. Revenue and costs of sales (Continued)

(2). Revenue generated from contracts

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Contract type	Rail transportation control system	Construction contracting	Others	Total
China	26,976,569,092.59	10,211,703,641.11	65,119,908.29	37,253,392,641.99
Other countries and regions	1,104,904,466.79	—	—	1,104,904,466.79
Total	<u>28,081,473,559.38</u>	<u>10,211,703,641.11</u>	<u>65,119,908.29</u>	<u>38,358,297,108.78</u>

2020

Unit: Yuan Currency: RMB

Contract type	Rail transportation control system	Construction contracting	Others	Total
China	27,782,561,742.11	11,367,288,035.61	59,380,959.28	39,209,230,737.00
Other countries and regions	915,245,973.76	—	—	915,245,973.76
Total	<u>28,697,807,715.87</u>	<u>11,367,288,035.61</u>	<u>59,380,959.28</u>	<u>40,124,476,710.76</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

61. Revenue and costs of sales (Continued)

(3). Details of performance obligation

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

	Rail transportation control system	Construction contracting	Others	Total
Time of revenue recognition				
Revenue recognised at a certain point of time	4,498,099,623.97	–	65,119,908.29	4,563,219,532.26
Revenue recognised within a certain period of time	<u>23,583,373,935.41</u>	<u>10,211,703,641.11</u>	<u>–</u>	<u>33,795,077,576.52</u>
Total	<u>28,081,473,559.38</u>	<u>10,211,703,641.11</u>	<u>65,119,908.29</u>	<u>38,358,297,108.78</u>

2020

Unit: Yuan Currency: RMB

	Rail transportation control system	Construction contracting	Others	Total
Time of revenue recognition				
Revenue recognised at a certain point of time	3,397,183,997.56	–	59,380,959.28	3,456,564,956.84
Revenue recognised within a certain period of time	<u>25,300,623,718.31</u>	<u>11,367,288,035.61</u>	<u>–</u>	<u>36,667,911,753.92</u>
Total	<u>28,697,807,715.87</u>	<u>11,367,288,035.61</u>	<u>59,380,959.28</u>	<u>40,124,476,710.76</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

61. Revenue and costs of sales (Continued)

(3). Details of performance obligation (Continued)

The revenue recognised in the current year and included in the book value of contract liabilities at the beginning of the year is as follows:

Rail transportation control system	2021	2020
Equipment manufacturing	360,023,630.18	99,668,968.34
System implementation	1,561,461,918.29	1,445,098,722.81
Design and integration	1,335,081,998.70	2,572,375,512.57
Construction contracting	1,129,397,658.14	638,719,374.55
Others	1,739,703.45	4,279,222.22
	4,387,704,908.76	4,760,141,800.49

(4). Explanation about allocation to the remaining performance obligations

☒ Applicable ☐ Not applicable

Other explanation:

Typically, the construction contracts or service rendering contracts provided by the Group as a whole constitutes a single performance obligation and is a performance obligation performed within a certain period of time. As of 31 December 2021, some of the Group's construction contracts or service rendering contract are still in the process of performance. The transaction price allocated to the outstanding (or partially outstanding) performance obligations is related to the performance progress of the corresponding construction contract or service rendering contract, and will be recognized as revenue on the basis of the performance progress in the future performance period of the corresponding construction contract or service rendering contract.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

62. Taxes and surcharges

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Urban maintenance and construction tax	87,212,479.95	75,278,809.01
Educational surcharge	65,416,528.73	56,530,755.16
Property tax	57,410,972.66	55,297,688.13
Urban land use tax	11,570,661.30	10,621,677.13
Stamp duty	27,744,625.80	25,882,191.59
Others	4,331,388.42	6,472,277.29
Total	<u>253,686,656.86</u>	<u>230,083,398.31</u>

Other explanation:

For tax determination basis, please refer to Note VI. Taxation.

63. Selling and distribution expenses

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Employee benefits	495,162,695.14	460,343,180.99
Sales service expenses	132,025,500.76	122,685,072.77
Office and rental expenses	30,046,029.59	29,541,429.27
Tendering expenses	46,132,049.80	49,156,421.64
Depreciation and amortization expenses	6,335,783.89	5,617,541.56
Others	87,069,798.24	115,342,330.99
Total	<u>796,771,857.42</u>	<u>782,685,977.22</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

64. General and administrative expenses

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Employee benefits	1,353,667,745.85	1,287,807,040.63
Safety production expenses	177,618,771.59	193,509,344.88
Depreciation and amortization expenses	241,217,142.00	233,616,327.45
Office and rental expenses	166,467,716.28	148,601,198.96
Travel costs and business entertainment expenses	54,648,452.28	53,693,633.71
Others	123,362,191.27	142,329,668.48
Total	<u>2,116,982,019.27</u>	<u>2,059,557,214.11</u>

Other explanation:

General and administrative expenses include the audit fees of financial statements of RMB9,150,000.00 (2021: RMB9,000,000.00).

65. Research and development expenses

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Labor expenses	978,785,273.66	849,386,017.95
Materials expenses	205,408,476.85	196,215,635.86
Testing and processing expenses	98,145,585.43	70,392,521.09
Depreciation and amortization expenses	86,110,668.19	68,617,403.85
Administrative expenses	69,087,991.24	65,094,981.30
Travel costs	34,687,867.46	31,865,104.80
Others	166,269,040.37	152,701,735.05
Total	<u>1,638,494,903.20</u>	<u>1,434,273,399.90</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

66. Finance costs

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Interest expense	94,342,569.44	42,795,594.41
Less: Interest income	-482,214,091.74	-415,063,581.21
Exchange loss	33,061,151.72	71,059,219.95
Financial institutions commissions	42,428,616.33	51,549,123.05
Total	-312,381,754.25	-249,659,643.80

67. Other income

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Government grants related to assets		
Other research grants	1,289,503.65	—
Government grants related to income		
Special Fund of Changsha High-tech Zone for Industrial Development (長沙高新區產業發展專項資金)	—	15,716,000.00
Refund of taxes	155,186,020.42	59,528,004.35
Other research grants	180,418,184.68	140,976,462.92
Total	336,893,708.75	216,220,467.27

NOTES TO FINANCIAL STATEMENTS

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

68. Investment income

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Income from long-term equity investments under the equity method	86,129,094.82	60,364,356.23
Investment income from disposal of long-term equity investments	381,153.40	—
Loss from derecognition of financial assets measured at amortized cost	—	-23,907,670.65
Interest income from debt investments during the holding period	11,364,993.67	22,729,987.33
Others	16,035,841.61	-497,132.77
Total	113,911,083.50	58,689,540.14

69. Gains on net exposure hedges

☐ Applicable ☒ Not applicable

70. Gains on changes in fair value

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

71. Credit impairment losses

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Losses from bad debts of accounts receivables	161,945,192.51	33,666,850.32
Reversal/(losses) from bad debts of other receivables	33,420,301.56	-29,593,545.64
Reversal/(losses) from bad debts of long-term receivables	-1,707,152.89	8,067,498.05
Reversal/(losses) from bad debts of non-current assets due within one year	-202,460.57	140,214.71
Reversal/(losses) from bad debts of retention money in other non-current assets	1,446,159.99	-318,645.56
Losses from impairment of receivables financing	594,513.90	4,099,803.48
Total	195,496,554.50	16,062,175.36

72. Losses from impairment of assets

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Reversal/(losses) from decline in value of inventories	275,772.34	-540,471.33
Losses from impairment of contract assets	-65,004,542.56	-13,265,841.95
Total	-64,728,770.22	-13,806,313.28

NOTES TO FINANCIAL STATEMENTS

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

73. Gains on disposal of assets

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Gains on disposal of fixed assets	35,918,865.82	146,368,050.73
Gains on disposal of intangible assets	30,510.25	24,856,941.01
Total	35,949,376.07	171,224,991.74

Other explanation:

The gains from disposal of fixed assets in 2020 include the disposal gains of RMB143,325,709.96 arising from the purchase and storage of the land located at No. 248 Jiangchang West Road, Shanghai, of Shanghai Engineering Bureau, the subsidiary of the Company, by the Land Reserve Center of Shanghai Jing'an District.

74. Non-operating income

Information about non-operating income

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period	Amount included in current non-recurring profit or loss
Government grants not related to the daily business activities	4,228,959.03	1,808,959.03	4,228,959.03
Compensation payments	5,372,226.23	5,174,120.74	5,372,226.23
Accounts payable	20,111,170.32	7,861,752.95	20,111,170.32
Others	15,114,542.48	11,255,445.64	15,114,542.48
Total	44,826,898.06	26,100,278.36	44,826,898.06

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

74. Non-operating income (Continued)

Government grants recognized through profit and loss for the period

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period	Related to assets/related to gains
Technology innovation award	2,420,000.00	—	Related to gains
Demolition grants	1,808,959.03	1,808,959.03	Related to assets
Total	4,228,959.03	1,808,959.03	/

Other explanation:

☐ Applicable ☒ Not applicable

75. Non-operating expenses

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period	Amount included in current non-recurring profit or loss
Lawsuits compensation	350,500.00	650,872.60	350,500.00
External donations	10,660,200.00	1,197,728.76	10,660,200.00
Losses from damage and scrap of non-current assets	1,303,916.09	1,543,123.62	1,303,916.09
Others	2,996,697.89	1,537,668.39	2,996,697.89
Total	15,311,313.98	4,929,393.37	15,311,313.98

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

76. Income tax expenses

(1). Table for income tax expenses

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Current income tax expenses	641,172,724.26	759,824,703.68
Deferred income tax expenses	-60,170,627.96	36,627,622.94
Total	581,002,096.30	796,452,326.62

(2). Adjustment process for accounting profit and income tax

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Total profit	4,273,912,182.62	5,035,872,523.61
Income tax at the statutory/applicable income tax rate	1,068,478,045.66	1,258,968,130.90
Effect of different tax rates for subsidiaries	-289,648,928.04	-306,661,817.77
Effect of non-deductible cost, expenses and loss	31,978,261.78	41,393,833.10
Tax effect of deductible losses and deductible temporary differences not recognized	4,757,693.85	5,659,996.71
Utilization of the tax effect of deductible losses and temporary differences not recognized in previous years	-119,073.17	-8,018,434.41
Tax effect of additional deductions	-121,276,672.25	-76,680,291.72
Adjustment on the income tax prevailing in previous period	-80,966,092.03	-69,151,987.77
Effect of tax rate changes on deferred income tax balance at the beginning of the year	—	1,892,114.28
Effect of non-taxable income	-10,668,865.79	-35,858,127.64
Profit and loss attributable to joint ventures and associates	-21,532,273.71	-15,091,089.06
Others	—	—
Income tax expenses	581,002,096.30	796,452,326.62

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

76. Income tax expenses (Continued)

(2). Adjustment process for accounting profit and income tax (Continued)

Other explanation:

☒ Applicable ☐ Not applicable

The Group's income tax has been provided at the applicable rate on the estimated profits assessable arising in the PRC during the period. Taxes on profits assessable elsewhere have been calculated at the applicable rates of tax prevailing in the countries/regions in which the Group operates, based on existing legislation, interpretations and practices in respect thereof.

Share of tax attributable to joint ventures and associates in 2021 were RMB15,575,017.24 (2020: RMB10,163,585.19) and RMB5,978,997.87 (2020: RMB4,140,227.01), respectively. These shares of tax are included in the "income from investments in joint ventures and associates" in the consolidated income statement.

77. Other comprehensive income

☒ Applicable ☐ Not applicable

See notes for details

The accumulated balance of other comprehensive income attributable to the parent company in the consolidated balance sheet is as follows:

	1 January 2021	Increase/decrease	31 December 2021
Changes in re-measurement of defined benefit plan	-233,062,000.00	24,841,000.00	-208,221,000.00
Differences on translation of foreign currency financial statements	-501,228.13	-303,831.01	-805,059.14
Hedging reserve arising from cash flows	21,772,817.52	-1,074,832.24	20,697,985.28
Provision for impairment of receivables financing	4,099,803.48	592,617.70	4,692,421.18
	<u>-207,690,607.13</u>	<u>24,054,954.45</u>	<u>-183,635,652.68</u>

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Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

77. Other comprehensive income (Continued)

The accumulated balance of other comprehensive income attributable to the parent company in the consolidated balance sheet is as follows (Continued):

	1 January 2020	Increase/decrease	31 December 2020
Changes in re-measurement of defined benefit plan	-273,904,000.00	40,842,000.00	-233,062,000.00
Differences on translation of foreign currency financial statements	98,690.61	-599,918.74	-501,228.13
Hedging reserve arising from cash flows	939,724.27	20,833,093.25	21,772,817.52
Provision for impairment of receivables financing	—	4,099,803.48	4,099,803.48
	<u>-272,865,585.12</u>	<u>65,174,977.99</u>	<u>-207,690,607.13</u>

The amount of other comprehensive income is as follows:

2021

Unit: Yuan Currency: RMB

	Balance before tax	Less: income tax	Attributable to shareholders of the parent company	Attributable to non-controlling shareholders
Other comprehensive income not to be reclassified to profit or loss:				
Changes in re-measurement of defined benefit plan	24,841,000.00	—	24,841,000.00	—
Other comprehensive income to be reclassified to profit or loss:				
Differences on translation of foreign currency financial statements	-303,831.01	—	-303,831.01	—
Hedging reserve arising from cash flows	-1,074,832.24	—	-1,074,832.24	—
Provision for credit impairment of receivables financing	594,513.90	—	592,617.70	1,896.20
Total	<u>24,056,850.65</u>	<u>—</u>	<u>24,054,954.45</u>	<u>1,896.20</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

77. Other comprehensive income (Continued)

2020

Unit: Yuan Currency: RMB

	Balance before tax	Less: income tax	Attributable to shareholders of the parent company	Attributable to non-controlling shareholders
Other comprehensive income not to be reclassified to profit or loss:				
Changes in re-measurement of defined benefit plan	40,842,000.00	—	40,842,000.00	—
Other comprehensive income to be reclassified to profit or loss:				
Differences on translation of foreign currency financial statements	-599,918.74	—	-599,918.74	—
Hedging reserve arising from cash flows	20,833,093.25	—	20,833,093.25	—
Provision for credit impairment of receivables financing	4,099,803.48	—	4,099,803.48	—
	<u>65,174,977.99</u>	<u>—</u>	<u>65,174,977.99</u>	<u>—</u>

78. Items in statement of cash flows

(1). Other cash received related to operating activities

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the previous period
Income from other businesses	405,665,474.28	280,121,524.69
Government grants	232,081,956.26	153,060,522.26
Interest income	172,305,219.74	179,761,892.90
Others	22,515,673.96	225,217,151.25
Total	<u>832,568,324.24</u>	<u>838,161,091.10</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

78. Items in statement of cash flows (Continued)

(2). Other cash paid related to operating activities

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the previous period
Research and development expenses	573,598,961.35	559,075,929.74
Safety production expenses	177,618,771.59	193,509,344.88
Travel and business hospitality expenses	54,648,452.28	53,693,633.71
Others	556,554,650.03	219,157,087.11
Total	<u>1,362,420,835.25</u>	<u>1,025,435,995.44</u>

(3). Other cash received related to investment activities

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the previous period
Interest income	309,908,872.00	235,301,688.31
Total	<u>309,908,872.00</u>	<u>235,301,688.31</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

78. Items in statement of cash flows (Continued)

(4). Other cash paid related to investment activities

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the previous period
Futures margin	17,537,919.08	10,758,063.72
Derecognition of losses from financial assets at amortized cost	—	23,907,670.65
Total	17,537,919.08	34,665,734.37

(5). Other cash received related to fund-raising activities

☐ Applicable ☒ Not applicable

(6). Other cash paid relating to fund-raising activities

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the previous period
Rental expenses and others	303,214,723.13	213,531,369.67
Total	303,214,723.13	213,531,369.67

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

79. Supplementary information to the statement of cash flows

(1). Supplementary information to the statement of cash flows

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Supplementary information	Amount for the current period	Amount for the previous period
1. Adjustment of net profit to cash flow of operating activities:		
Net profit	3,692,910,086.32	4,239,420,196.99
Add: assets impairment provision	64,728,770.22	13,806,313.28
Credit impairment losses	195,496,554.50	16,062,175.36
Depreciation and amortization of investment properties	17,885,911.35	12,860,420.23
Depreciation of fixed assets	391,579,137.36	373,492,822.52
Amortization of right-of-use assets	72,876,876.30	74,207,221.70
Amortization of intangible assets	200,805,927.41	143,592,674.87
Amortization of long-term prepaid expenses	25,134,499.68	38,886,842.27
Loss from disposal of fixed assets, intangible assets and other long-term assets (income as sign "-")	-35,949,376.07	-171,224,991.74
Loss from scrap of fixed assets (income as sign "-")	—	—
Loss from fair value change (income as sign "-")	—	—
Financial costs (income as sign "-")	-188,746,471.26	-118,903,936.19
Investment loss (income as sign "-")	-113,911,083.50	-58,689,540.14
Decrease in deferred income tax assets (increase as sign "-")	-81,828,619.22	43,184,357.88
Increase in deferred income tax liabilities (decrease as sign "-")	21,657,991.26	-6,556,734.94
Decrease in special reserve	-37,422,858.45	-108,698,132.33
Decrease in inventories (increase as sign "-")	-3,013,282.38	-288,450,005.14
Increase in contract assets	-1,339,862,834.99	-3,021,674,706.33
Increase/(decrease) in contract liabilities	406,179,439.65	-345,071,197.80
Decrease in operating receivables (increase as sign "-")	-2,011,553,874.15	-4,408,520,063.81
Increase in operating payables (decrease as sign "-")	1,491,734,697.03	6,579,652,236.40
Others	—	—
Net cash flow generated from operating activities	<u>2,768,701,491.06</u>	<u>3,007,375,953.08</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

79. Supplementary information to the statement of cash flows (Continued)

(1). Supplementary information to the statement of cash flows (Continued)

Supplementary information	Amount for the current period	Amount for the previous period
2. Significant investment and financing activities not involving cash receipts and payments:		
Conversion of debt into capital	—	—
Convertible bonds to be expired within one year	—	—
Fixed assets under finance lease	—	—
3. Net change in cash and cash equivalents:		
Ending Balance of Cash	17,595,724,106.74	18,184,861,073.07
Less: opening balance of cash	18,184,861,073.07	17,854,952,684.12
Add: closing balance of cash equivalents	—	—
Less: opening balance of cash equivalents	—	—
Net increase in cash and cash equivalents	-589,136,966.33	329,908,388.95

(2). Net cash paid to acquire subsidiaries during the period

☐ Applicable ☒ Not applicable

(3). Net cash received from disposal of subsidiaries during the period

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

79. Supplementary information to the statement of cash flows (Continued)

(4). Composition of cash and cash equivalents

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
I. Cash	17,595,724,106.74	18,184,861,073.07
Including: Cash on hand	455,141.96	714,559.72
Bank deposits available for payment	17,595,268,964.78	18,184,146,513.35
Other monetary funds available for payment	—	—
Funds deposited with the central bank that are available for payment	—	—
Deposit from other banks	—	—
Loans to other banks	—	—
II. Cash equivalents	—	—
Including: Bond investment due within three months	—	—
III. Closing balance of cash and cash equivalents	17,595,724,106.74	18,184,861,073.07
Including: Cash and cash equivalents with restrictions on use by the parent or subsidiaries within the Group	—	—

(5). Net change in cash and cash equivalents

☒ Applicable ☐ Not applicable

	2021	2020
Ending balance of cash	17,595,724,106.74	18,184,861,073.07
Less: Opening balance of cash	18,184,861,073.07	17,854,952,684.12
Add: Ending balance of cash equivalents	—	—
Less: Opening balance of cash equivalents	—	—
Net (decrease)/increase in cash and cash equivalents	-589,136,966.33	329,908,388.95

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

80. Notes to items in statement of changes in shareholder equity

Explanation of the name of “Others” item that adjusted the closing balance at the end of the last year and the amount of adjustment, etc.:

81. Assets with restricted ownership or right-of-use

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing carrying amount	Book balance at the beginning of the period	Reasons for Restrictions
Monetary funds	500,621,987.32	186,038,677.04	/
Monetary funds – acceptance bill deposits	177,039,248.02	48,101,075.32	/
Monetary funds – guarantee letter deposits	45,255,632.95	43,400,800.35	/
Monetary funds – other purposes	278,327,106.35	94,536,801.37	/
Receivables for financing	48,875,684.59	52,492,742.32	Note 1
Accounts receivable	201,458,572.34	–	Note 2
Long-term receivables	–	4,092,306,736.92	Note 2
Other non-current assets	4,426,249,414.22	–	Note 2
Total	5,177,205,658.47	4,330,838,156.28	/

Other explanation:

Note 1: As at 31 December 2021 and 31 December 2020, the Group had no notes receivable that was pledged for the purpose of issuing bank acceptance bills payable.

On 31 December 2021, the book value of bank acceptance bills and commercial acceptance bills pledged by the Group were RMB8,875,684.59 and RMB40,000,000.00 respectively, which was used to obtain short-term loans of RMB48,875,684.59. On 31 December 2020, the book value of bank acceptance bills and commercial acceptance bills pledged by the Group were RMB2,561,294.29 and RMB49,931,448.03 respectively, which was used to obtain short-term loans of RMB52,492,742.32. See Note VII. 32 for details.

Note 2: On 31 December 2021, the Group's book balance amount of other non-current asset of RMB4,426,249,414.22 and book balance amount of accounts receivable of RMB201,458,572.34 (31 December 2020: book balance amount of long-term receivables of RMB4,092,306,736.92), which were formed by the earning rights of the franchise pledged and all proceeds thereunder, were used to obtain long-term loans of RMB2,336,791,575.20 (31 December 2020: RMB1,900,360,668.00) (Notes VII.5, 16, 31 and 45).

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

82. Foreign currency monetary items

(1). Foreign currency monetary items

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Ending balance of foreign currency	Exchange rate	Ending balance in RMB equivalent
Monetary funds			
Including: US Dollar	56,317,933.05	6.3757	359,066,245.77
Euro	48,607.30	7.2197	350,930.13
HK Dollar	1,146,346,698.94	0.8176	937,253,061.05
Indian Rupee	4,056,688.55	0.0856	347,252.54
Others	<u> /</u>	<u> /</u>	<u>91,262,619.00</u>
Accounts payable			
Including: Indian Rupee	<u>23,964,406.78</u>	<u>0.0856</u>	<u>2,051,353.22</u>

(2). Notes on the overseas operating entities, including, for significant overseas operating entities, the necessary disclosure of main overseas operating places, functional currency and selection basis, as well as reasons for changes of the functional currency

☐ Applicable ☒ Not applicable

83. Hedging

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

84. Government grants

(1). Basic information of government grants

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Type	Amount	Item reported	Amount included in current profits or loss
Government grants related to assets			
Other research grants	1,289,503.65	Other income	1,289,503.65
Demolition grants	1,808,959.03	Non-operating income	1,808,959.03
Government grants related to income			
Refund of taxes	155,186,020.42	Other income	155,186,020.42
Other research grants	180,418,184.68	Other income/deferred income	180,418,184.68

(2). Return of government grants

☐ Applicable ☒ Not applicable

85. Others

☒ Applicable ☐ Not applicable

The supplementary information of the Group's operating costs, sales expenses, management expenses and research and development expenses by nature is set forth as follows:

Unit: Yuan Currency: RMB

	2021	2020
Raw materials and spare parts consumed	17,560,922,691.78	19,577,944,358.37
Subcontracting costs	6,168,739,290.47	6,653,886,677.56
Employee benefits	5,520,532,247.90	4,981,420,643.62
Research expenses	573,598,961.35	516,269,978.10
Depreciation and amortization	794,393,020.29	711,657,385.44
Others	3,780,938,239.44	3,104,438,785.05

Note: The labor expenses of RMB978,785,273.66 (2020: RMB849,386,017.95) under the research and development expenses has been included in the employee benefits, and the amount of depreciation and amortization expense of RMB86,110,668.19 has been included in depreciation and amortization (2020: RMB68,617,403.85).

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VIII · CHANGES ON SCOPE OF CONSOLIDATION

1. Business combination of entities not under common control

☐ Applicable ☒ Not applicable

2. Business combination of entities under common control

☐ Applicable ☒ Not applicable

3. Reverse takeover

☐ Applicable ☒ Not applicable

4. Disposal of subsidiaries

Whether or not the loss of control occurs immediately after a single disposal of investment in the subsidiaries

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

5. Changes in scope of consolidation due to other reasons

Explanation of changes in scope of consolidation due to other reasons (e.g. incorporation of new subsidiaries, and liquidation of subsidiaries, etc.) and relevant information:

☒ Applicable ☐ Not applicable

On 30 April 2021, CRSC WANQUAN SIGNAL EQUIPMENT CO., LTD ("CRSC WANQUAN", a former second-tier subsidiary of the Company) was transferred to China Railway Signal & Communication Shanghai Engineering Bureau ("Shanghai Engineering Bureau"), and became a third-tier subsidiary of the Company;

NOTES TO FINANCIAL STATEMENTS

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VIII · CHANGES ON SCOPE OF CONSOLIDATION (Continued)

5. Changes in scope of consolidation due to other reasons (Continued)

On 30 September 2021, third-tier subsidiaries of the Company, Shanghai Railway Communication Co., Ltd., Shanghai Deuta Electronic & Electrical Equipment Co., Ltd. and Chengdu Railway Communication Equipment Co., Ltd. were transferred from CRSC(Beijing) Industry Group Co., Ltd. ("Beijing Industry Group"), a second-tier subsidiary of the Company, to CRSC(Xi'an) Rail Industry Group Co., Ltd. ("Xi'an Industry Group"), a second-tier subsidiary of the Company;

On 30 September 2021, third-tier subsidiaries of the Company, Beijing Railway Signal Co., Ltd. and Xi'an Quanlutonghao Equipment Research Co., Ltd. were transferred from CRSC(Beijing) Industry Group Co., Ltd. ("CRSC Beijing Industry Group") and CRSC(Xi'an) Rail Industry Group Co., Ltd. ("CRSC Xi'an Industry Group"), the Company's second-tier subsidiaries, to the second-tier subsidiary CRSC Research & Design Institute Group Co., Ltd. ("Research & Design Institute");

On 30 September 2021, a second-tier subsidiary of the Company, CRSC Construction Group Co., Ltd. ("CRSC Construction") absorbed and merged a former second-tier subsidiary of the Company, CRSC Innovation Zhejiang Construction Investment Ltd. ("Zhejiang Construction Investment").

6. Others

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

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IX. INTERESTS IN OTHER ENTITIES

1. Interests in subsidiaries

(1). Composition of enterprise group

✓ Applicable □ Not applicable

Name of subsidiaries	Places of principal activities	Place of registration	Nature of business	Shareholding percentage of the Group (%)		Means of acquisition
				Direct	Indirect	
CRSC (Beijing) Rail Industry Group Co., Ltd. (通號(北京)軌道工業集團有限公司) ("CRSC Beijing Industry Group")	Beijing	Beijing	Equipment manufacturing	100.00	–	Incorporation
CRSC (Xi'an) Rail Industry Group Co., Ltd. (通號(西安)軌道交通工業集團有限公司) ("CRSC Xi'an Industry Group")	Xi'an	Xi'an	Equipment manufacturing	100.00	–	Incorporation
CRSC Cables Company Ltd. (通號電纜集團有限公司) ("CRSC Cables")	Zhengzhou	Zhengzhou	Equipment manufacturing	100.00	–	Incorporation
Beijing National Railway Research & Design Institute of Signal & Communication Co., Ltd. (北京全路通信信號研究設計院集團有限公司) ("CRSCD")	Beijing	Beijing	Design integration	100.00	–	Incorporation
CASCO Signal Ltd. (卡斯柯信號有限公司) ("CRSC CASCO")	Shanghai	Shanghai	Design integration	51.00	–	Business combination not under common control
CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司) ("CRSCC")	Beijing	Beijing	Design integration	100.00	–	Incorporation
CRSC Urban Rail Transit Technology Co., Ltd. (通號城市軌道交通技術有限公司) ("Urban Rail Transit")	Beijing	Beijing	Design integration	100.00	–	Incorporation
China Railway Signal & Communication Shanghai Engineering Bureau Group Co., Ltd. (中國鐵路通信信號上海工程局集團有限公司) ("CRSCS")	Shanghai	Shanghai	System delivery service and design integration	100.00	–	Incorporation
CRSC Engineering Group Company Ltd. (通號工程局集團有限公司) ("CRSCE")	Beijing	Beijing	System delivery service	100.00	–	Incorporation
CRSC International Holdings Company Limited (通號國際控股有限公司) ("CRSC International Holdings")	Beijing	Beijing	Design integration	100.00	–	Incorporation
CRSC Innovation Investment Co., Ltd. (通號創新投資有限公司) ("Innovation Investment")	Beijing	Beijing	Investment management	100.00	–	Incorporation

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IX. INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(1). Composition of enterprise group (Continued)

Name of subsidiaries	Places of		Nature of business	Shareholding percentage of the Group (%)		Means of acquisition
	principal activities	Place of registration		Direct	Indirect	
CRSC (Changsha) Rail Transit Control Technology Company Limited (通號(長沙)軌道交通控制技術有限公司) ("CRSC Changsha Railway")	Changsha	Changsha	System delivery service	100.00	–	Incorporation
CRSC Construction Group Co., Ltd. (通號建設集團有限公司) ("CRSC Construction")	Changsha	Changsha	General engineering contracting	100.00	–	Incorporation
Zhengzhou Zhongyuan Railway Engineering Co., Ltd. (鄭州中原鐵道工程有限責任公司) ("Zhengzhou Zhongyuan")	Zhengzhou	Zhengzhou	General engineering contracting and system delivery service	65.00	–	Business combination not under common control
CRSC (Zhengzhou) Electrification Bureau Co., Ltd. (通號(鄭州)電氣化局有限公司) ("CRSC Electrification Bureau")	Zhengzhou	Zhengzhou	General engineering contracting	65.00	–	Business combination not under common control
CRSC Jishou Huatai Pipeline Project Management Co., Ltd. (吉首通號華泰管廊項目管理有限責任公司) ("CRSC Huatai")	Jishou	Jishou	Project management of engineering and operation and maintenance	90.00	–	Incorporation
CRSC Jishou Tengda Project Management Co., Ltd. (吉首通號騰達項目管理有限責任公司) ("CRSC Tengda")	Jishou	Jishou	Project management of engineering and operation and maintenance	90.00	–	Incorporation
China Railway Signal & Communication International Co., Ltd. (中國通號國際有限公司) ("CRSC International")	Hong Kong, the PRC	Hong Kong, the PRC	Technical exchange and trade	100.00	–	Incorporation
CRSC (Jiangsu) Smart City Construction & Development Co., Ltd. (通號(江蘇)智慧城市建設開發有限公司) ("CRSC Jiangsu Smart")	Taixing	Taixing	Design integration	88.00	2.00	Incorporation

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Year ended 31 December 2021

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IX. INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(1). Composition of enterprise group (Continued)

Name of subsidiaries	Places of principal activities	Place of registration	Nature of business	Shareholding percentage of the Group (%)		Means of acquisition
				Direct	Indirect	
CRSC(Beijing) Tendering Company Ltd. (通號(北京)招標有限公司) ("CRSC Beijing Tendering")	Beijing	Beijing	Bidding agency	100.00	–	Incorporation

Note 1: All the companies above are limited liability companies.

Note 2: For changes on major subsidiaries for the year, please refer to Note VIII. 5.

Note 3: The Articles of Association stipulate that CRSC CASCO is a Sino-foreign joint venture, with the Board as its highest authority, and the proportion of voting rights is calculated according to the proportion of seats on the Board. The Board of CRSC CASCO consists of seven members, including four from CRSC.

Note 4: The registered capital of CRSC Changsha Railway was changed from RMB1,153,750,000 to RMB1,228,750,000 as a result of the Company's capital injection into its second-tier company during the year.

(2). Significant non-wholly owned subsidiaries

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Name of subsidiary	Shareholding percentage of non-controlling shareholders	Current profits and losses attributable to non-controlling shareholders	Current dividends declared and paid to non-controlling shareholders	Ending balance of interest of non-controlling shareholders
CRSC CASCO	49%	362,320,586.50	286,703,410.00	927,936,106.35

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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IX. INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(2). Significant non-wholly owned subsidiaries (Continued)

2020

Unit: Yuan Currency: RMB

Name of subsidiary	Shareholding percentage of non-controlling shareholders	Current profits and losses attributable to non-controlling shareholders	Current dividends declared and paid to non-controlling shareholders	Ending balance of interest of non-controlling shareholders
CRSC				
CASCO	49%	316,954,230.64	245,759,500.00	881,245,446.95

Explanations for the inconsistency of shareholding percentage of non-controlling shareholders of subsidiaries with proportion of their voting rights:

☐ Applicable ☒ Not applicable

Other explanations:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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IX. INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(3). Main financial information of significant non-wholly owned subsidiaries

✓ Applicable ☐ Not applicable

The following table sets out the main financial information of the above subsidiaries. Such information represents the amount before mutual offsetting between companies within the Group:

Unit: Yuan Currency: RMB

Name of subsidiary	Closing balance				Opening balance			
	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities	Total assets	Total liabilities
CRSC CASCO	4,785,508,190.31	1,253,851,192.69	6,039,359,383.00	4,044,577,772.59	101,034,454.59	4,145,612,227.18	5,524,180,789.70	3,725,720,693.89
Name of subsidiary	Amount for the current period				Amount for the previous period			
	Revenue	Net profit	Total comprehensive income	Cash flows from operating activities	Revenue	Net profit	Total comprehensive income	Cash flows from operating activities
CRSC CASCO	4,205,399,745.45	739,429,768.37	739,429,768.37	840,487,746.93	3,923,172,792.98	646,845,368.66	646,845,368.66	1,101,673,886.17

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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IX. INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(4). Major restrictions on the use of assets of the Group and repayment of debts of the Group

☐ Applicable ☒ Not applicable

(5). Financial support or other support provided for structured entities included in the scope of consolidated financial statements

☐ Applicable ☒ Not applicable

Other explanations:

☐ Applicable ☒ Not applicable

2. Transaction in which the share of shareholder's interests in the subsidiary changes while control over the subsidiary remaining unchanged

☐ Applicable ☒ Not applicable

3. Interests in the joint venture or associate

☒ Applicable ☐ Not applicable

(1). Significant joint ventures or associates

☐ Applicable ☒ Not applicable

(2). Main financial information of significant joint ventures

☐ Applicable ☒ Not applicable

(3). Main financial information of significant associates

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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IX. INTERESTS IN OTHER ENTITIES (Continued)

3. Interests in the joint venture or associate (Continued)

(4). Summary of financial information of insignificant joint ventures and associates

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

	Balance at end of the period/amount incurred in the period	Balance at beginning of the period/amount incurred in the previous period
Joint ventures:		
Total book value of investment	229,687,703.77	232,579,525.12
Total amount of the following items calculated on the basis of shareholding percentage		
– Net profit	21,433,178.65	21,356,385.92
– Total comprehensive income	21,433,178.65	21,356,385.92
Associates:		
Total book value of investment	1,148,536,043.29	876,453,691.23
Total amount of the following items calculated on the basis of shareholding percentage		
– Net profit	64,695,916.17	39,007,970.31
– Total comprehensive income	64,695,916.17	39,007,970.31

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

IX. INTERESTS IN OTHER ENTITIES (Continued)

3. Interests in the joint venture or associate (Continued)

- (5). Explanation for the significant restrictions on the ability of joint ventures or associates to transfer funds to the Company

☐ Applicable ☒ Not applicable

- (6). Excessive loss incurred by joint ventures or associates

☐ Applicable ☒ Not applicable

- (7). Unrecognised commitments related to investments in joint ventures

☐ Applicable ☒ Not applicable

- (8). Contingent liabilities related to investments in joint ventures or associates

☐ Applicable ☒ Not applicable

4. Significant joint operation

☐ Applicable ☒ Not applicable

5. Interests in structured entities not included in the scope of consolidated financial statements

Explanation about structured entities not included in the scope of consolidated financial statements:

☐ Applicable ☒ Not applicable

6. Others

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS

✓ Applicable ☐ Not applicable

1. Category of financial instruments

Book values of various financial instruments as of the balance sheet date are as follows:

31 December 2021

Financial assets

Unit: Yuan Currency: RMB

	Financial assets measured at fair value through other comprehensive income			
	Financial assets measured at amortized cost	Standards	Designated	Total
Cash and bank balances	22,982,585,272.39	—	—	22,982,585,272.39
Receivables for financing	—	2,142,993,114.00	—	2,142,993,114.00
Accounts receivable	19,853,757,318.28	—	—	19,853,757,318.28
Other receivables	1,093,595,430.95	—	—	1,093,595,430.95
Debt investment	273,172,183.50	—	—	273,172,183.50
Other equity instrument investments	—	—	1,124,819,159.20	1,124,819,159.20
Long-term receivables	3,713,734,908.20	—	—	3,713,734,908.20
Financial assets included in other non-current assets	4,715,091,932.30	—	—	4,715,091,932.30
	<u>52,631,937,045.62</u>	<u>2,142,993,114.00</u>	<u>1,124,819,159.20</u>	<u>55,899,749,318.82</u>

Financial liabilities

Unit: Yuan Currency: RMB

	Financial liabilities measured at amortized cost
Short-term borrowings	75,629,684.59
Bills payable	2,300,794,453.21
Accounts payable	46,455,196,868.52
Other payables	1,063,620,223.11
Long-term borrowings	3,127,722,482.40
Financial liabilities in non-current liabilities due within one year	328,560,596.20
Lease liabilities	97,747,858.35
Long-term payables	62,593,424.21
	<u>53,511,865,590.59</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

1. Category of financial instruments (Continued)

31 December 2020

Financial assets

Unit: Yuan Currency: RMB

	Financial assets measured at fair value through other comprehensive income			
	Financial assets measured at amortized cost	Standards	Designated	Total
Cash and bank balances	22,740,631,687.08	—	—	22,740,631,687.08
Receivables for financing	—	2,230,124,457.61	—	2,230,124,457.61
Accounts receivable	18,290,953,101.67	—	—	18,290,953,101.67
Other receivables	1,476,276,378.69	—	—	1,476,276,378.69
Debt investment	273,172,183.50	—	—	273,172,183.50
Other equity instrument investments	—	—	1,019,867,488.13	1,019,867,488.13
Long-term receivables	8,384,707,579.19	—	—	8,384,707,579.19
Financial assets included in other non- current assets (including maturity within 1 year)	320,052,882.98	—	—	320,052,882.98
	<u>51,485,793,813.11</u>	<u>2,230,124,457.61</u>	<u>1,019,867,488.13</u>	<u>54,735,785,758.85</u>

Financial liabilities

Unit: Yuan Currency: RMB

	Financial liabilities measured at amortized cost
Short-term borrowings	491,584,392.53
Bills payable	1,974,383,429.57
Accounts payable	44,705,884,497.10
Other payables	1,979,340,519.78
Long-term borrowings	1,995,641,575.20
Financial liabilities in non-current liabilities due within one year	216,094,781.87
Lease liabilities	80,677,106.29
Long-term receivables	77,846,656.30
	<u>51,521,452,958.64</u>

X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

2. Transfer of financial asset

Transferred financial assets that are not derecognized in their entirety

As at 31 December 2021, the book value of bank acceptance bills and commercial acceptance bills that the Group has endorsed or discounted to suppliers for settlement of trade payables were RMB179,573,211.17 and RMB270,243,426.09 respectively (31 December 2020: RMB179,206,712.21 and RMB211,897,708.43). The Group believed that almost all risks and rewards have been retained, including related default risks. Therefore, it continued to recognise the full carrying amounts of the Endorsed Bills and the associated trade payables settled. Subsequent to the endorsement, the Group no longer reserves the right to use it, including the right to sell, transfer or pledge it to other third parties. The aggregate carrying amount of the trade payables settled by the endorsed bills as at 31 December 2021 was RMB449,816,637.26 (31 December 2020: RMB391,104,420.64).

Transferred financial assets that are derecognised in their entirety in which continuing involvement exists

As at 31 December 2021, the book value of bank acceptance bills that the Group has endorsed to suppliers for settlement of trade payables was RMB466,753,794.07 (31 December 2020: RMB934,167,212.36). As at 31 December 2021, the derecognized bills had a maturity of one to twelve months. In accordance with the Law of Negotiable Instruments, the holders of the derecognized bills have the right of recourse against the Group if the accepting banks default (the "Continuing Involvement"). In the opinion of the Group, the Group has transferred substantially all risks and rewards relating to the Derecognised Bills. Accordingly, it has derecognised the carrying amounts of such Derecognised Bills and the associated trade payables settled. The maximum exposure to loss from the Group's Continuing Involvement in the Derecognised Bills and the undiscounted cash flows to repurchase these Derecognised Bills is equal to their carrying amounts. In the opinion of the Group, the fair values of the Group's Continuing Involvement in the Derecognised Bills are not significant.

In 2021, the Group did not recognise any profit or loss on the date of transfer of the derecognised bills. The Group had no current or accumulated gains or expenses related to continuing involvement of financial assets which had been derecognized. The endorsement happened evenly throughout the year.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments

The Group is faced with risks of various financial instruments in daily activities, which mainly include credit risk, liquidity risk and market risk (including exchange rate risk and interest rate risk). The main financial instruments of the Group include monetary funds, equity investment, borrowings, receivables for financing, accounts receivable, bills payable and accounts payable and others. The risks associated with these financial instruments and the risk management strategies adopted by the Group to mitigate these risks are described below.

The Board of Directors shall be responsible for planning and establishing the risk management framework of the Group, formulating the Group's risk management policies and relevant guidelines, and supervising the implementation of risk management measures. The Group has formulated risk management policies to identify and analyse risks the Group faced with. These risk management policies specify specific risks and cover market risks, credit risks, liquidity risk management and many other aspects. The Group regularly evaluates changes in the market environment and the Group's business activities to determine whether to update risk management policies and systems. The risk management of the Group shall be carried out by the Risk Management Committee in accordance with the policies approved by the Board.

The Group diversifies the risk of financial instruments through various appropriate investments and business portfolios, and reduces the risk of concentration in any single industry, specific region or specific counterparty by formulating corresponding risk management policies.

Credit risk

The Group only deals with recognized and reputable third parties. According to the Group's policy, credit review is required for all customers who seek to carry out credit-based transactions. In addition, the Group continuously monitors the balance of accounts receivable to ensure that the Group is not exposed to significant bad debt risks. For transactions that are not settled in the bookkeeping base currency of the relevant business entity, the Group does not provide credit-based transaction conditions unless specifically approved by the credit control department of the Group.

Due to the counterparties of monetary funds and receivable bank acceptance bills are banks with good reputation and higher credit rating, the credit risk of these financial instruments is low.

X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments (Continued)

Credit risk (Continued)

Financial assets of the Group include monetary funds, receivables for financing, account receivable, other receivables, debt investments, other equity instruments investment, Long-term receivables and financial assets included in other non-current assets. The credit risk of these financial assets originates from the default of the counterparty. The maximum risk exposure is equal to the book value of these instruments.

As the Group only deals with recognized and reputable third parties, no collateral is required. Credit risk is centrally managed by customers/counterparties, geographic regions and industries. Customers owing accounts receivables to the Group were widely engaged in different sectors and industries, therefore, there was no concentration of significant credit risks within the Group. The Group did not hold any collateral or other credit enhancement against the balance of accounts receivable.

Criteria for judgment of significant increase in credit risk

On each balance sheet date, the Group assessed whether or not the credit risk of relevant financial instruments has increased significantly since initial recognition. In determining whether or not the credit risk has increased significantly since the initial recognition, the Group considered that the reasonable and reliable information could be obtained without unnecessary extra costs or efforts, including qualitative and quantitative analysis based on the Group's historical data, external credit risk rating and forward-looking information. Based on a single financial instrument or a combination of financial instruments with similar credit risk characteristics, the Group compared the risk of default of financial instruments as at the balance sheet date with the risk of default on the initial recognition date to determine the changes in the default risk of financial instruments during their expected lifetime.

The Group believed that the credit risk of financial instruments has increased significantly when one or more of the following quantitative and qualitative criteria or upper limit indicators are triggered:

- The quantitative criteria are satisfied if the probability of default for the remaining lifetime on the reporting date rises by more than a certain proportion compared with the probability of default at time of the initial recognition;
- Qualitative criteria mainly comprise material adverse changes in the debtor's business or financial position, and alert list of customers;
- The upper limit indicator is defined as the debtor's contract payment (including principal and interest) has been overdue for more than 30 days.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments (Continued)

Credit risk (Continued)

Definition of assets with credit impairment

In order to determine whether or not credit impairment has occurred, the Group adopted the definition criteria consistent with the internal credit risk management objectives for relevant financial instruments, while considering both quantitative and qualitative indicators. When the Group evaluated whether or not the debtor suffers from credit impairment, it mainly considered the following factors:

- The issuer or debtor is in material financial difficulties;
- The debtor violates the contract, such as default or overdue payment of interest or principal, etc.;
- The creditor gives concessions that it would not make under any other circumstance based on economic or contractual considerations related to the debtor's financial difficulties;
- The debtor is likely to go bankrupt or undergo other financial restructuring;
- Financial difficulties of the issuer or debtor result in the disappearance of the active market of the financial asset;
- Purchase or generate a financial asset at a substantial discount, which reflects the fact that credit impairment has occurred.

Credit impairment of financial assets might be caused by the combined action of multiple events, but not necessarily by separately identifiable events.

X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments (Continued)

Credit risk (Continued)

Parameters for Measuring Expected Credit Loss

Depending on whether credit risk has increased significantly and whether credit impairment has occurred, the Group measures impairment provision for different assets with the expected credit loss for 12 months or the entire lifetime period, respectively. The key parameters for expected credit loss measurement include default probability, default loss rate and default risk exposure. Considering the quantitative analysis and forward-looking information of historical statistical data (such as counterparty ratings, guarantees and collateral types, repayment methods and others), the Group establishes a default probability, default loss rate and default risk exposure model.

The relevant definitions are as follows:

- Probability of default (PD) refers to the possibility that the debtor will not be able to fulfill its obligations of repayment over the next 12 months or throughout the entire remaining lifetime. The Group's PD is adjusted based on the results of the historical mobility model of receivables, taking into account the forward-looking information to reflect the debtor's PD under the current macroeconomic environment;
- Loss given default (LGD) refers to the Group's expectation of the extent of the loss resulting from the default exposure. Depending on the type of counterparty, the method and priority of the recourse, and the type of collaterals, the LGD varies. The LGD is the percentage of loss of risk exposure at the time of default, calculated over the next 12 months or over the entire remaining lifetime;
- Exposure at default (EAD) is the amount that the Group should be reimbursed at the time of the default in the next 12 months or throughout the entire remaining lifetime.

Both the assessment of a significant increase in credit risk and the calculation of ECL involve forward-looking information. Through the analysis of historical data, the Group identified the key economic indicators that affect the credit risk of each business type and ECL.

See Notes VII. 5, 8 and 10 for the risk exposure information of receivables, other receivables and contract assets.

See Notes VII. 5,6,8,10,14,16,18 and 31 for the quantitative data of credit risk exposure of the Group due to receivables, receivables for financing, other receivables, contract assets, debt investment, long-term receivables, other equity instruments investment and other non-current assets.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments (Continued)

Liquidity risk

The Group manages its risk of fund deficiency using a recurring liquidity planning tool. This tool considers the maturity of both its financial instruments and estimated cash flows from the Group's operations.

The Group sets its objective as maintaining a balance between continuity and flexibility in funding through the comprehensive use of several financing methods such as notes settlement and bank borrowings, as well as optimizing financing structure through the appropriate combination of long and short-term financing. The Group has obtained banking facilities from several commercial banks to fund the working capital requirements and capital expenditure.

The management of the Group monitors the liquidity position of the Group on an ongoing basis to ensure the availability of sufficient liquid funds to meet all obligations as they fall due and to make the most efficient use of the Group's financial resources.

The table below summarizes the maturity profile of the Group's financial liabilities based on the undiscounted contractual cash flows:

31 December 2021

Unit: Yuan Currency: RMB

	Within 1 year	1 to 2 years	2 to 5 years	Over 5 years	Total
Short-term borrowings	75,629,684.59	-	-	-	75,629,684.59
Bills payable	2,300,794,453.21	-	-	-	2,300,794,453.21
Accounts payable	46,455,196,868.52	-	-	-	46,455,196,868.52
Other payables	1,063,620,223.11	-	-	-	1,063,620,223.11
Lease liabilities	68,675,160.21	47,223,410.28	61,455,727.59	-	177,354,298.08
Long-term borrowings (including maturity within 1 year)	226,069,092.80	-	43,450,000.00	3,084,272,482.40	3,353,791,575.20
Interests arising from long-term and short-term loans	163,916,813.99	158,370,476.21	460,176,875.81	552,853,051.44	1,335,317,217.45
Long-term payables (including maturity within 1 year)	37,438,695.03	62,593,424.21	-	-	100,032,119.24
	<u>50,391,340,991.46</u>	<u>268,187,310.70</u>	<u>565,082,603.40</u>	<u>3,637,125,533.84</u>	<u>54,861,736,439.40</u>

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Year ended 31 December 2021

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments (Continued)

Liquidity risk (Continued)

31 December 2020

Unit: Yuan Currency: RMB

	Within 1 year	1 to 2 years	2 to 5 years	Over 5 years	Total
Short-term borrowings	491,584,392.53	–	–	–	491,584,392.53
Bills payable	1,974,383,429.57	–	–	–	1,974,383,429.57
Accounts payable	44,705,884,497.10	–	–	–	44,705,884,497.10
Other payables	1,979,340,519.78	–	–	–	1,979,340,519.78
Lease liabilities	62,431,029.36	30,838,300.28	33,975,222.35	–	127,244,551.99
Long-term borrowings (including maturity within 1 year)	128,719,092.80	187,000,000.00	577,900,000.00	1,230,741,575.20	2,124,360,668.00
Interests arising from long-term and short-term loans	107,023,325.37	96,714,836.65	233,871,839.43	276,030,640.16	713,640,641.61
Long-term payables (including maturity within 1 year)	42,421,794.65	77,846,656.30	–	–	120,268,450.95
	<u>49,491,788,081.16</u>	<u>392,399,793.23</u>	<u>845,747,061.78</u>	<u>1,506,772,215.36</u>	<u>52,236,707,151.53</u>

Market risk

Interest rate risk

The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's borrowings and deposit and bank current deposit in large amount with floating interest rates.

The Group regularly reviews and monitors the appropriate mix of fixed and floating interest rate in order to manage its interest rate risk. Borrowings and monetary funds are measured at amortized cost and are not revalued on a periodic basis. Floating rate interest income and expenses are credited/charged to the profit or loss as earned/incurred.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments (Continued)

Market risk (Continued)

Interest rate risk (Continued)

As at 31 December 2021, floating interest rate loans and fixed interest rate loans accounted for 98.2% and 1.8% of the Group's borrowings respectively. The management would adjust the floating rate assets based on changes in the market interest rates to reduce the material impact arising from interest rate risk.

If there was a general increase/decrease in the interest rate of bank and other borrowings with floating interest rates by 1 percentage point, with all other variables held constant, the consolidated net profits and other comprehensive income net of tax would have decreased/increased by approximately RMB9,576,718.41 for 2021 (2020: RMB6,639,227.51), and there is no impact on other components of the consolidated shareholders' equity, except for retained earnings, of the Group. The sensitivity analysis above has been determined assuming that the change in interest rates had occurred as at 31 December 2021 and the exposure to interest rate risk has been applied to those financial instruments in existence at that date. The estimated 1% of increase or decrease represents management's assessment of a reasonably possible change in interest rates over the period from the year until the date of balance sheet of the next year.

If there was a general increase/decrease in the interest rate of bank and other borrowings with floating interest rates by 0.1 percentage point, with all other variables held constant, the consolidated net profits and other comprehensive income net of tax would have decreased/increased by approximately RMB12,852,687.00 for 2021 (2020: RMB12,639,216.00), and there is no impact on other components of the consolidated shareholders' equity, except for retained earnings, of the Group. The sensitivity analysis above has been determined assuming that the change in interest rates had occurred as at 31 December 2021 and the exposure to interest rate risk has been applied to those financial instruments in existence at that date. The estimated 0.1 percentage point of increase or decrease represents management's assessment of a reasonably possible change in interest rates over the period from the year until the date of balance sheet of the next year.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments (Continued)

Market risk (Continued)

Foreign currency risk

As a result of its significant business operations in Mainland China, the Group's revenue, expenses and over 95% of the financial assets and liabilities are denominated in RMB. The effect of the fluctuations in the exchange rates of RMB against foreign currencies on the Group's results of operations is therefore minimal and the Group has not entered into any hedging transactions as at 31 December 2021 and 31 December 2020 in order to reduce the Group's exposure to foreign currency risk in this regard.

The following table demonstrates the sensitivity analysis on the foreign currency risk, reflecting the influence of reasonable possible change in the exchange rates of the United States dollar and Hong Kong dollar, with all other variables held constant, on the Group's net profit net of tax.

	Increase/ (decrease) in US Dollar	Increase/ (decrease) in net profit or loss	Increase/ (decrease) in total shareholder's interest
2021			
Depreciation of RMB against United States dollar	5%	17,953,312.29	17,953,312.29
Appreciation of RMB against United States dollar	-5%	<u>-17,953,312.29</u>	<u>-17,953,312.29</u>

	Increase/ (decrease) in HK dollar	Increase/ (decrease) in net profit or loss	Increase/ (decrease) in total shareholder's interest
2021			
Depreciation of RMB against Hong Kong dollar	5%	46,740,013.05	46,740,013.05
Appreciation of RMB against Hong Kong dollar	-5%	<u>-46,740,013.05</u>	<u>-46,740,013.05</u>

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Year ended 31 December 2021

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

3. Risk of financial instruments (Continued)

Market risk (Continued)

	Increase/ (decrease) in US Dollar	Increase/ (decrease) in net profit or loss	Increase/ (decrease) in total shareholder's interest
2020			
Depreciation of RMB against United States dollar	5%	10,041,063.16	10,041,063.16
Appreciation of RMB against United States dollar	-5%	<u>-10,041,063.16</u>	<u>-10,041,063.16</u>

	Increase/ (decrease) in HK dollar	Increase/ (decrease) in net profit or loss	Increase/ (decrease) in total shareholder's interest
2020			
Depreciation of RMB against Hong Kong dollar	5%	40,572,117.87	40,572,117.87
Appreciation of RMB against Hong Kong dollar	-5%	<u>-40,572,117.87</u>	<u>-40,572,117.87</u>

The sensitivity analysis above has been determined assuming that the change in foreign exchange rates had occurred as at 31 December 2021 and 31 December 2020 and the exposure to foreign currency risk has been applied to those monetary assets and liabilities in existence at that date. The estimated percentage increase or decrease represents management's assessment of a reasonable possible change in foreign exchange rates over the period from the year until the date of balance sheet of the next year.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

4. Capital management

The Group's primary objectives for capital management are to safeguard the Group's ability to continue as a going concern and keep the capital ratio at a healthy level, so that it can support business development and maximize the value of Shareholders.

The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions and the risk characteristics of the underlying assets. In order to maintain or adjust the capital structure, the Group may adjust the profit distribution to Shareholders, return capital to Shareholders, issue new shares or sell assets to reduce debts. The Group is not bound by external compulsory capital requirements. In 2021 and 2020, no changes were made in the objectives, policies or processes for managing capital.

The Group monitors its capital using the asset liability ratio, which is the ratio of total liabilities to total assets. The gearing ratios as at the balance sheet date are as follows:

	31 December 2021	31 December 2020
Total assets	108,942,588,838.30	105,328,082,320.59
Total liabilities	63,571,212,916.84	61,030,744,806.19
Gearing ratio	<u>58.35%</u>	<u>57.94%</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XI. DISCLOSURE OF FAIR VALUE

1. Ending fair value of assets and liabilities measured at fair value

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Ending fair value			Total
	Level-1 fair value measurement	Level-2 fair value measurement	Level-3 fair value measurement	
Receivables for financing	–	2,142,993,114.00	–	2,142,993,114.00
Other equity instrument investments	–	–	1,124,819,159.20	1,124,819,159.20
Total assets measured at fair value on a recurring basis	–	2,142,993,114.00	1,124,819,159.20	3,267,812,273.20

2020

Unit: Yuan Currency: RMB

Item	Ending fair value			Total
	Level-1 fair value measurement	Level-2 fair value measurement	Level-3 fair value measurement	
Receivables for financing	–	2,230,124,457.61	–	2,230,124,457.61
Other equity instrument investments	–	–	1,019,867,488.13	1,019,867,488.13
Total assets measured at fair value on a recurring basis	–	2,230,124,457.61	1,019,867,488.13	3,249,991,945.74

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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XI. DISCLOSURE OF FAIR VALUE (Continued)

2. Assets and liabilities disclosed at fair value

31 December 2021

Unit: Yuan Currency: RMB

	Inputs of fair value measurement			Total
	Quoted prices in active markets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
Long-term receivables	–	3,760,138,048.00	–	3,760,138,048.00
Investment properties	–	561,751,389.73	–	561,751,389.73
Financial assets included in other non-current assets	–	4,702,904,421.04	–	4,702,904,421.04
Long-term loans	–	3,154,753,762.62	–	3,154,753,762.62
Long-term payables	–	61,180,880.05	–	61,180,880.05

31 December 2020

Unit: Yuan Currency: RMB

	Inputs of fair value measurement			Total
	Quoted prices in active markets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
Long-term receivables	–	8,760,069,666.00	–	8,760,069,666.00
Investment properties	–	471,045,500.00	–	471,045,500.00
Financial assets included in other non-current assets	–	165,847,397.98	–	165,847,397.98
Long-term loans	–	1,997,903,257.48	–	1,997,903,257.48
Long-term payables	–	75,668,169.69	–	75,668,169.69

NOTES TO FINANCIAL STATEMENTS

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XI. DISCLOSURE OF FAIR VALUE (Continued)

3. Fair value valuation

The following is a comparison of the book value and fair value of various types of financial instruments other than lease liabilities and financial instruments with small differences between book value and fair value:

Unit: Yuan Currency: RMB

	Carrying amount		Fair value	
	31 December 2021	31 December 2020	31 December 2021	31 December 2020
Long-term receivables	3,713,734,908.20	8,384,707,579.19	3,760,138,048.00	8,760,069,666.00
Financial assets include in other non-current assets	4,715,091,932.30	174,209,713.82	4,702,904,421.04	165,847,397.98
Long-term loans	3,127,722,482.40	1,995,641,575.20	3,154,753,762.62	1,997,903,257.48
Long-term payables	62,593,424.21	77,846,656.30	61,180,880.05	75,668,169.69
	<u>11,619,142,747.11</u>	<u>10,632,405,524.51</u>	<u>11,678,977,111.71</u>	<u>10,999,488,491.15</u>

The management has assessed the cash and bank balances and accounts receivable, other receivables, short-term loans, bills and accounts payable and other payables. In each case, the fair value and book value are similar due to short remaining period.

On each balance sheet date, the Group analyzes the changes in the value of financial instruments and determines the key inputs to which the valuation applies.

The fair values of long-term receivables, long-term loans and long-term payables determined by discounting the future cash flows using discount rates representing market return currently available for other financial instruments with similar terms, credit risk and remaining maturities. As at 31 December 2021 and 31 December 2020, the fair value of long-term receivables and long-term payables was similar to the book value, and the Group's own non-performance risk for long-term and short-term borrowings was assessed to be insignificant.

The market approach is used to estimate the fair value of investment properties.

The fair value of other investments in equity instruments is estimated using the market approach, asset-based approach, etc. based on assumptions that are not supported by observable market prices or interest rates. The Group is required to make estimates of liquidity discounts. The Group believes that the fair value and changes in fair value estimated by valuation techniques are reasonable and are the most appropriate values at the balance sheet date.

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XI. DISCLOSURE OF FAIR VALUE (Continued)

4. Unobservable inputs

The following is a description of significant unobservable inputs for Level 3 fair value measurements:

As at December 31, 2021, the significant unobservable inputs in the financial statements were as follows:

Other investments in equity instruments of RMB1,124,819,159.20 (December 31, 2020: RMB1,019,867,488.13), the significant unobservable valuation inputs of P/B ratio, liquidity discount, enterprise value/revenue, P/E ratio and P/S ratio.

5. Adjustment of fair value measurements

Adjustment information for continuous Level 3 fair value measurements is as follows:

2021

	Opening balance for the year	Purchase	Closing balance for the year
Other investments in equity instruments	<u>1,019,867,488.13</u>	<u>104,951,671.07</u>	<u>1,124,819,159.20</u>

2020

	Opening balance for the year	Purchase	Closing balance for the year
Other investments in equity instruments	<u>806,064,229.20</u>	<u>213,803,258.93</u>	<u>1,019,867,488.13</u>

6. Level transformation of fair value measurement

In 2021 and 2020, there was no transfer of the fair value measurement of financial assets and financial liabilities between Level 1 and Level 2, nor was there any transfer to or out of Level 3.

7. Information on adjustment between opening and closing book values and sensitivity analysis of unobservable parameters for continuous Level-3 fair value measurement items

☐ Applicable ☒ Not applicable

8. Reason for conversion for transfer between levels during the current period for continuous fair value measurement items, and policies for determination of time point of the conversion

☐ Applicable ☒ Not applicable

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Year ended 31 December 2021

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XI. DISCLOSURE OF FAIR VALUE (Continued)

9. Changes in valuation techniques during the current period and reason for such change

☐ Applicable ☒ Not applicable

10. Fair value of financial assets and financial liabilities not measured at fair value

☐ Applicable ☒ Not applicable

11. Others

☐ Applicable ☒ Not applicable

XII. RELATED PARTIES AND CONNECTED TRANSACTIONS

1. Parent of the Company

☒ Applicable ☐ Not applicable

Unit: 0'000 Yuan Currency: RMB

Name of the parent	Type of enterprise	Place of registration	Legal representative	Nature of business	Registered capital	Shareholding percentage in the Company (%)	Percentage of voting right in the Company (%)
CRSC Group	The wholly State-Owned Enterprise and Central enterprise	Beijing	Zhou Zhiliang	Railway communication, signal power and production of automatic control equipment	1,000,000	62.69	62.69

Explanation about the parent of the Company

The Company's parent and ultimate holding company is CRSC Group

2. Subsidiaries of the Company

For details of the subsidiaries of the Company, see the Note

☒ Applicable ☐ Not applicable

For details of the subsidiaries of the Company, see the Note IX. 1.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

3. Joint ventures and associates of the Company

☒ Applicable ☐ Not applicable

For details of joint ventures or associates of the Company, see the Note VII. 17.

Information for other joint ventures and associates which form balance through related transaction during the current or previous periods

☐ Applicable ☒ Not applicable

Other explanation

☐ Applicable ☒ Not applicable

4. Other related parties

☒ Applicable ☐ Not applicable

Name of other related parties	Relationship between other related parties and the Company
Beijing CRSC Construction and Development Co., Ltd. (北京通號建設開發有限公司)	Joint venture of the Parent
Beijing CRSC Beifang Real Estate Co., Ltd. (北京通號北房置業有限公司)	Joint venture of the Parent
Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	Associate of the subsidiary under the common control of the ultimate controlling party
Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	Associate of the subsidiary under the common control of the ultimate controlling party
Tianshui Tonghao Electric Power Equipment Co., Ltd. (天水通號電力設備有限公司)	Associate of the subsidiary under the common control of the ultimate controlling party
Beijing Erqi Communication Factory Co., Ltd. (北京二七通信工廠有限公司)	Subsidiary under the common control of the ultimate controlling party
Beijing Railways Signal & Communication Complete Equipment Company Ltd. (北京鐵路通信信號成套設備有限公司)	Subsidiary under the common control of the ultimate controlling party

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

4. Other related parties (Continued)

Name of other related parties	Relationship between other related parties and the Company
Shanghai Xinlicheng Communication Technology Service Co., Ltd. (上海信立城通信技術服務有限公司)	Subsidiary under the common control of the ultimate controlling party
Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	Subsidiary under the common control of the ultimate controlling party
Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd. (北京北信豐元鐵路電子設備有限公司)	Subsidiary under the common control of the ultimate controlling party
CRSC Real Estate Co., Ltd. (通號置業有限公司)	Subsidiary under the common control of the ultimate controlling party
CRSC Foshan Real Estate Co., Ltd. (通號佛山置業有限公司)	Subsidiary under the common control of the ultimate controlling party
CRSC Guizhou Real Estate Co., Ltd. (通號貴州置業有限公司)	Subsidiary under the common control of the ultimate controlling party
Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司)	Minority shareholder having material influence on the Group
ALSTOM Transporte SA	Related party of a minority shareholder having material influence on the Group
ALSTOM Transport S.A.	Related party of a minority shareholder having material influence on the Group
Alstom Signaling Inc.	Related party of a minority shareholder having material influence on the Group
ALSTOM Aix en Provence	Related party of a minority shareholder having material influence on the Group
ALSTOM (Villeurbanne)	Related party of a minority shareholder having material influence on the Group
ALSTOM Ferroviaria S.p.A	Related party of a minority shareholder having material influence on the Group
ALSTOM Transport India Limited	Related party of a minority shareholder having material influence on the Group
ALSTOM Transport (S) Pte Ltd.	Related party of a minority shareholder having material influence on the Group
ALSTOM Transport Australia Pty. Ltd	Related party of a minority shareholder having material influence on the Group

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Year ended 31 December 2021
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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

4. Other related parties (Continued)

Name of other related parties	Relationship between other related parties and the Company
ALSTOM Hong Kong Ltd.	Related party of a minority shareholder having material influence on the Group
ALSTOM Brasil Energia e transporte Ltda	Related party of a minority shareholder having material influence on the Group
ALSTOM Transport Mexico, S.A. de C.V.	Related party of a minority shareholder having material influence on the Group
CITADIS ISRAEL LTD	Related party of a minority shareholder having material influence on the Group
ALSTOM Transport Romania SA	Related party of a minority shareholder having material influence on the Group
ALSTOM Transport Spain Limited	Related party of a minority shareholder having material influence on the Group
ALSTOM (USA)	Related party of a minority shareholder having material influence on the Group

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions

(1). Related party transactions of purchasing or selling goods and rendering or receiving services

Statement on procurement of goods/receipt of labour services

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Related parties	Contents of related party transactions	Amount incurred during the period	Amount incurred during the previous period
ALSTOM Transport S.A. (Note 1)	Procurement of goods	298,255,651.98	231,146,470.40
Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd. (北京北信豐元鐵路電子設備有限公司) (Note 1)	Procurement of goods	43,040,048.14	49,809,860.80
Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	Procurement of goods	41,507,580.17	25,057,021.65
SSCX	Procurement of goods	32,315,152.94	78,708,367.02
ALSTOM (Villeurbanne) (Note 1)	Procurement of goods	30,455,042.83	40,850,090.32
Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	Procurement of goods	18,471,580.17	11,664,392.07
Alstom Signaling Inc. (Note 1)	Procurement of goods	8,818,186.49	5,631,560.16
Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司) (Note 1)	Procurement of goods	6,592,218.40	3,305,296.24
Tongzhi Data Technology (Beijing) Co., Ltd. (通智科技)	Procurement of goods	3,241,628.96	15,566,037.74
Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司) (Note 1)	Procurement of goods	3,209,291.53	4,149,115.00
ALSTOM Aix en Provence (Note 1)	Procurement of goods	1,249,860.01	3,217,852.79
Chipsea Prioritizing	Procurement of goods	812,917.77	—
China Tietong Railway	Procurement of goods	811,273.00	—
Beijing Erqi Communication Factory Co., Ltd. (北京二七通信工廠有限公司) (Note 1)	Procurement of goods	64,953.41	—
Schaltbau	Procurement of goods	51,961.07	707,082.91
Beijing Railways Signal & Communication Complete Equipment Company Ltd. (北京鐵路通信信號成套設備有限公司) (Note 1)	Procurement of goods	—	3,483,421.74
ALSTOM Transport S.A. (Note 1)	Receiving technology transfer services	265,466,093.65	248,210,844.38

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(1). Related party transactions of purchasing or selling goods and rendering or receiving services (Continued)

Related parties	Contents of related party transactions	Amount incurred during the period	Amount incurred during the previous period
ALSTOM (Villeurbanne) (Note 1)	Receiving technology transfer services	14,346,098.11	—
Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司) (Note 1)	Receiving technology transfer services	3,916,650.01	2,535,399.43
ALSTOM Aix en Provence (Note 1)	Receiving technology transfer services	846,751.96	693,541.38
Tongzhi Data Technology (Beijing) Co., Ltd. (通智科技)	Receiving services	22,854,453.62	—
Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司) (Note 1)	Receiving services	2,675,568.39	—
Shanghai Xinlicheng Communication Technology Service Co., Ltd. (上海信立城通信技術服務有限公司) (Note 1)	Receiving services	771,152.82	783,218.00
Beijing Railways Signal & Communication Complete Equipment Company Ltd. (北京鐵路通信信號成套設備有限公司) (Note 1)	Receiving services	419,825.68	545,607.48
SSCX	Receiving services	248,070.80	—
ALSTOM Transport S.A. (Note 1)	Receiving services	—	385,972.70

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(1). Related party transactions of purchasing or selling goods and rendering or receiving services (Continued)

Statement on sales of goods/provision of labour services

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Related parties	Contents of related party transactions	Amount incurred during the period	Amount incurred during the previous period
CRSC Tianshui	Selling goods	106,194,690.30	144,247,787.62
SSCX	Selling goods	56,486,173.37	55,626,017.44
ALSTOM Brasil Energia e transporte Ltda (Note 1)	Selling goods	27,110,354.61	506,468.00
ALSTOM Transport S.A. (Note 1)	Selling goods	19,834,655.00	31,963,082.50
Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd. (北京北信豐元鐵路電子設備有限公司) (Note 1)	Selling goods	11,041,680.86	29,735,953.15
Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	Selling goods	8,243,678.86	6,739,941.35
Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	Selling goods	8,169,828.40	10,336,727.58
ALSTOM Transport India Limited (Note 1)	Selling goods	7,935,750.00	22,433,312.00
ALSTOM Ferroviaria S.p.A (Note 1)	Selling goods	914,050.00	1,261,400.00
Shanghai Xinlicheng Communication Technology Service Co., Ltd. (上海信立城通信技術服務有限公司) (Note 1)	Selling goods	518,867.92	11,504.42
ALSTOM Transporte SA (Note 1)	Selling goods	—	16,237,512.00
ALSTOM Transport (S) Pte Ltd. (Note 1)	Selling goods	—	3,359,576.00
ALSTOM Transport Australia Pty. Ltd (Note 1)	Selling goods	—	3,167,649.00
CRSC Group (Note 1)	Selling goods	—	1,264,957.26
ALSTOM Transport Mexico, S.A. de C.V. (Note 1)	Selling goods	—	394,926.00
Beijing CRSC Construction and Development Co., Ltd. (北京通號建設開發有限公司)	Selling goods	—	136,792.45
ALSTOM Hong Kong Ltd. (Note 1)	Selling goods	—	52,980.00

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(1). Related party transactions of purchasing or selling goods and rendering or receiving services (Continued)

Related parties	Contents of related party transactions	Amount incurred during the period	Amount incurred during the previous period
SSCX	Rendering technology transfer services	918,582.99	964,822.63
CRSC Real Estate Co., Ltd. (通號置業有限公司) (Note 1)	Rendering services	130,258,250.29	202,995,841.92
CRSC Foshan Real Estate Co., Ltd. (通號佛山置業有限公司) (Note 1)	Rendering services	103,746,009.88	391,271,246.71
CRSC Guizhou Real Estate Co., Ltd. (通號貴州置業有限公司) (Note 1)	Rendering services	58,343,908.68	28,672,796.27
Beijing CRSC Beifang Real Estate Co., Ltd. (北京通號北房置業有限公司)	Rendering services	7,294,327.73	—
SSCX	Rendering services	905,377.11	1,683,937.80
Schaltbau	Rendering services	660,230.83	—
CRSC Group (Note 1)	Rendering services	584,913.79	134,951.46
CRSC Tianshui	Rendering services	583,308.49	89,286,337.71

Note 1: The prices of the goods and labour services between the Group and related parties were determined by both parties through negotiation with referring to market prices and other factors.

Explanation about related party transactions of purchasing or selling goods and rendering or receiving services

☒ Applicable ☐ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(2). Connected entrusted management/contracting and entrusted management/outsourcing

Statement on entrusted management/contracting by the Company:

☐ Applicable ☒ Not applicable

Description of connected custody/contracting

☐ Applicable ☒ Not applicable

Statement on entrusted management/outsourcing by the Company

☐ Applicable ☒ Not applicable

Description of connected management/outsourcing

☐ Applicable ☒ Not applicable

(3). Leases with related parties

The Company as lessor:

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Name of lessee	Type of leased assets	Rental income recognized in current period	Rental income recognized in the previous period
Schaltbau	House	2,433,302.75	2,433,302.75
Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	House	1,509,838.54	1,509,838.54
Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司) (Note 1)	House	471,421.10	471,421.10
Zhuhai Huatong	House	—	2,674,055.99

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(3). Leases with related parties (Continued)

The Company as lessee:

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Name of lessor	Type of leased assets	Rental income recognized in current period	Rental income recognized in the previous period
Beijing Railways Signal & Communication Complete Equipment Company Ltd. (北京鐵路通信信號成套設備有限公司)	House	392,495.24	366,859.46

Explanation about leases with related parties

☒ Applicable ☐ Not applicable

Note 1: Related party transactions in connection with the above items also constitute connected transactions or continuing connected transactions as defined in Chapter 14A of the Hong Kong Listing Rules 《香港上市規則》.

Note 2: The prices of the rental between the Group and related parties were determined by both parties through negotiation with referring to market prices.

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(4). Related guarantee

The Company as a guarantor

☐ Applicable ☒ Not applicable

The Company as a secured party

☐ Applicable ☒ Not applicable

Description of related guarantee

☐ Applicable ☒ Not applicable

(5). Capital lending to/borrowing from related parties

☐ Applicable ☒ Not applicable

(6). Asset transfer and debt restructuring of related parties

☐ Applicable ☒ Not applicable

(7). Emolument of key management

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount incurred during the period	Amount incurred during the previous period
Emolument of key management	<u>8,285,703.72</u>	<u>6,738,673.53</u>

Key management personnel comprise executive directors, supervisors, independent non-executive directors and senior management.

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Year ended 31 December 2021

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(7). Emolument of key management (Continued)

Directors' and supervisors' remuneration

Unit: Yuan Currency: RMB

	2021	2020
Directors' and supervisors' remuneration	4,152,198.02	3,386,736.53

Within the year, the names of directors and supervisors and their remunerations were as follows:

2021

Unit: Yuan Currency: RMB

	Remuneration	Basic salaries	Performance-based bonuses	Total pre-tax remunerations (Note 1)	Social insurance premium and housing provident fund	Supplementary pension insurance	Total Compensation
Executive directors							
Mr. ZHOU Zhiliang (周志亮)	-	234,396.00	511,788.00	746,184.00	130,029.22	51,201.80	927,415.02
Mr. XU Zongxiang (徐宗祥)	-	234,396.00	511,788.00	746,184.00	130,029.22	52,868.80	929,082.02
Mr. YANG Yongsheng (楊永勝)	-	210,960.00	352,996.00	563,956.00	130,029.22	47,257.20	741,242.42
	-	679,752.00	1,376,572.00	2,056,324.00	390,087.66	151,327.80	2,597,739.46
Independent Non-executive Directors							
Mr. WANG Jiajie (王嘉傑) (Note 3)	-	-	-	-	-	-	-
Mr. CHEN Jin'en (陳津恩)	80,000.00	-	-	80,000.00	-	-	80,000.00
Mr. CHAN Ka Keung Peter (陳嘉強)	139,008.00	-	-	139,008.00	-	-	139,008.00
Mr. YAO Guiqing (姚桂清)	100,000.00	-	-	100,000.00	-	-	100,000.00
	319,008.00			319,008.00			319,008.00
Non-executive Directors							
Mr. GUO Yonghong (郭永宏) (Note 5)	-	-	-	-	-	-	-
Supervisors							
Mr. CHEN Shikui (陳世奎)	-	156,000.00	342,000.00	498,000.00	130,029.22	22,876.72	650,905.94
Mr. KONG Ning (孔寧)	-	166,400.00	251,943.00	418,343.00	130,029.22	36,172.40	584,544.62
Ms. LI Tienan (李鐵南) (Note 2)	-	-	-	-	-	-	-
	-	322,400.00	593,943.00	916,343.00	260,058.44	59,049.12	1,235,450.56
Total	319,008.00	1,002,152.00	1,970,515.00	3,291,675.00	650,146.10	210,376.92	4,152,198.02

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Year ended 31 December 2021

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(7). Emolument of key management (Continued)

2020

Unit: Yuan Currency: RMB

	Remuneration	Basic salaries	Performance-based bonuses	Total pre-tax remunerations (Note 1)	Social insurance premium and housing provident fund	Supplementary pension insurance	Total Compensation
Executive directors							
Mr. ZHOU Zhiliang (周志亮)	-	219,996.00	417,746.50	637,742.50	73,811.78	51,819.60	763,373.88
Mr. XU Zongxiang (徐宗祥)	-	219,996.00	244,373.50	464,369.50	73,811.78	49,960.80	588,142.08
Mr. YANG Yongsheng (楊永勝)	-	198,000.00	304,691.00	502,691.00	73,811.78	34,998.30	611,501.08
	-	637,992.00	966,811.00	1,604,803.00	221,435.34	136,778.70	1,963,017.04
Independent Non-executive Directors							
Mr. WANG Jiajie (王嘉傑) (Note 3)	60,000.00	-	-	60,000.00	-	-	60,000.00
Mr. CHEN Jin'en (陳津恩)	60,000.00	-	-	60,000.00	-	-	60,000.00
Mr. CHAN Ka Keung Peter (陳嘉強)	131,008.00	-	-	131,008.00	-	-	131,008.00
Mr. YAO Guiqing (姚桂清)	60,000.00	-	-	60,000.00	-	-	60,000.00
	311,008.00	-	-	311,008.00	-	-	311,008.00
Supervisors							
Mr. CHEN Shikui (陳世奎)	-	144,000.00	336,000.00	480,000.00	73,811.78	21,258.60	575,070.38
Mr. KONG Ning (孔寧)	-	139,200.00	208,800.00	348,000.00	63,442.56	36,585.55	448,028.11
Ms. TIAN Liyan (田麗艷) (Note 4)	-	-	89,613.00	89,613.00	-	-	89,613.00
Ms. LI Tienan (李鐵南) (Note 2)	-	-	-	-	-	-	-
	-	283,200.00	634,413.00	917,613.00	137,254.34	57,844.15	1,112,711.49
Total	311,008.00	921,192.00	1,601,224.00	2,833,424.00	358,689.68	194,622.85	3,386,736.53

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Year ended 31 December 2021
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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(7). Emolument of key management (Continued)

Notes:

Note 1: The total pre-tax remunerations include basic salary, seniority wage, post salary, performance-based salary, bonus, and meeting allowance, etc.

Note 2: Ms. LI Tienan was appointed as a supervisor in February 2020. She received no emoluments for the year ended 31 December 2021, because she did not receive any remuneration in the capacity as supervisor.

Note 3: Mr. WANG Jiajie resigned as independent non-executive director in January 2021. He received no emoluments for the year ended 31 December 2021, because he did not receive any remuneration in the capacity as independent non-executive director.

Note 4: Ms. TIAN Liyan resigned as chairman of the Supervisory Committee in February 2020.

Note 5: Mr. GUO Yonghong was appointed as a non-executive director in March 2021. He received no emoluments for the year ended 31 December 2021, because he did not receive any remuneration in the capacity as non-executive director.

An analysis of the number of five highest paid employees within the Group for the year is as follows:

	2021	2020
Non-director and non-supervisor employees	<u>5</u>	<u>5</u>

Details of the remuneration of the above non-director and non-supervisor highest paid employees are as follows:

Unit: Yuan Currency: RMB

	2021	2020
Basic salary	5,351,500.00	5,824,200.00
Performance bonus	<u>7,444,537.00</u>	<u>5,866,429.52</u>
Total pre-tax remunerations	<u>12,796,037.00</u>	<u>11,690,629.52</u>
Social insurance premium and housing provident fund	692,804.45	534,903.55
Supplementary pension insurance	<u>387,022.80</u>	<u>370,779.60</u>
	<u>13,875,864.25</u>	<u>12,596,312.67</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(7). Emolument of key management (Continued)

The number of non-director and non-supervisor highest paid employees whose remuneration fell within the following bands is as follows:

	2021	2020
Nil to HK\$1,000,000	—	—
HK\$1,000,001 to HK\$1,500,000	—	—
HK\$1,500,001 to HK\$2,000,000	—	—
HK\$2,000,001 to HK\$2,500,000	—	—
HK\$2,500,001 to HK\$3,000,000	—	3
HK\$3,000,001 to HK\$3,500,000	5	2
	<u>5</u>	<u>2</u>
	<u>5</u>	<u>5</u>

(8). Other related party transactions

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

6. Amounts due from/to related parties

(1). Receivables

✓ Applicable □ Not applicable

Unit: Yuan Currency: RMB

Project name	Related parties	Closing balance		Opening balance	
		Book balance	Provision for bad debt	Book balance	Provision for bad debt
Accounts receivable	CRSC Foshan Real Estate Co., Ltd. (通號佛山置業有限公司)	297,105,277.45	—	341,207,338.30	—
Accounts receivable	CRSC Tianshui	292,863,059.33	—	256,014,007.85	—
Accounts receivable	CRSC Real Estate Co., Ltd. (通號置業有限公司)	151,581,441.45	—	104,648,801.57	—
Accounts receivable	Siping Pipeline	29,101,565.00	—	9,079,482.00	—
Accounts receivable	CRSC Guizhou Real Estate Co., Ltd. (通號貴州置業有限公司)	21,079,606.28	—	10,114,290.11	—
Accounts receivable	Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	17,886,991.23	467,392.53	8,655,085.15	43,275.43
Accounts receivable	SSCX	15,583,230.76	5,588.28	15,283,692.32	5,062.85
Accounts receivable	Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	820,684.96	—	—	—
Accounts receivable	ALSTOM Transport India Limited	238,423.70	1,192.12	—	—
Accounts receivable	Tianshui Tonghao Electric Power Equipment Co., Ltd. (天水通號電力設備有限公司)	43,067.00	635.90	43,067.00	—
Accounts receivable	ALSTOM Transport Mexico, S.A. de C.V.	29,136.00	1,456.80	394,926.00	1,974.63
Accounts receivable	ALSTOM Ferroviaria S.p.A	—	—	1,261,400.00	6,307.00
Accounts receivable	ALSTOM Transporte SA	—	—	207,844.00	1,039.22
Accounts receivable	ALSTOM Transport S.A.	—	—	46,595.00	232.98
Prepayments	Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	1,613,217.82	—	1,210,383.03	—
Prepayments	SSCX	130,000.00	—	—	—
Prepayments	Beijing Railways Signal & Communication Complete Equipment Company Ltd. (北京鐵路通信信號成套設備有限公司)	26,870.64	—	32,838.56	—
Prepayments	ALSTOM Transport S.A.	—	—	2,546,503.68	—
Prepayments	ALSTOM (Villeurbanne)	—	—	418,420.90	—
Other receivables	CRSC Group	16,662,394.89	—	—	—

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

6. Amounts due from/to related parties (Continued)

(1). Receivables (Continued)

Unit: Yuan Currency: RMB

Project name	Related parties	Closing balance		Opening balance	
		Book balance	Provision for bad debt	Book balance	Provision for bad debt
Other receivables	CRSC Real Estate Co., Ltd. (通號置業有限公司)	333,518.00	—	310,518.00	—
Other receivables	SSCX	327,224.79	—	918,862.28	—
Other receivables	Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	293,628.00	—	—	—
Other receivables	Beijing CRSC Beifang Real Estate Co., Ltd. (北京通號北房置業有限公司)	169,382.27	—	622,908.84	—
Other receivables	Beijing CRSC Construction and Development Co., Ltd. (北京通號建設開發有限公司)	71,997.70	—	71,997.70	—
Other receivables	Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	42,220.80	—	—	—
Other receivables	CRSC Tianshui	32,518.97	—	57,499.97	—
Other receivables	Beijing Railways Signal & Communication Complete Equipment Company Ltd. (北京鐵路通信信號成套設備有限公司)	10,000.00	—	22,100.00	—
Dividends receivable	SSCX	6,525,000.00	—	14,040,000.00	—

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

6. Amounts due from/to related parties (Continued)

(2). Payable

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Project name	Related parties	Book balance at the end of the period	Book balance at the beginning of the period
Accounts payable	Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd. (北京北信豐元鐵路電子設備有限公司)	127,637,286.06	133,672,015.80
Accounts payable	Alstom Signaling Inc.	61,726,905.50	66,593,042.14
Accounts payable	ALSTOM Transport S.A.	51,350,265.10	120,413,856.53
Accounts payable	Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	46,487,403.44	13,993,324.31
Accounts payable	Tongzhi Data Technology (Beijing) Co., Ltd.	12,176,481.32	4,927,521.74
Accounts payable	ALSTOM (Villeurbanne)	7,329,590.68	8,859,562.95
Accounts payable	SSCX	7,078,456.70	31,755,398.37
Accounts payable	Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	3,401,783.59	274,236.08
Accounts payable	China Tietong Railway	811,273.00	—
Accounts payable	Schaltbau	291,826.38	529,114.75
Accounts payable	Chipsea Prioritizing	279,770.00	—
Accounts payable	Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	125,544.17	44,584.00
Accounts payable	Beijing Erqi Communication Factory Co., Ltd. (北京二七通信工廠有限公司)	64,953.41	39,385.47
Accounts payable	ALSTOM Aix en Provence	59,553.43	598,333.48
Accounts payable	Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司)	—	190,644.34
Bills payable	Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	2,900,000.00	—
Bills payable	SSCX	—	14,000,000.00
Bills payable	Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd. (北京北信豐元鐵路電子設備有限公司)	—	350,000.00

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

6. Amounts due from/to related parties (Continued)

(2). Payable (Continued)

Unit: Yuan Currency: RMB

Project name	Related parties	Book balance at the end of the period	Book balance at the beginning of the period
Bills payable	Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	–	68,713.00
Contract liabilities	Beijing CRSC Beifang Real Estate Co., Ltd. ("Beifang Real Estate") (北京通號北房置業有限公司)	7,294,327.73	–
Contract liabilities	ALSTOM Transport S.A.	4,380,561.06	4,225,109.56
Contract liabilities	CITADIS ISRAEL LTD	2,126,404.67	–
Contract liabilities	SSCX	577,400.00	112,000.00
Contract liabilities	ALSTOM Transport (S) Pte Ltd.	131,815.00	42,997.00
Contract liabilities	ALSTOM Transport Australia Pty. Ltd	110,357.99	185,650.00
Contract liabilities	ALSTOM Transport Mexico, S.A. de C.V.	29,120.00	–
Contract liabilities	ALSTOM Transport India Limited	11,938.55	–
Other payables	CRSC Group	11,477,274.05	11,776,283.85
Other payables	Beijing Railways Signal & Communication Complete Equipment Company Ltd. (北京鐵路通信信號成套設備有限公司)	562,248.95	475,511.81
Other payables	Schaltbau	64,925.15	–
Other payables	Zhuhai Huatong	12,257.84	–

Note: As of 31 December 2021, the Group's receivables from and payables to related parties were interest-free, unsecured and have no fixed repayment period.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

7. Commitment of related parties

✓ Applicable ☐ Not applicable

The following are the significant outstanding contracts in connection with related parties of the Group at the balance sheet date:

Selling goods to related parties

Unit: Yuan Currency: RMB

	31 December 2021	31 December 2020
ALSTOM Transport S.A.	53,042,498.28	32,326,137.78
ALSTOM Transport Australia Pty.Ltd	45,637,583.60	—
ALSTOM Transport India Limited	10,513,661.00	—
SSCX	10,279,709.91	13,410,144.41
ALSTOM Transport Romania SA	3,186,589.00	—
ALSTOM Transport Spain Limited	929,453.25	—
ALSTOM HONG KONG LTD.	240,000.00	—
ALSTOM Transport (S) Pte Ltd.	211,542.00	—
	124,041,037.04	45,736,282.19

Purchasing goods from/receiving technology transfer services from related parties

Unit: Yuan Currency: RMB

	31 December 2021	31 December 2020
ALSTOM Transport S.A.	293,211,498.21	276,169,670.10
SSCX	11,852,852.10	41,387,046.06
ALSTOM (USA)	7,504,122.24	—
Gu'an Beixin Railway Signal Co., Ltd.	1,189,881.76	1,368,080.06
Chipsea Prioritizing	662,843.30	—
Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd.	247,471.21	1,315,902.01
Tongzhi Data Technology (Beijing) Co., Ltd.	—	17,760,387.04
Alstom Signaling Inc.	—	6,433,362.24
ALSTOM Transport India Limited	—	448,603.48
ALSTOM Aix en Provence	—	416,766.48
	314,668,668.82	345,299,817.47

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XII. RELATED PARTIES AND CONNECTED TRANSACTIONS (Continued)

7. Commitment of related parties (Continued)

Providing labour service for related parties

Unit: Yuan Currency: RMB

	31 December 2021	31 December 2020
Siping Pipeline	205,361,702.63	205,361,702.63
CRSC Tianshui	4,885,996.00	—
	210,247,698.63	205,361,702.63

8. Others

☐ Applicable ☒ Not applicable

XIII. SHARE-BASED PAYMENT

1. Overview of share-based payment

☐ Applicable ☒ Not applicable

2. Equity-settled share-based payments

☐ Applicable ☒ Not applicable

3. Cash-settled share-based payments

☐ Applicable ☒ Not applicable

4. Modification and termination of share-based payment

☐ Applicable ☒ Not applicable

5. Other

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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XIV. COMMITMENTS AND CONTINGENCIES

1. Significant commitments

☒ Applicable ☐ Not applicable

Major external commitments, nature and amount thereof as at the balance sheet date

Unit: Yuan Currency: RMB

	Closing balance	Opening balance
Contracted, but not provided for		
Capital commitment	6,330,106.30	21,218,890.30
Investment commitment	324,610,770.00	284,750,480.00
Total	330,940,876.30	305,969,370.30

2. Contingencies

(1). Important contingencies existing as at the balance sheet date

☐ Applicable ☒ Not applicable

(2). The Company has no disclosable important contingencies, and shall also give an explanation:

☐ Applicable ☒ Not applicable

3. Others

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XV. LEASE ARRANGEMENT

1. As a lessor

The Group leases out part of houses and buildings to form operating leases with a term of 1- 8 years. Pursuant to leasing contracts, rentals shall be adjusted annually based on market rental rate. The Group recorded income from leasing out of houses and buildings of RMB29,345,092.74 in 2021 (2020: RMB28,615,913.61). Leasing out of houses and buildings is stated in the investment properties, details of which are set out in Note VII. 20.

Profit and loss related to operating lease are listed as follows:

Unit: Yuan Currency: RMB

	2021	2020
Rental income	29,345,092.74	28,615,913.61

According to the lease contracts entered into with the lessees, the minimum lease receivables under non-cancellable leases are as follows:

Unit: Yuan Currency: RMB

	2021	2020
Less than 1 year (including 1 year)	30,040,752.03	28,744,854.81
2 to 5 years (including 5 years)	96,419,306.98	77,874,693.91
Over 5 years	21,863,938.67	25,838,606.13
	148,323,997.68	132,458,154.85

2. As a lessee

Unit: Yuan Currency: RMB

	2021	2020
Interest expense of lease liabilities	8,797,303.53	7,800,474.53
Short-term lease expenses subject to simplified treatment and included in current profits and losses	119,893,542.36	79,891,527.32
Total cash outflow related to lease	77,244,113.03	83,636,649.91

The leased assets of the Group include houses and buildings, machinery equipment, transportation equipment and other equipment used in operation, in which houses and buildings and machinery equipment generally have a lease term of 1 to 5 years and transportation equipment and other equipment generally have a lease term of 1 to 3 years. Lease contracts generally stipulate that the Group cannot sublease the leased assets, and some of the lease contracts require the Group to keep financial indicators at a certain level. A few lease contracts specify options for renewal and termination.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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XV. LEASE ARRANGEMENT (Continued)

2. As a lessee (Continued)

Leases committed but not yet commenced

The expected annual cash outflows in the future for leases committed but not yet commenced by the Group are as follows:

Unit: Yuan Currency: RMB

	2021	2020
Less than 1 year (including 1 year)	11,962,537.76	37,290,453.89
1 to 2 years (including 2 years)	7,134,484.33	20,659,577.27
2 to 3 years (including 3 years)	—	6,154,657.10
Over 3 years	—	9,127,760.59
	19,097,022.09	73,232,448.85

XVI. EVENTS AFTER THE BALANCE SHEET DATE

1. Important non-adjusting matters

☐ Applicable ☒ Not applicable

2. Profit distribution

☒ Applicable ☐ Not applicable

On 25 March 2022, the board of directors of the Company resolved to recommend the distribution of a cash dividend of RMB0.17 per share (including tax) with the profit available for distribution as of 31 December 2021. The profit distribution plan will be submitted to the Company's 2021 annual general meeting for the shareholders' consideration and approval.

3. Sales return

☐ Applicable ☒ Not applicable

4. Explanation of other events after the balance sheet date

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XVII. OTHER SIGNIFICANT EVENTS

1. Early correction of accounting error

(1). Retrospective restatement

☐ Applicable ✓ Not applicable

(2). Prospective application

☐ Applicable ✓ Not applicable

2. Debt restructuring

☐ Applicable ✓ Not applicable

3. Asset replacement

(1). Exchange of non-monetary assets

☐ Applicable ✓ Not applicable

(2). Other asset replacement

☐ Applicable ✓ Not applicable

4. Annuity plan

☐ Applicable ✓ Not applicable

5. Discontinuing operations

☐ Applicable ✓ Not applicable

XVII. OTHER SIGNIFICANT EVENTS (Continued)

6. Segment information

(1). Basis for determining and accounting policies of reportable segments

☒ Applicable ☐ Not applicable

For management purposes, the Group is divided into business units based on the products and services. The Group has the following three reportable segments:

- (1) The rail transportation control system segment mainly provides a specialized “three-in-one” service comprising of design and integration, equipment manufacturing and system delivery for rail transportation control systems;
- (2) General engineering contracting segment mainly includes municipal engineering contracting and the construction services of other engineering projects;
- (3) Other segments mainly engage in trading etc.

The management separately manages the operating results of each business unit for the purpose of making decisions about resources allocation and performance assessment. Segment performance is evaluated based on the profit of a reportable segment. The indicator is consistent with the total profit of the Group.

Inter-segment transfer pricing is determined by reference to prices adopted in sales or provision of labor services to third parties.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XVII. OTHER SIGNIFICANT EVENTS (Continued)

6. Segment information (Continued)

(2). Financial information of reportable segment

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Item	Rail transportation control system	General engineering contracting	Others	Inter-segment offsetting	Total
Revenue from external transactions	28,081,473,559.38	10,211,703,641.11	65,119,908.29	-	38,358,297,108.78
Revenue from inter-segment transactions	23,085,890.75	64,626,966.26	9,823,301.74	-97,536,158.75	-
	28,104,559,450.13	10,276,330,607.37	74,943,210.03	-97,536,158.75	38,358,297,108.78
Investment income of joint ventures and associates	85,246,857.06	882,237.76	-	-	86,129,094.82
Asset impairment loss	64,561,485.17	167,285.05	-	-	64,728,770.22
Credit impairment loss	61,113,023.65	126,668,150.15	7,715,380.70	-	195,496,554.50
Depreciation and amortization fees	684,875,754.43	22,783,917.86	622,679.81	-	708,282,352.10
Total profit					4,273,912,182.62
Income tax expenses					-581,002,096.30
Net profit					3,692,910,086.32
Total assets	73,485,903,275.09	36,164,462,291.34	142,997,367.21	-850,774,095.34	108,942,588,838.30
Total liabilities	35,921,576,958.54	28,413,571,060.11	87,088,093.53	-851,023,195.34	63,571,212,916.84
Other disclosures:					
Long-term equity investments in joint ventures and associates	1,297,129,873.89	81,093,873.17	-	-	1,378,223,747.06
Capital expenditures (Note)	626,240,662.77	14,505,510.09	103,781.60	-	640,849,954.46

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XVII. OTHER SIGNIFICANT EVENTS (Continued)

6. Segment information (Continued)

(2). Financial information of reportable segment (Continued)

2020

Unit: Yuan Currency: RMB

Item	Rail transportation control system	General engineering contracting	Others	Inter-segment offsetting	Total
Revenue from external transactions	28,697,807,715.87	11,367,288,035.61	59,380,959.28	-	40,124,476,710.76
Revenue from inter-segment transactions	170,324,451.16	77,891,295.59	34,304,764.52	-282,520,511.27	-
	28,868,132,167.03	11,445,179,331.20	93,685,723.80	-282,520,511.27	40,124,476,710.76
Investment income of joint ventures and associates	55,927,425.69	4,436,930.54	-	-	60,364,356.23
Asset impairment loss	9,477,047.11	4,329,266.17	-	-	13,806,313.28
Credit impairment loss/(reversal)	-3,526,724.55	27,440,587.67	-7,851,687.76	-	16,062,175.36
Depreciation and amortization fees	603,238,095.05	39,248,766.13	553,120.41	-	643,039,981.59
Total profit					5,035,872,523.61
Income tax expenses					-796,452,326.62
Net profit					4,239,420,196.99
Total assets	70,702,421,914.74	35,453,252,959.74	202,479,146.55	-1,030,071,700.44	105,328,082,320.59
Total liabilities	34,088,819,658.26	27,923,031,030.12	75,209,431.13	-1,056,315,313.32	61,030,744,806.19
Other disclosures:					
Long-term equity investments in joint ventures and associates	1,099,321,580.94	9,711,635.41	-	-	1,109,033,216.35
Capital expenditures (Note)	1,906,413,111.78	67,059,446.16	433,251.77	-	1,973,905,809.71

Note: Capital expenditures consist of additions for the year to investment properties, fixed assets, construction in progress, right-of-use assets, intangible assets, development expenditure and long-term prepaid expenses.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XVII. OTHER SIGNIFICANT EVENTS (Continued)

6. Segment information (Continued)

- (3). The Company shall explain the reason if there is no reportable segment or it cannot disclose the total assets and total liabilities of each reportable segment

☐ Applicable ☒ Not applicable

- (4). Other explanation

☒ Applicable ☐ Not applicable

Geographic information

- (a) Revenue from external transactions

Unit: Yuan Currency: RMB

	2021	2020
Mainland China	37,253,392,641.99	39,209,230,737.00
Other countries or regions	1,104,904,466.79	915,245,973.76
	<u>38,358,297,108.78</u>	<u>40,124,476,710.76</u>

Revenue from external transactions is categorized by where the customers are located.

- (b) Total non-current assets

Unit: Yuan Currency: RMB

	31 December 2021	31 December 2020
China	<u>15,176,623,882.00</u>	<u>10,119,225,874.00</u>

Non-current assets are categorized based on where the assets (excluding financial assets and deferred tax assets) are located.

Key customer information

In 2021, the revenue of any single customer of the Group did not reach or exceed 10% of the Group's revenue.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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XVII. OTHER SIGNIFICANT EVENTS (Continued)

7. Other material transactions and matters that have an impact on investors' decisions

☐ Applicable ☒ Not applicable

8. Others

☐ Applicable ☒ Not applicable

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS

1. Accounts receivable

(1). Disclosure by ageing

☒ Applicable ☐ Not applicable

The accounts receivable usually have a credit period of 6 months and bear no interest.

Unit: Yuan Currency: RMB

Aging	Closing book balance	Opening book balance
Within 1 year	1,395,399,544.13	1,503,406,673.88
1 to 2 years	293,247,471.58	357,423,337.34
2 to 3 years	158,428,972.60	222,345,245.80
Over 3 years	194,805,412.11	118,701,812.95
Total	2,041,881,400.42	2,201,877,069.97

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

1. Accounts receivable (Continued)

(2). Disclosure by the method of provision of bad debts

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Categories	Closing balance					Opening balance				
	Gross carrying amount		Provision for bad debt		Book value	Gross carrying amount		Provision for bad debt		Book value
			Percentage of					Percentage of		
	Amount	Proportion (%)	Amount	provision (%)		Amount	Proportion (%)	Amount	provision (%)	
Single provision for bad debt	452,462,918.94	22.16	4,470,744.79	0.99	447,992,174.15	497,542,567.46	22.60	4,348,445.89	0.87	493,194,121.57
Provision withdrawn for bad debt on a combination basis	1,589,418,481.48	77.84	87,745,644.56	5.52	1,501,672,836.92	1,704,334,502.51	77.40	71,560,578.81	4.20	1,632,773,923.70
Total	2,041,881,400.42	100.00	92,216,389.35	4.52	1,949,665,011.07	2,201,877,069.97	100.00	75,909,024.70	3.45	2,125,968,045.27

Single provision for bad debt:

✓ Applicable ☐ Not applicable

31 December 2021

Unit: Yuan Currency: RMB

Name	Closing balance			Reasons for provision
	Gross carrying amount	Provision for bad debt	Percentage of provision (%)	
Accounts receivable of single provision for bad debt	452,462,918.94	4,470,744.79	0.99	Note
Total	452,462,918.94	4,470,744.79	0.99	/

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

1. Accounts receivable (Continued)

(2). Disclosure by the method of provision of bad debts (Continued)

31 December 2020

Unit: Yuan Currency: RMB

Name	Closing balance			Reasons for provision
	Gross carrying amount	Provision for bad debt	Percentage of provision (%)	
Accounts receivable of single provision for bad debt	497,542,567.46	4,348,445.89	0.87	Note
Total	<u>497,542,567.46</u>	<u>4,348,445.89</u>	<u>0.87</u>	/

Descriptions of single provision for bad debt:

☒ Applicable ☐ Not applicable

Note: The Company made provision for some bad debts based on the aging of the accounts and the business conditions of the other party.

Provision withdrawn for bad debt on a combination basis:

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Name	Closing balance		
	Accounts receivable	Provision for bad debt	Percentage of provision (%)
Within 1 year	993,601,097.01	4,968,005.49	0.50
1 to 2 years	284,527,569.52	14,226,378.48	5.00
2 to 3 years	152,264,966.73	15,226,496.67	10.00
Over 3 years	159,024,848.22	53,324,763.92	33.53
Total	<u>1,589,418,481.48</u>	<u>87,745,644.56</u>	

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

1. Accounts receivable (Continued)

(2). Disclosure by the method of provision of bad debts (Continued)

2020

Unit: Yuan Currency: RMB

Name	Closing balance		
	Accounts receivable	Provision for bad debt	Percentage of provision (%)
Within 1 year	1,058,144,688.79	5,290,723.44	0.50
1 to 2 years	348,405,037.47	17,420,251.87	5.00
2 to 3 years	215,970,220.65	21,597,022.07	10.00
Over 3 years	81,814,555.60	27,252,581.43	33.31
Total	<u>1,704,334,502.51</u>	<u>71,560,578.81</u>	

Recognition standards and descriptions of provision withdrawn for bad debt on a combination basis:

☐ Applicable ☒ Not applicable

If provisions for bad debts are made as per the general model of ECL, please make disclosure with reference to other receivables:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

1. Accounts receivable (Continued)

(3). Provision for bad debts

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Category	Opening balance	Increase/decrease during the period				Closing balance
		Provision	Recovery or reversal	Write-off or cancellation	Other changes	
Accounts receivable	75,909,024.70	22,775,490.79	-6,468,126.14	-	-	92,216,389.35
Total	75,909,024.70	22,775,490.79	-6,468,126.14	-	-	92,216,389.35

2020

Unit: Yuan Currency: RMB

Category	Opening balance	Increase/decrease during the period				Closing balance
		Provision	Recovery or reversal	Write-off or cancellation	Other changes	
Accounts receivable	66,495,016.08	13,348,971.81	-3,934,963.19	-	-	75,909,024.70
Total	66,495,016.08	13,348,971.81	-3,934,963.19	-	-	75,909,024.70

Including significant amounts of provision for bad debts recovered or reversed in the period:

☐ Applicable ☒ Not applicable

(4). The situation of the write-off of accounts receivable for the period

☐ Applicable ☒ Not applicable

Writing-off of important accounts receivable

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

1. Accounts receivable (Continued)

(5). Top five accounts receivable by closing balance collection of the borrowers

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Name of entity	Gross carrying amount	Provision for bad debt	Percentage to total accounts receivable (%)
Total closing balance for the year of the top five accounts receivable	615,459,717.21	5,582,614.44	30.14

2020

Unit: Yuan Currency: RMB

Name of entity	Gross carrying amount	Provision for bad debt	Percentage to total accounts receivable (%)
Total closing balance for the year of the top five accounts receivable	770,012,164.43	4,823,043.18	34.97

(6). Accounts receivable derecognized due to the transfer of financial assets

☒ Applicable ☐ Not applicable

In 2021, the Company had no accounts receivable measured at amortized cost that were derecognized for factoring to financial institutions on a non-recourse basis (2020: RMB290,800,000.00), and no related gains and losses included in investment income (2020: RMB18,648,016.99 of losses).

(7). Amount of assets or liabilities resulting from transferring of accounts receivable and continuing involvement

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables

Presentation of item

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Dividends receivable	356,533,862.95	699,665,430.31
Other receivables	6,212,600,336.97	6,318,464,558.38
Total	6,569,134,199.92	7,018,129,988.69

Other explanation:

☐ Applicable ☒ Not applicable

Interests receivable

(1). Classification of interests receivable

☐ Applicable ☒ Not applicable

(2). Significant overdue interest

☐ Applicable ☒ Not applicable

(3). Provision for bad debts

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables (Continued)

Interests receivable (Continued)

(4). Dividends receivable

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item (or investee)	Closing balance	Opening balance
CRSCD	—	569,484,500.00
CRSC Wanquan	3,616,930.31	3,616,930.31
CRSC Construction	126,564,000.00	126,564,000.00
Zhengzhou Zhongyuan	190,593,000.00	—
CRSC Electrification Bureau	4,185,000.00	—
Innovation Investment	31,574,932.64	—
Total	356,533,862.95	699,665,430.31

(5). Significant dividends receivable with an age over 1 year

☐ Applicable ☒ Not applicable

(6). Provision for bad debts

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables (Continued)

Other receivables

(1). Disclosure by ageing

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Aging	Closing book balance	Opening book balance
Within 1 year	5,433,394,585.46	6,012,431,654.80
1 to 2 years	516,879,862.53	13,566,260.59
2 to 3 years	3,927,858.85	108,779,050.95
Over 3 years	258,983,746.15	184,304,289.84
Less: Provision for bad debts of other receivables	-585,716.02	-616,697.80
Total	6,212,600,336.97	6,318,464,558.38

(2). Classified by nature of accounts

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Nature of accounts	Closing book balance	Opening book balance
Loans from subsidiaries	4,560,843,130.00	5,244,843,130.00
Advances	1,564,390,541.16	1,035,326,953.10
Dividends receivable	356,533,862.95	699,665,430.31
Others	87,952,381.83	38,911,173.08
Less: Provision for bad debts of other receivables	-585,716.02	-616,697.80
Total	6,569,134,199.92	7,018,129,988.69

(3). Provision for bad debts

☒ Applicable ☐ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(3). Provision for bad debts (Continued)

2021

Unit: Yuan Currency: RMB

	Stage 1	Stage 2	Stage 3	
		Lifetime ECL (non-credit impaired)	Lifetime ECL (credit-impaired)	Total
Provision for bad debt	12-month ECL			
Amounts due as at 1 January 2021	453,904.47	162,793.33	—	616,697.80
Amounts due for the period as at 1 January 2021				
Provision for the period	753.72	—	—	753.72
Reversal for the period	31,735.50	—	—	31,735.50
Amounts due as at 31 December 2021	<u>422,922.69</u>	<u>162,793.33</u>	<u>—</u>	<u>585,716.02</u>

2020

Unit: Yuan Currency: RMB

	Stage 1	Stage 2	Stage 3	
		Lifetime ECL (non-credit impaired)	Lifetime EC (credit-impaired)	Total
Provision for bad debt	12-month ECL			
Amounts due as at 1 January 2020	404,051.00	162,793.33	—	566,844.33
Amounts due for the period as at 1 January 2020				
Provision for the period	49,853.47	—	—	49,853.47
Amounts due as at 31 December 2020	<u>453,904.47</u>	<u>162,793.33</u>	<u>—</u>	<u>616,697.80</u>

Explanation about obvious changes in gross carrying amount of other receivables for which loss provision has changed in the period:

✓ Applicable ☐ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(3). Provision for bad debts (Continued)

Significant changes in gross carrying amount of other receivables that influenced changes in the loss provision during the year:

2021

Unit: Yuan Currency: RMB

	Stage 1	Stage 2	Stage 3	
	12-month ECL	Lifetime ECL (non-credit impaired)	Lifetime ECL (credit impaired)	Total
Amount as at 1 January 2021	6,318,811,318.86	269,937.32	–	6,319,081,256.18
Amounts due for the period as at 1 January 2021				
Provision for the period	8,220,930,482.92	–	–	8,220,930,482.92
Reversal for the period	-8,326,825,686.11	–	–	-8,326,825,686.11
Amount as at 31 December 2021	<u>6,212,916,115.67</u>	<u>269,937.32</u>	<u>–</u>	<u>6,213,186,052.99</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(3). Provision for bad debts (Continued)

2020

Unit: Yuan Currency: RMB

	Stage 1	Stage 2	Stage 3	
	12-month ECL	Lifetime ECL (non-credit impaired)	Lifetime ECL (credit impaired)	Total
Amount as at 1 January 2020	6,188,654,816.55	269,937.32	—	6,188,924,753.87
Amounts due for the period as at 1 January 2020				
Provision for the period	8,078,024,849.93	—	—	8,078,024,849.93
Reversal for the period	-7,947,868,347.62	—	—	-7,947,868,347.62
Amount as at 31 December 2020	<u>6,318,811,318.86</u>	<u>269,937.32</u>	<u>—</u>	<u>6,319,081,256.18</u>

Amount of provision for bad debt for the period and basis for evaluating whether credit risk of financial instruments increase significantly:

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(4). Provision for bad debts

☒ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Categories	Opening balance	Increase/decrease during the period				Closing balance
		Provision	Recovery or reversal	Write-off or cancellation	Other changes	
Other receivables	616,697.80	753.72	-31,735.50	-	-	585,716.02
Total	616,697.80	753.72	-31,735.50	-	-	585,716.02

2020

Unit: Yuan Currency: RMB

Categories	Opening balance	Increase/decrease during the period				Closing balance
		Provision	Recovery or reversal	Write-off or cancellation	Other changes	
Other receivables	566,844.33	49,853.47	-	-	-	616,697.80
Total	566,844.33	49,853.47	-	-	-	616,697.80

Including significant amounts of provision for bad debts recovered or reversed in the period:

☐ Applicable ☒ Not applicable

(5). The situation of the write-off of other receivables for the period

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(6). Top five accounts receivable by closing balance collection of the borrowers

✓ Applicable □ Not applicable

2021

Unit: Yuan Currency: RMB

Name of entity	Nature of receivable	Closing balance	Aging	Proportion of the total closing balance of other receivables (%)	Provision for bad debt Closing balance
Total top five closing balance for the year of other receivables	Internal borrowing	<u>5,120,000,000.00</u>	/	<u>82.41</u>	/

2020

Unit: Yuan Currency: RMB

Name of entity	Nature of receivable	Closing balance	Aging	Proportion of the total closing balance of other receivables (%)	Provision for bad debt Closing balance
Total top five closing balance for the year of other receivables	Internal borrowing	<u>3,605,843,130.00</u>	/	<u>57.06</u>	/

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(7). Receivables involving government subsidies

☐ Applicable ☒ Not applicable

(8). Other receivables derecognized due to the transfer of financial assets

☒ Applicable ☐ Not applicable

In 2021, the Group has no other receivables derecognized as a result of factoring to financial institutions on a non-recourse basis (2020: nil).

(9). Amount of assets or liabilities resulting from transfer of other receivables and continuing involvement

☐ Applicable ☒ Not applicable

Other explanation:

☐ Applicable ☒ Not applicable

3. Long-term equity investments

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance			Opening balance		
	Balance of carrying amount	Impairment provision	Carrying amount	Balance of carrying amount	Impairment provision	Carrying amount
Investment in subsidiaries	16,333,066,112.61	-	16,333,066,112.61	16,170,066,112.61	-	16,170,066,112.61
Investments in associates and joint ventures	864,288,516.03	-	864,288,516.03	817,575,074.70	-	817,575,074.70
Total	17,197,354,628.64	-	17,197,354,628.64	16,987,641,187.31	-	16,987,641,187.31

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

3. Long-term equity investments (Continued)

(1). Investment in subsidiaries

✓ Applicable □ Not applicable

2021

Unit: Yuan Currency: RMB

Investee	Opening book balance	Increase for the period	Decrease for the period	Closing book balance	Provision for impairment for the period	Closing balance of provision for impairment	Cash dividend for the year
CRSCS (Note 1)	1,515,168,395.36	119,950,600.00	-	1,635,118,995.36	-	-	191,257,000.00
CRSCD (Note 2)	1,529,072,621.04	654,080,831.27	-	2,183,153,452.31	-	-	131,982,500.00
CRSCC	370,790,731.45	-	-	370,790,731.45	-	-	78,798,000.00
Urban Rail Transit	100,000,000.00	-	-	100,000,000.00	-	-	21,054,000.00
CRSC International Holdings	463,000,000.00	-	-	463,000,000.00	-	-	3,282,000.00
Innovation Investment	2,901,431,060.71	-	-	2,901,431,060.71	-	-	-
CRSCE	1,090,447,494.77	-	-	1,090,447,494.77	-	-	150,330,000.00
CRSC Cables	389,223,087.50	-	-	389,223,087.50	-	-	24,168,000.00
CRSC Changsha Railway (Note 3)	1,379,470,000.00	75,000,000.00	-	1,454,470,000.00	-	-	810,000.00
CRSC Wanquan (Note 1)	119,950,600.00	-	119,950,600.00	-	-	-	-
CRSC CASCO	731,460,709.51	-	-	731,460,709.51	-	-	298,405,590.00
CRSC Beijing Industry Group (Note2)	1,348,703,706.17	-	1,298,703,706.17	50,000,000.00	-	-	183,138,000.00
CRSC Xi'an Industry Group (Note2)	1,516,853,488.70	644,622,874.90	-	2,161,476,363.60	-	-	321,918,000.00
Zhengzhou Zhongyuan	325,000,000.00	-	-	325,000,000.00	-	-	190,593,000.00
CRSC Electrification Bureau	-	-	-	-	-	-	4,185,000.00
CRSC Construction (Note 4)	1,000,344,078.11	278,568,939.29	-	1,278,913,017.40	-	-	45,930,000.00
CRSC International	2,581,200.00	-	-	2,581,200.00	-	-	-
CRSC Tengda	405,000,000.00	-	-	405,000,000.00	-	-	7,121,000.00
CRSC Huatai	522,000,000.00	-	-	522,000,000.00	-	-	4,028,000.00
CRSC Jiangsu Smart (Note 5)	176,000,000.00	88,000,000.00	-	264,000,000.00	-	-	-
CRSC Zhejiang Construction Investment (Note 4)	278,568,939.29	-	278,568,939.29	-	-	-	37,296,000.00
Beijing Tendering	5,000,000.00	-	-	5,000,000.00	-	-	3,972,000.00
Total	16,170,066,112.61	1,860,223,245.46	1,697,223,245.46	16,333,066,112.61	-	-	1,698,268,090.00

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Year ended 31 December 2021

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XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

3. Long-term equity investments (Continued)

(1). Investment in subsidiaries (Continued)

2020

Unit: Yuan Currency: RMB

Investee	Opening balance	Increase for the period	Decrease for the period	Closing balance	Provision for impairment for the period	Closing balance of provision for impairment	Cash dividend for the year
CRSCS (Note 6)	1,015,168,395.36	500,000,000.00	-	1,515,168,395.36	-	-	131,177,000.00
CRSCD	1,529,072,621.04	-	-	1,529,072,621.04	-	-	919,600,000.00
CRSCC (Note 8)	320,790,731.45	50,000,000.00	-	370,790,731.45	-	-	59,017,000.00
Urban Rail Transit	100,000,000.00	-	-	100,000,000.00	-	-	17,968,000.00
CRSC International Holdings	463,000,000.00	-	-	463,000,000.00	-	-	92,000.00
Innovation Investment (Note 9)	3,000,000,000.00	-	98,568,939.29	2,901,431,060.71	-	-	-
CRSC Communications (Note 9)	180,000,000.00	-	180,000,000.00	-	-	-	-
CRSC Materials Group (Note 10)	100,000,000.00	-	100,000,000.00	-	-	-	-
CRSCE (Note 10)	995,447,494.77	95,000,000.00	-	1,090,447,494.77	-	-	154,927,000.00
CRSC Cables	389,223,087.50	-	-	389,223,087.50	-	-	23,114,000.00
CRSC Inspection (Note 12)	88,600,178.96	-	88,600,178.96	-	-	-	98,000.00
CRSC Changsha Railway (Note 11)	1,153,750,000.00	225,720,000.00	-	1,379,470,000.00	-	-	-
CRSC Wanquan	119,950,600.00	-	-	119,950,600.00	-	-	-
CRSC CASCO	731,460,709.51	-	-	731,460,709.51	-	-	255,790,500.00
CRSC Beijing Industry Group	1,348,703,706.17	-	-	1,348,703,706.17	-	-	239,739,000.00
CRSC Xi'an Industry Group	1,516,853,488.70	-	-	1,516,853,488.70	-	-	295,492,000.00
Zhengzhou Zhongyuan	325,000,000.00	-	-	325,000,000.00	-	-	-
CRSC Railway Vehicles (Note 11)	225,720,000.00	-	225,720,000.00	-	-	-	-
CRSC Construction	1,000,344,078.11	-	-	1,000,344,078.11	-	-	74,848,000.00
Smart City Research & Design (Note 8)	50,000,000.00	-	50,000,000.00	-	-	-	-
CRSC International	2,581,200.00	-	-	2,581,200.00	-	-	-
CRSC Tengda	405,000,000.00	-	-	405,000,000.00	-	-	-
CRSC Huatai	522,000,000.00	-	-	522,000,000.00	-	-	3,565,600.00
CRSC Jiangsu Smart (Note 7)	88,000,000.00	88,000,000.00	-	176,000,000.00	-	-	-
CRSC Zhejiang Construction Investment (Note 9)	-	278,568,939.29	-	278,568,939.29	-	-	-
Beijing Tendering (Note 10)	-	5,000,000.00	-	5,000,000.00	-	-	3,772,000.00
Total	15,670,666,291.57	1,242,288,939.29	742,889,118.25	16,170,066,112.61	-	-	2,179,200,100.00

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

3. Long-term equity investments (Continued)

(1). Investment in subsidiaries (Continued)

- Note 1: In April 2021, CRSC Wanquan (a former second-tier subsidiary of the Company) was transferred to CRSCS and became a third-tier subsidiary of the Company.
- Note 2: In September 2021, Beijing Railway Signal Co., Ltd., a subsidiary of CRSC Beijing Industry Group (a second-tier subsidiary of the Company), was transferred to CRSCD. Meanwhile, Shanghai Railway Communication Co., Ltd., Shanghai Deuta Electronic & Electrical Equipment Co., Ltd., and Chengdu Railway Communication Equipment Co., Ltd. were transferred to CRSC Xi'an Industry Group, and Xi'an Quanlutonghao Equipment Research Co., Ltd., a subsidiary of CRSC Xi'an Industry Group (a second-tier subsidiary of the Company), was transferred to CRSCD.
- Note 3: In December 2021, the Company increased its long-term equity investment in CRSC Changsha Railway with an amount of RMB75 million, resulting in an ending shareholding ratio of 100%.
- Note 4: In September 2021, CRSC Construction (a second-tier subsidiary of the Company) absorbed and merged CRSC Zhejiang Construction Investment (a former second-tier subsidiary of the Company).
- Note 5: In December 2021, the Company increased its long-term equity investment in CRSC Jiangsu Smart with an amount of RMB88 million, resulting in an ending shareholding ratio of 88%.
- Note 6: In May 2020, the Company increased its investment in CRSCS with an amount of RMB500 million, resulting in an ending shareholding ratio of 100%.
- Note 7: In June 2020, the Company increased its investment in CRSC Jiangsu Smart with an amount of RMB88 million, resulting in an ending shareholding ratio of 88%.
- Note 8: In April 2020, Smart City Research & Design (a former second-tier subsidiary of the Company) was transferred to CRSCC (a second-tier subsidiary of the Company), consequently, Smart City Research & Design became a third-tier subsidiary of the Company.
- Note 9: In May 2020, CRSC Zhejiang Construction Investment, a subsidiary of Innovation Investment (a former second-tier subsidiary of the Company), merged CRSC Communications (a former second-tier subsidiary of the Company), consequently, CRSC Zhejiang Construction Investment is currently a second-tier subsidiary of the Company.
- Note 10: In April 2020, CRSC Material Group Company Ltd. (a former second-tier subsidiary of the Company) was transferred to CRSCE and became a third-tier subsidiary of the Company. Meanwhile, CRSCM divested its subsidiary CRSC (Beijing) Bid to the Company, consequently, CRSC (Beijing) Bid became a second-tier subsidiary of the Company.
- Note 11: In June 2020, CRSC Railway Vehicles (a former second-tier subsidiary of the Company) was transferred to CRSC Changsha Railway, consequently, CRSC Railway Vehicles became a third-tier subsidiary of the Company.
- Note 12: In June 2020, Xi'an Quanlutonghao Equipment Research Co., Ltd. and Xi'an CRSC Railway Communication Product Inspection Station Co., Ltd., subsidiaries of CRSC Inspection (a former second-tier subsidiary of the Company), were transferred to the Company's second-tier subsidiary CRSC Xi'an Industry Group and CRSCD. CRSC Inspection was cancelled in September 2020.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

3. Long-term equity investments (Continued)

(2). Investments in associates and joint ventures

✓ Applicable ☐ Not applicable

2021

Unit: Yuan Currency: RMB

Investee	Opening balance	Increase/decrease during the period								Closing balance	Closing balance of provision for impairment
		Increase in investment	Decrease in investment	Investment gains/losses recognized under equity method	Other comprehensive income adjustment	Other equity changes	Declared and paid cash dividends or profits	Provision for impairment	Others		
I. Joint ventures											
Wenzhou-Hangwen High-Speed Railway	76,503,772.49	-	-	-	-	-	-	-	-	76,503,772.49	-
Subtotal	76,503,772.49	-	-	-	-	-	-	-	-	76,503,772.49	-
II. Associates											
CSCEC Foshan	12,503,152.61	-	-	113,080.77	-	-	-	-	-	12,616,233.38	-
Siping Pipeline	224,763,946.36	-	-	-	-	-	-	-	-	224,763,946.36	-
Guangdong Ultrast											
Financial Leasing	329,544,657.81	-	-	19,046,428.93	-	-	4,500,000.00	-	-	344,091,086.74	-
CRSC Transhui	174,269,545.43	-	-	32,053,931.63	-	-	-	-	-	206,313,477.06	-
Subtotal	741,071,302.21	-	-	51,213,441.33	-	-	4,500,000.00	-	-	787,784,743.54	-
Total	817,575,074.70	-	-	51,213,441.33	-	-	4,500,000.00	-	-	864,288,516.03	-

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

3. Long-term equity investments (Continued)

(2). Investments in associates and joint ventures (Continued)

2020

Unit: Yuan Currency: RMB

Investee	Opening balance	Increase/decrease during the period								Closing balance	Closing balance of provision for impairment
		Increase in investment	Decrease in investment	Investment gains/losses recognized under equity method	Other comprehensive income adjustment	Other equity changes	Declared and paid cash dividends or profits	Provision for impairment	Others		
I. Joint ventures											
Wenzhou-Hangwen High-Speed Railway	76,503,772.49	-	-	-	-	-	-	-	-	76,503,772.49	-
Subtotal	76,503,772.49	-	-	-	-	-	-	-	-	76,503,772.49	-
II. Associates											
CSCEC Foshan	18,001,674.57	-	-	3,405,413.92	-	-	8,903,935.88	-	-	12,503,152.61	-
Siping Pipeline (note)	134,715,266.36	90,048,680.00	-	-	-	-	-	-	-	224,763,946.36	-
Guangdong Ultrast Financial Leasing	313,638,566.72	-	-	15,906,091.09	-	-	-	-	-	329,544,657.81	-
CRSC Tianshui	177,539,261.27	-	-	-3,279,715.84	-	-	-	-	-	174,259,545.43	-
Subtotal	643,894,768.92	90,048,680.00	-	16,031,789.17	-	-	8,903,935.88	-	-	741,071,302.21	-
Total	720,398,541.41	90,048,680.00	-	16,031,789.17	-	-	8,903,935.88	-	-	817,575,074.70	-

Note: On 21 January 2020, the Company paid the third registered capital of RMB90.0487 million for Siping Pipeline, and the capital contribution requirement has been completed. As of 31 December 2020, the Company has invested a total of RMB224.7639 million, accounting for 20% of the total registered capital of the project company.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

4. Revenue and costs of sales

(1). Revenue and costs of sales

✓ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period		Amount for the last period	
	Revenue	Cost	Revenue	Cost
Principal operations	5,607,156,949.46	5,282,629,217.04	4,787,729,636.18	4,416,401,678.77
Other operations	161,614,770.17	44,018,790.16	177,158,759.27	46,158,904.65
Total	<u>5,768,771,719.63</u>	<u>5,326,648,007.20</u>	<u>4,964,888,395.45</u>	<u>4,462,560,583.42</u>

Revenue is presented as follows:

Unit: Yuan Currency: RMB

	2021	2020
Design and integration	2,058,530,837.69	2,076,018,167.79
Construction contracting	151,155,542.23	228,104,253.67
System implementation	3,397,470,569.54	2,483,607,214.72
Others	161,614,770.17	177,158,759.27
Total	<u>5,768,771,719.63</u>	<u>4,964,888,395.45</u>

Costs of sales is listed as follows:

Unit: Yuan Currency: RMB

	2021	2020
Design and integration	1,963,684,421.34	1,813,639,945.76
Construction contracting	138,050,184.98	206,387,479.97
System implementation	3,180,894,610.72	2,396,374,253.04
Others	44,018,790.16	46,158,904.65
Total	<u>5,326,648,007.20</u>	<u>4,462,560,583.42</u>

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

4. Revenue and costs of sales (Continued)

(1). Revenue and costs of sales (Continued)

Breakdown of revenue

2021

Unit: Yuan Currency: RMB

	Design and integration	Construction contracting	System implementation	Others	Total
Main region of operation					
China	1,683,047,431.27	151,155,542.23	3,397,470,569.54	161,614,770.17	5,393,288,313.21
Other countries and regions	375,483,406.42	—	—	—	375,483,406.42
	<u>2,058,530,837.69</u>	<u>151,155,542.23</u>	<u>3,397,470,569.54</u>	<u>161,614,770.17</u>	<u>5,768,771,719.63</u>
Time of revenue recognition					
Revenue recognised within a certain period of time	<u>2,058,530,837.69</u>	<u>151,155,542.23</u>	<u>3,397,470,569.54</u>	<u>161,614,770.17</u>	<u>5,768,771,719.63</u>

2020

Unit: Yuan Currency: RMB

	Design and integration	Construction contracting	System implementation	Others	Total
Regions of major operation					
China	1,770,559,802.45	228,104,253.67	2,483,607,214.72	177,158,759.27	4,659,430,030.11
Other countries and regions	305,458,365.34	—	—	—	305,458,365.34
	<u>2,076,018,167.79</u>	<u>228,104,253.67</u>	<u>2,483,607,214.72</u>	<u>177,158,759.27</u>	<u>4,964,888,395.45</u>
Time of revenue recognition					
Revenue recognised within a certain period of time	<u>2,076,018,167.79</u>	<u>228,104,253.67</u>	<u>2,483,607,214.72</u>	<u>177,158,759.27</u>	<u>4,964,888,395.45</u>

(2). Revenue from contracts

☐ Applicable ☒ Not applicable

(3). Details of performance obligation

☐ Applicable ☒ Not applicable

(4). Explanation about allocation to the remaining performance obligations

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021
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XVIII. NOTES TO KEY ITEMS OF THE PARENT COMPANY'S FINANCIAL STATEMENTS (Continued)

5. Investment income

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Income from long-term equity investments under the cost method	1,698,268,090.00	2,179,200,100.00
Income from long-term equity investments under the equity method	51,213,441.33	16,031,789.17
Investment income from debt investments during the holding period	—	-40,864,482.93
Investment income from borrowing/loan (note)	265,047,293.19	243,925,849.24
Loss from derecognition of financial assets measured at amortized cost	—	-18,648,016.99
Income from debt investments during the holding period	11,364,993.67	22,729,987.33
Total	2,025,893,818.19	2,402,375,225.82

Note: investment income from borrowing/loan is the interest charged by the Company for providing capital for subsidiaries.

6. Others

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

RMB

XIX. SUPPLEMENTARY INFORMATION

1. Breakdown of current non-recurring profit or loss

☒ Applicable ☐ Not applicable

Unit: Yuan Currency: RMB

Item	Amount
Profit and loss on disposal of non-current assets	35,949,376.07
Government grants recognized through profit or loss (other than government grants which are closely related to corporate business and granted based on a _fixed amount or a _fixed quantity unified by the state)	109,073,995.77
Gain or loss on debt restructuring	13,849,690.16
Reversal of the impairment provision for receivables and contract assets which are tested individually for impairment	2,755,674.64
Other non-operating income and expenses apart from the aforesaid items	25,667,778.45
Less: Effect of income tax	-35,036,177.88
Effect of minority interest	-1,451,374.21
Total	<u>150,808,963.00</u>

Reasons shall be given with respect to the Company classifying the non-recurring profit and loss items defined and listed in the Explanatory Notice on Information Disclosure of Companies with Public Offering No. 1-Non-recurring Profit and Loss (《公開發行證券的公司信息披露解釋性公告第1號--非經常性損益》) as recurring profit and loss items.

☐ Applicable ☒ Not applicable

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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XIX. SUPPLEMENTARY INFORMATION (Continued)

2. Return on net assets and earnings per share

✓ Applicable ☐ Not applicable

2021

Profit for reporting period	Weighted average return on net assets (%)	Earnings per share	
		Basic earnings per share	Diluted earnings per share
Net profit attributable to ordinary shareholders of the Company	7.57	0.30	0.30
Net profit attributable to ordinary shareholders of the Company after deducting non-recurring profits and losses	7.22	0.28	0.28

2020

Profit for reporting period	Weighted average return on net assets (%)	Earnings per share	
		Basic earnings per share	Diluted earnings per share
Net profit attributable to ordinary shareholders of the Company	9.09	0.34	0.34
Net profit attributable to ordinary shareholders of the Company after deducting non-recurring profits and losses	8.52	0.32	0.32

Basic earnings per share are calculated by dividing the net profit for the period attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares in issue.

The Company does not have any dilutive potential ordinary shares and therefore diluted earnings per share equal basic earnings per share.

NOTES TO FINANCIAL STATEMENTS

Year ended 31 December 2021

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3. Differences in accounting data between domestic and overseas accounting standards

☐ Applicable ☒ Not applicable

4. Others

☐ Applicable ☒ Not applicable

Chairman: ZHOU Zhiliang

Date of approval by the Board for submission: 25 March 2022

INFORMATION ON AMENDMENT

☐ Applicable ☒ Not applicable