



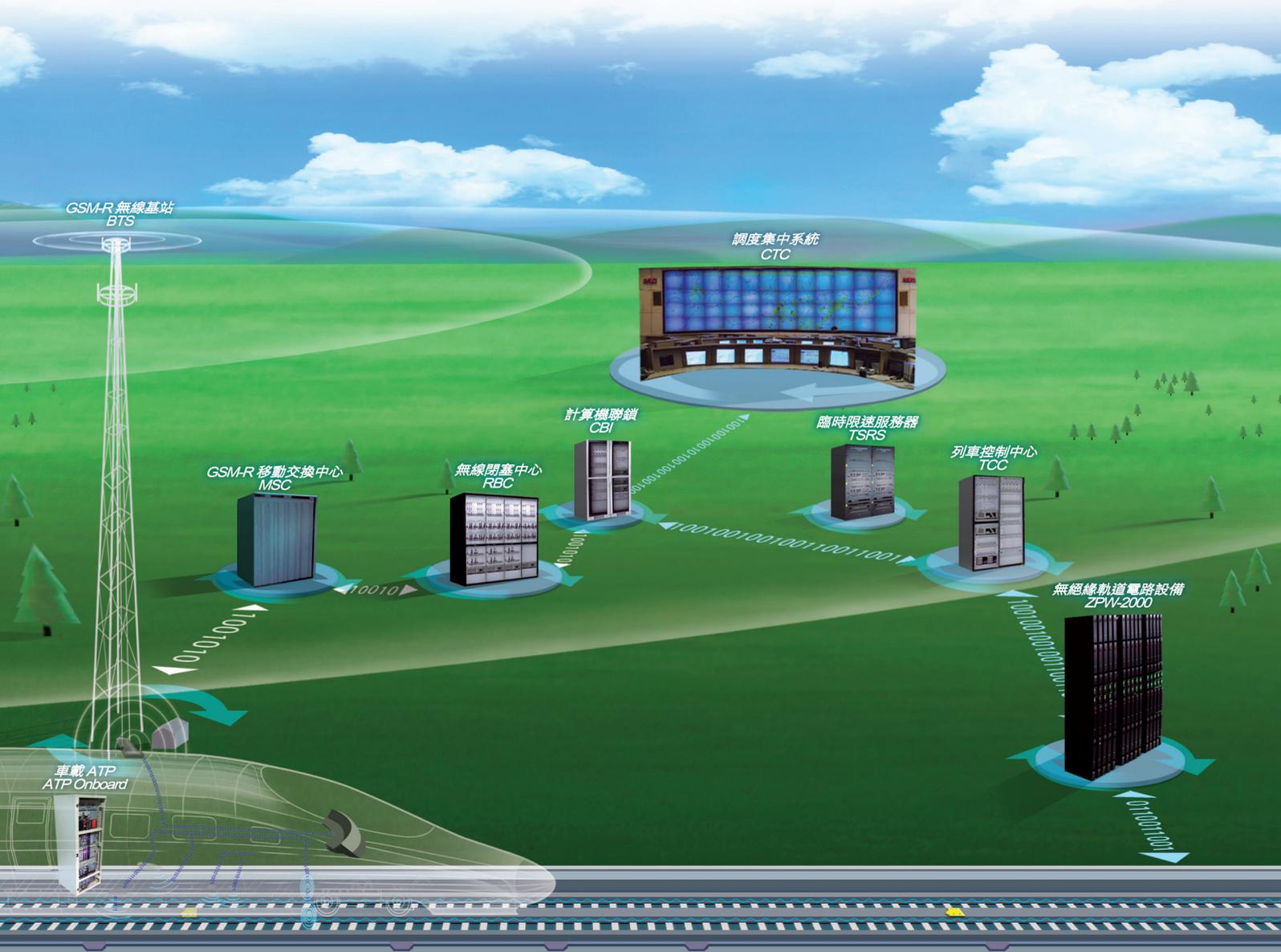
中国通号

China Railway Signal & Communication Corporation Limited*

中國鐵路通信信號股份有限公司

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

Stock code: 3969



2022

Interim Report

*For identification only

IMPORTANT NOTICE

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 INTERIM REPORT, AND ACCEPT SEVERAL AND JOINT LEGAL RESPONSIBILITIES.

WARNING OF SIGNIFICANT RISKS

The Company has described the risk factors in detail in this report. For the description of relevant risks, please refer to “Management Discussion and Analysis” under Section III of this report.

ALL DIRECTORS OF THE COMPANY ATTENDED THE BOARD MEETING.

THIS INTERIM REPORT WAS UNAUDITED.

ZHOU ZHILIANG, PERSON-IN-CHARGE OF THE COMPANY, LI LIANQING, CHIEF FINANCIAL OFFICER, AND ZHANG SHIHU, HEAD OF THE FINANCE DEPARTMENT (PERSON IN CHARGE OF ACCOUNTING), CONFIRM THAT THE FINANCIAL REPORT IN THIS INTERIM REPORT IS TRUE, ACCURATE AND COMPLETE.

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

None

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

Applicable Not applicable

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.

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

No

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

No

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

No

OTHERS

Applicable Not applicable

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Documents Available
for Inspection

The financial statement signed and stamped by the legal representative, chief financial officer and the person in charge of accounting of the Company.
Original copies of all documents and announcements of the Company disclosed publicly during the Reporting Period.

SECTION I DEFINITIONS

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

Definition of common words

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
ATP	Automatic Train Protection, the automatic train protection equipment that automatically brakes train when it exceeds speed limits
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
CNRG	China National Railway Group Co., Ltd. (中國國家鐵路集團有限公司)
CRSC Group	China Railway Signal and Communication (Group) Corporation Limited (中國鐵路通信信號集團有限公司), the controlling shareholder of the Company
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)
CSRC	China Securities Regulatory Commission (中國證券監督管理委員會)
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
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
Hong Kong Stock Exchange	The Stock Exchange of Hong Kong Limited
Reporting Period	From 1 January 2022 to 30 June 2022
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)
SSE	the Shanghai Stock Exchange
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

Note: In this report, figures shown as totals in different ways may not be an arithmetic aggregation of the figures preceding them, which are due to rounding adjustments.

BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

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
Historical change of registered office of the Company	In November 2017, the Company's registered office was changed from B 49 Xisihuan South Road, 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
Website of the Company	www.crsc.cn
E-mail	ir@crsc.cn
Index to changes during the Reporting Period	None

CONTACT PERSONS AND CONTACT METHODS

Name	Secretary to the Board (Domestic representative for information disclosure) LI Lianqing
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 II

BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

CHANGES IN INFORMATION DISCLOSURE AND PLACE OF INSPECTION

Newspapers designated by the Company for information disclosure	China Securities Journal, Shanghai Securities News, Securities Times and Securities Daily
Website for publishing the interim report of the Company	www.sse.com.cn, www.hkexnews.hk
Place of inspection of the interim report of the Company	Board Office of the Company
Index to changes during the Reporting Period	None

BASIC INFORMATION OF SHARES/DEPOSITARY RECEIPTS OF THE COMPANY

(I) Basic information of shares of the Company

Applicable Not Applicable

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

OTHER RELEVANT INFORMATION

Applicable Not Applicable



SECTION II

BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

KEY ACCOUNTING DATA AND FINANCIAL INDICATORS OF THE COMPANY

(I) Key accounting data

Unit: Yuan Currency: RMB

Key accounting data	For the Reporting Period (from January to June)	Corresponding period of last year	Change as compared with the corresponding period of last year (%)
Revenue	18,383,362,437.75	17,864,747,289.30	2.90
Net profit attributable to shareholders of the listed company	1,934,084,073.92	1,840,504,747.38	5.08
Net profit deducting non-recurring profit or loss attributable to shareholders of the listed company	1,881,314,263.17	1,771,582,249.39	6.19
Net cash flows from operating activities	-1,091,172,765.94	-425,939,991.41	-

	As at the end of the Reporting Period	As at the end of last year	Change as compared with the end of last year (%)
Net assets attributable to shareholders of the listed company	43,728,359,048.95	43,554,652,753.64	0.40
Total assets	112,721,899,243.89	108,942,588,838.30	3.47

(II) Key financial indicators

Key financial indicators	For the Reporting Period (from January to June)	Corresponding period of last year	Change as compared with the corresponding period of last year (%)
Basic earnings per share (RMB/share)	0.18	0.16	12.50
Diluted earnings per share (RMB/share)	0.18	0.16	12.50
Basic earnings per share after deduction of non-recurring profit or loss (RMB/share)	0.18	0.16	12.50
Weighted average rate of return on net assets (%)	4.25	4.24	Increased by 0.01 percentage point
Weighted average rate of return on net assets after deduction of non-recurring profit or loss (%)	4.13	4.08	Increased by 0.05 percentage point
R&D investment as a percentage of revenue (%)	4.11	4.24	Decreased by 0.13 percentage point

Explanations on the key accounting data and financial indicators of the Company

Applicable Not Applicable

SECTION II

BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

DIFFERENCES IN ACCOUNTING DATA BETWEEN DOMESTIC AND OVERSEAS ACCOUNTING STANDARDS

Applicable Not Applicable

(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

(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

SECTION II

BASIC CORPORATE INFORMATION AND KEY FINANCIAL INDICATORS

NON-RECURRING PROFIT OR LOSS ITEMS AND AMOUNTS

Applicable Not Applicable

Unit: Yuan Currency: RMB

Non-recurring profit or loss items	Amount	Notes (if applicable)
Gains or loss from disposal of non-current assets	26,780,716.67	
Government grants included in profit or loss for the period (except for those closely related to the Company's normal operation and which were granted on a recurring basis subject to certain amount or volume upon fulfilment of specific standards in compliance with the national policies and regulations)	38,086,062.14	
Gain or loss on debt restructuring	11,320,931.24	
Reversal of the impairment provision for receivables and contract assets which are tested individually for impairment		
Other non-operating income and expenses apart from the aforesaid items	6,971,852.69	
Other gain or loss items falling within the definition of extraordinary items		
Sub-total	83,159,562.74	
Less: effect of income tax	15,798,209.50	
Effect of minority interest (after tax)	14,591,542.49	
Total	52,769,810.75	

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

EXPLANATION OF PERFORMANCE INDICATORS OF NON-ENTERPRISE ACCOUNTING STANDARDS

Applicable Not Applicable

SECTION III

MANAGEMENT DISCUSSION AND ANALYSIS

I. DESCRIPTION OF THE INDUSTRY WHERE THE COMPANY OPERATED AND ITS MAJOR BUSINESSES DURING THE REPORTING PERIOD

During the Reporting Period, the core businesses of the Company remained to be the rail transportation control system and its derivative businesses. Meanwhile, it carried out the construction of supporting rail transportation projects, the general contracting of municipal informationization and its supporting projects and relevant businesses on the construction of overseas rail transportation. There were no significant changes in business components.

The Company has been deeply rooted in the field of rail transportation control system in China and has deeply participated in the formulation of standards on relevant industries, the R&D and application of autonomous systems, the construction of relevant projects and the upgrading and maintenance of systems. It has a deep understanding of China's railway and urban rail transit policy, operating model, market environment and other market elements, a strong ability to predict market changes and adjust resources for operation and can adapt to changes of the industry rapidly and lead the development of the industry. There were no marked changes in the production and operation models of the Company during the Reporting Period. 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.

There were no significant changes in the overall situation of the industry during the Reporting Period. Seen from the perspective of global railway industry, railroad infrastructure construction will maintain a relatively high growth momentum around the globe while technology, market and resources will continue to concentrate in leading enterprises. The rising trade protectionism in the European and US markets, the COVID-19 pandemic and changes in the international situation intensified competitions in the international market.

With respect to the railroad industry in China, new national policies provided new development opportunities for railroad infrastructure construction in China, which is expected to maintain a relatively high growth momentum in the next few years. However, as the Company's businesses are at the tail end of the railroad infrastructure business, there is some delay in the effect of relevant favorable factors. Meanwhile, there is a notable tendency that the focus of high-speed rail investment is shifting from new construction to reconstruction, operation and maintenance. About 5,000 kilometers of high-speed railroads are expected to enter the stage of overhaul and renovation during the "14th Five-Year Plan" period. For general speed railroads, the focus will be on the reconstruction of existing railway corridor projects, such as electrification, standards upgrading, capacity expansion and renovation. However, the investment in relevant sectors is greatly affected by the revenue of CNRG. It is expected that relevant investment will increase with the revenue recovery of CNRG after the overall improvement of the pandemic.

Seen from the perspective of the global urban rail transit industry, there is still some space in the overall market. The European and US markets are relatively closed, but Southeast Asia, Middle East, Central and South America and other regions still have a relatively big market.

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Seen from the perspective of the domestic urban rail transit industry, despite the tightening national policies, new metro plans approved are sufficient to support the development of the industry. During the “14th Five-Year Plan” period, the investment in the domestic new metro market will maintain a relatively high level. Meanwhile, due to the restrictions of access thresholds, rail transportation with medium and small carrying capacity will become an important option for more cities, which is expected to be a new growth point in rail transportation construction during the “14th Five-Year Plan” period. The characteristic of high threshold of core technology in the rail transportation control system industry is still a basic factor and there are extremely high requirements for the safety, reliability, stability and sustainability of the products and services provided by enterprises, which requires relevant enterprises to have a strong anti-risk and technology R&D ability to consistently provide reliable and high-quality products and services in the long run. It also has significant cyclical characteristic 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. The cyclical characteristics empower certain self-cycling ability of relevant businesses, ensuring enterprises to carry out business at a relatively stable state during a certain period.

II. 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 deeply rooted in the field of rail transportation control system, and owned many industry-leading core technologies leveraging on its outstanding strength in technological innovation. As of the Reporting Period, the Company had 3,521 registered patents to protect its core technologies in the PRC. Moreover, the Company has signed special confidentiality agreements with relevant technicians regarding core technologies to ensure that core technologies will not be divulged or spread.

The core technologies owned by the Company primarily include but are 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 highly 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 trains, precise positioning of trains, speed and distance detecting of trains, onboard fully functional seamless switch, wireless redundancy coverage of multiple doubling railways, moving blocking and railway network connectivity.

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MANAGEMENT DISCUSSION AND ANALYSIS

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 to form a closed-loop system of train operation dispatch and instruction, addressing 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, and improving automation level of operation instruction and emergent handling level under fault conditions.

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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	Intelligent detection, operation and maintenance technology of rail transportation has been successfully used in the fields such as HSRs, normal-speed railways, and 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.
6	Train control integration technology	Independently researched and developed	Train control integration technology has been widely used in the fields such as HSRs, ICRs and urban transit. Through the integrated engineering software design platform integrating data platform technology and graphic software technology, this technology has been applied to make engineering design, data allocation, automatic compiling an organic entirety, thereby making 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.
7	Safe computer platform technology	Independently researched and developed	Safe computer platform technology has been widely used into the train operation control system centers, stations, onboard safe control devices, which provides a very safe, reliable, high-performance and expandable basic software and hardware platform. 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.

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MANAGEMENT DISCUSSION AND ANALYSIS

No.	Core technology	Source of technology	Technical level and degree of application
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, and external-locking technology of turnouts, and established world-leading high speed turnout switch system technology system, providing powerful safeguard for the development of railway in the PRC.
10	Rail transportation simulation test technology	Independently researched and developed	Rail transportation simulation test technology has been widely used in the fields of HSRs, ICRs, freight railways, and 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.

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No.	Core technology	Source of technology	Technical level and degree of application
11	High precision simulation technology based on coupling of multi-physics	Independently researched and developed	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 multi-space 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.
12	Manufacture technology of rail transportation safety products	Independently researched and developed	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 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, 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.

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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.

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MANAGEMENT DISCUSSION AND ANALYSIS

No.	Core technology	Source of technology	Technical level and degree of application
17	Train autonomous operation technology	Independently researched and developed	<p>Train autonomous operation technology has realized autonomous resource management and active interval protection for the train through three key innovations, namely the optimization of platforms, the streamlining of systems and the refinement of resources. With a simplified structure of the system from a complex one and easily-driven complicated functional applications, it achieved full-process and comprehensive protection. It may apply for rail side resources and achieve direct communication among trains based on the tasks on train operation. With on-board autonomous computing and mobile authorization, it improved the utilization rate of rail side resources. The capability on the real-time handling of key businesses and accurate speed detecting and positioning improved the efficiency of train operation. It may formulate corresponding handling mechanisms based on different business demands and meet the demand for the upgrading of different systems.</p>
18	BeiDou navigation system based train autonomous operation control technology	Independently researched and developed	<p>With BeiDou Navigation Satellite System as the basis, BeiDou navigation system based train autonomous operation control technology has applied diverse integration and train autonomous positioning technology, integrated longitudinal dynamics models, multi-particle longitudinal dynamics models and safety braking models of trains, combined inspection technologies with high safety, autonomy and completeness on wind pressure, location and speed information and applied the block dynamic swift technology with traffic control as the centre and the dynamic railway capacity allocation strategy, achieving the highly-efficient operation of trains, the simplification of rail side equipment and the centralization of central equipment. It shortened train tracking interval and improved the freight transport capacity.</p>

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No.	Core technology	Source of technology	Technical level and degree of application
19	Full-electronic computer interlocking control technology	Independently researched and developed	Full-electronic computer interlocking control technology has applied safe output, safe cut-off, turnout safety control, safe design of self-inspection on modulo conversion, the structure of double two out of two, network redundancy structure and other technology. Full electronic interlock system and electronic modules has passed third-party safety assessment with the level of safety completeness reaching level SIL4, meeting the requirements on the high safety and reliability of the rail transit signal interlock system and being characterized by small size, easy construction, high reliability, high maintainability and high safety. It full leveraged the industrialization advantages of CRSC and initiated “standardized design, factory commissioning and on-site plugging and splicing” in the industry. It can save the time on on-site indoor construction and installment and equipment commissioning at typical stations by 80% and enjoys a bright future with wide market application.
20	High-speed rail communication and signal training system	Independently researched and developed	With the orientation of serving the capability requirements of practical positions and improving the occupational capability, high-speed rail communication and signal training system focused on “teaching, learning, exercise, testing and research” and applied various information technology, making breakthroughs in virtual-real combination and interconnection of equipment in the high-speed rail signal control system, filling the blankness in occupational training products on high-speed rail signal, solving the “difficulties in teaching, practical exercise and assessment” in occupational education and meeting the requirements of railway electric staff and signal majors in colleges on the working principle of the high-speed rail system, practice, inspection and repairing, solving of failures and practice of other skills. It is characterized by full coverage of scenarios, virtual-real combination, internal-external linkage and train-land interconnection.

SECTION III

MANAGEMENT DISCUSSION AND ANALYSIS

The Company actively deployed innovation chain surrounding industrial chain, and 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. Through its newly-added automatic train operation technology, the Company has realized autonomous resource management and active interval protection, and the corresponding processing mechanism can be customized according to different business requirements; the newly-added automatic train and control technology based on BeiDou Navigation Satellite System (BDS) can actualize multi-mode and two-way radio communication through multiple channels such as satellite and public network to satisfy the dynamic configuration of train tracking interval, which can enable moving blocking and improve freight transportation capacity; the newly-added full-electronic computer interlocking control technology pioneered “standardized design, factory commissioning and on-site plugging and splicing” in the industry, which can shorten the indoor construction and installation time and equipment commissioning time of typical stations by more than 80%; the newly-added high-speed railway communication and signal training system fills the blankness in occupational training products for high-speed railway signaling system. 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	Levels of Rewards
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
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

SECTION III

MANAGEMENT DISCUSSION AND ANALYSIS

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

✓ Applicable □ Not applicable

Entity awarded	Title awarded	Year of recognition	Name of products
CRSC (Beijing) Rail Industry Group Co., Ltd. (通號(北京)軌道工業集團有限公司)	Single Manufacturing Champion Demonstration Enterprise	2020	Complete sets of equipment for rail transit control system
CRSC Research & Design Institute Group Co., Ltd. (北京全路通信信號研究設計院集團有限公司)	Single Manufacturing Champion Demonstration Enterprise	2020	Development and integration of complete sets of equipment for rail transportation control system
CRSC (Xi'an) Rail Industry Group Co., Ltd. (通號(西安)軌道交通工業集團有限公司)	Single Manufacturing Champion Demonstration Enterprise	2021	Rail transit signal infrastructure
CASCO Signal Ltd. (卡斯柯信號有限公司)	Single Manufacturing Champion Demonstration Enterprise	2021	Train operation control system

2. Research and development achievements during the Reporting Period

During the Reporting Period, the Company has completed the software development of automatic train operation control center and on-board equipment of heavy-haul trains, and carried out its research on the on-site test scheme; completed the research and development of intelligent light rail transit control system, which was successfully applied in the first stage of Fenghuang Maglev; completed the verification and test of computer-controlled braking, function and data for the first-stage on-site trial of new train control system based on BDS; completed the application of ground equipment of ETCS train control system based on baseline 3 in Beograd-Stara Pazova section of the Hungary-Serbia Railway in Serbia, and completed the integration testing of the on-board equipment ATP in Austria and the acceptance of the owners' laboratory; 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, and successfully passed the final acceptance of the Ministry of Science and Technology; completed the condition monitoring of the Train Autonomous Circumambulate System (TACS) of urban rail trains in phase I of Shenzhen Metro Line 20, which was in a stable and good operation, completed the release of the requirements baseline of the signal system of Shanghai Metro Line 3/4, and completed the design of trackside equipment and train interface; completed the application of CBTC system based on full-electronic interlocking in Changsha Metro Line 6; completed the functions of network-level multi-disciplinary integrated automatic work order, linkage between operation control and operation maintenance of intelligent urban rail dispatching system, and completed the construction of the operation and maintenance center of Kunming Metro lines; completed the development of train tracking platform, video data service platform, video security platform and video operation and maintenance management system of intelligent rail transit integrated video system; completed the development and production of integrated train control interlocking equipment, passed the expert group test, type test and circular track test organized by the industry, and entered the stage of field test; completed the on-road trial of locomotive on-board relays, obtained the application report, completed the design and optimization of on-board relay process method, and carried out small-batch trial production.

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MANAGEMENT DISCUSSION AND ANALYSIS

Regarding the Company's core technologies and main products, newly applied patents increased by 596, newly authorized patents increased by 319, and the total number of accumulative effective authorized patents reached 3,521. The Company has been granted a total of 14 awards at or above the provincial and ministerial levels as of the end of the Reporting Period. Key Technology and Application of Train Operation Control System Under Complex Working Conditions undertaken by the Company as the main contractor was awarded the grand prize under the Scientific and Technological Progress Awards by China Communications and Transportation Association, and Research on Autonomous Multifunctional Vehicle Bus Chip was awarded the first prize under the Scientific and Technological Progress Awards by China Association of Metros and won two excellent project awards under the China Patent Award. The Company undertook 11 research projects supported by governmental authorities at national and ministerial levels, 4 research projects supported by industrial administration organizations, and the preparations of 37 standards at national and industrial levels. 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 CNRG, Journal of the China Railway Society and Railway Signaling & Communication Engineering sponsored by China Railway Society.

List of intellectual property rights obtained during the Reporting Period

	Increase for the period		Accumulative number	
	Number of applications	Number of approvals	Number of applications	Number of approvals
Invention patent	526	162	3,511	1,228
Utility model patent	62	153	2,430	2,128
Design patent	8	4	170	165
Software copyright	119	91	1,773	1,608
Others	0	0	2	1
Total	715	410	7,886	5,130

3. Research and development investment

Unit: Yuan

	This period	Last period	Change (%)
Expensed research and development investment	648,574,665.76	643,409,638.89	0.80
Capitalized research and development investment	106,704,500.35	113,565,159.12	-6.04
Total research and development investment	755,279,166.11	756,974,798.01	-0.22
Percentage of total research and development investment in revenue (%)	4.11	4.24	Decreased by 0.13 percentage point
Percentage of capitalized research and development investment (%)	14.13	15.00	Decreased by 0.87 percentage point

Reasons for material change on total research and development expenditure as compared to last year

Applicable Not applicable

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MANAGEMENT DISCUSSION AND ANALYSIS

Reasons for material change on percentage of capitalized research and development expenditure and explanation on its reasonableness

Applicable Not applicable

4. Projects under development

Unit: 0'000 Yuan

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	Research on electromagnetic environmental effects of rail transportation and construction of test platform	3,319.00	324.80	1,805.49	Completed the simulation of vehicle transportation scheme and load evaluation, and completed the third-party in-situ loading test. Completed the integrated wiring diagram of traction power supply equipment, signal equipment and structural design of speed sensor tester.	To complete the research on electromagnetic environmental effects of rail transportation and construction of test platform 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.

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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
2	Research on “three standardizations” of train control system of urban transit based on full-electronic products	2,430.93	18.00	2,246.52	Completed the development and manufacturing of full-electronic interlocking products. The safety integrity level of the full-electronic interlocking system reaches SIL4, and as of the first half of 2022, it has been put into operation in Changchun, Changsha and other cities, with good results.	To complete the R&D, production, and construction related to the CBTC system based on full-electronic interlocking system and achieve “standardized design, factory commissioning and on-site plugging and splicing” of the full-electronic interlocking system of urban rail transit.	Full-electronic interlocking 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.	To meet the needs of urban rail transit line construction and renovation.
3	Research and development of a new generation of centralized traffic control system	14,858.06	1,354.82	7,373.01	Combined with the automatic adjustment requirements of high-speed railway operation plan and the demands for power adjustment and integration, the functions related to intelligent CTC were further optimized, the power adjustment and integration scheme and protocol of China Qinghai-Tibet Railway Group Co., Ltd. was initially determined and relevant development work was carried out; the technology development related to CTC3.0 train route and shunting route automatic control at a complex hub station with multiple stations, and the prototype development of customized CTC3.0 system of small marshalling yards Yanzhou North Station and Jinzhou Station was 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.

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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
4	Research and application of high-density automatic operation control technology for ad-hoc network of heavy-haul trains	9,180.98	1,307.35	4,080.56	Completed the software development of automatic train operation control center and on-board equipment of heavy-haul trains, and the study on on-site test protocol was underway.	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 highspeed 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.
5	Development of a new train control system	13,294.01	1,596.36	8,651.49	The circular track test of new train control system, the on-site test and trial review of Hetian-Ruoqiang Railway were completed; the on-site test of Jingbian-Shenmu Railway was completed, and acceptance test and project completion were prepared; the validation testing work for computer-controlled braking, function and data of first-stage on-site trail of Pingdingshan Coal Project.	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 BDS 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.

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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
6	Development of train fully-autonomous operation and control system	17,169.63	2,819.96	6,978.24	On 28 December 2021, the system was put into commercial operation on Shenzhen Metro Line 20, becoming the first TACS system in the industry to operate commercially. The system has been basically stable since its operation for more than half a year and is currently being optimized and upgraded. Shanghai Metro Line 3/4 have defined the requirements of large systems, and released the requirements baseline; On 30 June, the design of trackside equipment and train interface was completed.	To complete the development of general products of TACS system, meet the needs of the phase I project of Shenzhen Metro Line 20 and meet the specific needs of Shanghai Metro Line 3&4 signal system renovation project 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.
7	Intelligent rail transit integrated video system	1,866.00	440.91	1,763.24	The development of the video train tracking platform, video data service platform, video security platform and video operation and maintenance management system 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.

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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
8	Intelligent passenger traffic analysis system	965.00	143.33	633.44	Completed the development of nine algorithms for passenger flow statistics, regional density estimation, belongings left behind, pedestrian opposing flow, abnormal crowd gathering/spreading detection, prolonged stay, queue detection, license plate recognition and image segmentation.	To complete the development of seven algorithms for intelligent passenger analysis system, intrusion detection, crowd density detection, passenger flow statistics, area density estimation, belongings left behind, pedestrian opposing flow, 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, belongings left behind, 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.
9	Basic technology research	6,084.00	1,020.31	3,567.26	The overall scheme of the track circuit system in the station was completed, and the scheme design and system requirements of the railway safety signal display equipment were 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 develop digital track circuit and railway safety signal display equipment, which has reached the leading level in the industry.	It can provide basic technical support for the research, development and design of the Company.
10	Research on key technology and equipment development of train control system for normal-speed railways	7,420.54	64.66	4,485.30	Completed the safety certification of ground equipment and vehicle equipment for high-speed railway train 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 railway 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.

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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
11	Research on intelligent detection and perception technology of rail transit	2,021.00	225.76	1,537.00	The analysis of on-site trial use of the sensors installed backward was completed, the trial use of the rail monitoring system in the turnout area into high-speed railways was completed, and the prototypes for inspection of long-distance broken rails in one section was completed.	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 railways, intercity and regional railways, factories and self-owned railways of mining enterprises.
12	Development and application of train control interlocking integration	14,199.21	2,257.15	10,314.30	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 railways and passenger lines at home and abroad.

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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
13	Development of basic signal equipment	2,390.00	427.37	1,531.28	Locomotive on-board relays were put into trial use, the application report was obtained and the small-batch trial production of on-board relays was carried out; the development of high-frequency digital AC power supply module was completed, and the small-batch trial production of DC high-frequency switching power supply module was completed; the conversion of scheme design of switch-tie switch machine with information output function, and the trial production of prototype parts was carried out.	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.
14	Integrated development and certification of onboard systems in five European nations	1,148.00	187.18	516.30	The integration testing of the on-board equipment ETCS-400T in Vienna, Austria and the acceptance of the owners' laboratory were completed.	To develop ETCS onboard 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 onboard 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).

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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
15	Development and application of intelligent subway operation and maintenance	7,030.77	1,287.73	5,200.85	Line-level integrated DCS network management, parking accuracy analysis, TACS automatic alarm switching and other functions were completed; the functions of network-level and multi-disciplinary integrated automatic work order, linkage between operation control and operation maintenance were completed, and the construction of the operation and maintenance center of Kunming Metro lines.	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.
16	Development of rail side target controller	7,424.27	1,175.73	6,860.16	The system was released, and applied into Shenzhen Metro Line 20. The confirmation of OC requirement in Shanghai Metro Line 3/4 was completed.	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 normal-speed railways, local railways and urban rail transit.
17	Research on electromechanical integration system and equipment for rail transportation	5,130.04	1,066.00	3,607.68	Completed the research on electromechanical integration system, completed the production of ATP, ATO, STC, ATS and other equipment, obtained certification on project safety and opened for operation in Fenghuang Maglev.	To establish an electromechanical integration system for light rail transportation supporting full industrial chains with advanced technology and the intelligent and independent operation control of train as the core.	The electromechanical integration system for light rail transportation with the intelligent and independent operation control of train as the core reached an advanced level in China	Medium and low speed maglev lines, mountain (rack) rail transportation, suburban light rail, urban express rail, special tourist lines and other lines.

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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
18	Security integration platform for urban rail transportation	800.00	236.20	655.24	Conducted the test on equipment connected to the security integration platform.	To form a security integration platform for urban rail transportation.	On the basis of public security resources, the security integration platform for urban rail transportation established the security system with security policies, prevention procedures and prevention activities, coordinated deterrence, prevention, detection, delaying and response, improved the prevention and control ability, reduced the possibility of safety threats in rail transportation areas and reduced personal injuries and property losses in case of threats.	It is applicable to urban rail transportation.
19	Research on high-speed maglev/low-vacuum pipeline (tunnel) high-speed train operation control system and production of equipment	1,525.00	25.00	25.00	Completed the formulation of the overall technology plan on low-vacuum ultra-high-speed maglev (single trains).	To establish the train control system and equipment with proprietary intellectual property rights and supporting high-speed maglev with a speed of 600km/hour and low-vacuum pipeline (tunnel) high-speed train with a speed of 1,000km/hour.	It filled the blankness in the rail transportation system with a speed of 600-1,000 km/hour, which is the first in China at an internationally leading level.	It was put into testing in the Yanggao test line in Datong, Shanxi for subsequent application in high-speed maglev in coastal developed areas.
Total	/	118,256.44	15,978.62	71,832.36	/	/	/	/

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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)	4,270	4,226
Percentage of total research and development personnel in total personnel of the Company (%)	21.65	21.00
Total remuneration for research and development personnel	35,971.36	36,796.76
Average remuneration for research and development personnel	8.42	8.71

Educational background

Composition by education	Number (person)	Percentage (%)
Doctoral candidate	65	1.52
Master degree candidate	1,590	37.24
Bachelor's degree	2,433	56.98
College degree	182	4.26
Total	4,270	100

Age structure

Range of age	Number (person)	Percentage (%)
Below 35	2,522	59.06
36 to 40	821	19.23
41 to 45	463	10.84
46 to 50	231	5.41
51 to 54	124	2.91
55 to 59	109	2.55
Total	4,270	100

6. Other explanations

Applicable Not applicable

SECTION III

MANAGEMENT DISCUSSION AND ANALYSIS

III. ANALYSIS OF THE CORE COMPETITIVENESS DURING THE REPORTING PERIOD

(I) Analysis of core competitiveness

1. *Leading market position*

During the Reporting Period, the Company continued to maintain its position as a leading supplier in the domestic high-speed rail control system. It provides core train control technology and equipment for more than 95% of China's high-speed railways that have been in operation, representing the lion's share of the market. The Company occupies about 50% of the domestic market share of new bidding projects in the urban rail transit control system, continuing to top the list. As a leading provider of urban rail transit control system solutions in China, the Company enjoys an outstanding reputation among customers and outstanding brand image. 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 3,500 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 new rail transportation control technologies regarding all rail transit sectors such as high-speed railways, normal-speed railways, local railways, heavy haul railways, urban rail, urban (suburban) and special tourist lines, automatic unmanned train operation technology, coordinated transportation and management for regional freight, train traffic control automation technology, safe computer platform technology, train control integration technology, intelligent detection, operation and maintenance technology of rail transportation, rail transportation simulation test technology and turnout switch technology 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.

The Company is a secretariat member of the Communication Signal Branch Technical Committee of the National Standardization Technical Committee of Electric Equipment and Systems for Rail Transportation (national standards) and the Communication Signal Branch Technical Committee on the Standardization of Electric Equipment and Systems for the Railway Industry (industrial standards, the responsible department for the former equipment standards, technical standards and product standards of China's rail transportation control system). It has promoted the establishment of the national technical standard system on communication signal for national rail transportation and the technical standard system on the railway industry and 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. In addition, the Company also has advanced research and development, experiment and test institutions. The completeness and scale of its laboratory facilities are at a leading position in the world.

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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.

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 provide 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 management systems to maintain continuous improvement and meet the requirements of standards. 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.

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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 enthusiasm and creativity of scientific and technological innovation. It establishes platforms for scientific and technological talents emerged from significant scientific research technology, products and equipment and innovation in project construction to display their talents and carries out the certification, recommendation and declaration of incentives for various scientific and technological talents and strives to foster and train scientific and technological talents required for leading the development of the Company in the future. Nearly 4,300 employees of the Company are engaged in technology research and development, accounting for 21.65% of the total employees, 38.76% 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

IV. DISCUSSION AND ANALYSIS ON BUSINESS OPERATIONS

In the first half of 2022, against the background of the impacts of the COVID-19 pandemic and the remarkable decline in the overall investment of CNRG, the Company took the initiative, made every effort to exploit the market, continuously strengthened its leading position in operation, and reasonably controlled the scale of the general contracting business, and the overall operation of the Company remained basically stable. In the first half of 2022, the aggregate value of newly-signed contracts of the Company amounted to RMB28.666 billion, representing a year-on-year decrease of 11.81%, among which, the value of newly-signed contracts in railway sector amounted to RMB7.511 billion, representing a year-on-year increase of 2.28%; the value of newly-signed contracts in urban transit sector amounted to RMB6.471 billion, representing a year-on-year decrease of 1.04%; the value of newly-signed contracts in overseas sector amounted to RMB0.056 billion, representing a year-on-year decrease of 92.08%; the total value of newly-signed contracts for general contracting and other sectors amounted to RMB14.628 billion, representing a year-on-year decrease of 18.38%. The structure of contracts was further optimized. As of the first half of 2022, the Company's order in hand amounted to RMB144.008 billion.

Regarding the main business of "Four Electric Systems" integration in high-speed railways, due to the resurgence of the COVID-19 pandemic in China, various projects were delayed to different extents and the overall bidding in the market was significantly affected. Under the extremely unfavorable objective environment, CRSC successfully won the bidding for the Hanzhong-Bazhong-Nanchong intercity railway project. To compensate for the declining bidding in high-speed passenger rail lines in the first half, CRSC actively made plans with respect to newly constructed normal-speed railways, local railway special lines, reconstruction of existing lines and other markets. It seized the window period with the pandemic remaining stable in the end of the second quarter and successively undertook several key projects including the renovation of Qinghai-Tibet Railway from Golmud to Lhasa section, the electrification reconstruction of Yangquan-Shexian Railway and in sync major overhaul of Yangquan-Shexian Railway, with the contract value of the railway market maintaining a sound trend with steady increase. In the field of railway signaling control system, it was also affected by relevant factors, but the core systems still maintained a stable market share, with the integrated share of the high-speed railway market staying stable at about 65%.

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MANAGEMENT DISCUSSION AND ANALYSIS

Despite a slight year-on-year decrease in the field of urban transit signal system integration, it remained steady on the whole. CRSC CASCO and Shanghai Engineering Bureau Group, two core subsidiaries in the Company's urban transit business, overcame the impacts of the pandemic in the place where they are headquartered and basically maintained stable undertaking in the market. 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 12 projects in succession, including Wuhan Subway Lines 19 and 16, the second phase project of Xuzhou Subway Line 3, the first phase project of Shenyang Subway Line 3, Changchun Subway Line 6, Xiamen Subway Lines 4 and 6, the second phase project of Chengdu Subway Line 17, the third phase project of Chengdu Subway Line 18, the second phase project of Chengdu Subway Line 19, the eastern extension of Hefei Subway Line 2 and the southern extension of Hefei Subway Line 3, etc., securing more than half of the national market share and further consolidating 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 the capacity expansion project of Beijing Subway Line 13, the upgrading and renovation of the video monitoring system of the first and second phases of Shenzhen Metro and the communication integration projects for Zhengzhou Subway Lines 7 and 8, Chongqing Subway Line 18 and the second phase project of Xuzhou Subway Line 3, consolidating its existing market share. Communication Information Group also undertook key projects such as Zhengzhou Subway Line 12, Ningbo Subway Line 3, etc., making a significant supporting role to the stabilization of the Company's urban transit business.

In the overseas market, due to the dual impacts of the domestic and overseas pandemic and the turmoil of the international situation, various key projects failed to carry out bidding and other relevant work at the predetermined time, resulting in a year-on-year decrease in the value of newly-signed external contracts. However, the Company vigorously tided over the impacts of the pandemic, the international situation and other external factors, sped up in improving the overseas business organizational structure and network layout and the certification of relevant systems under European standards, laying a solid foundation for the recovery of undertaking in the second half of the year.

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 to ensure the risks of projects undertaken under control and the high quality of contracts. The Company reasonably controlled the undertaking of general contracting projects and adjusted the structure of contracts undertaken. During the undertaking of specific businesses, it continuously enhanced the EPC general contracting capacity, fully displayed the BIM application capability and technological advantages and improved the quality of projects undertaken, laying a solid foundation for its subsequent undertaking of rail transportation, municipal informationization and other businesses in relevant areas.

The Company will not adjust the overall target on undertaking projects formulated at the beginning of the year and will remain the target on the growth rate in core business areas such as railways, urban transit and overseas business to exceed that in 2021 unchanged. In the second half of the year, the Company will firmly seize the favorable opportunity that more high-speed passenger rail lines may be introduced in the market, actively enhance the undertaking of projects in relevant sectors and markets, strive to complete the tasks on undertaking projects in high-speed passenger rail lines for the whole year and support the achievement of the target on reasonable growth in the railway business. In the field of urban transit control system, the total number of bidding in the second half of the year is expected to remain at as that in the first half. The Company will also spare no effort to strengthen the guidance and resource investment in related business to maintain its leading position in the industry. Meanwhile, the Company will increase efforts for the contracting of telecommunications integration and construction business to support the reasonable growth of urban transit business and complete the tasks for the whole year. In the field of overseas business, based on the changes in the domestic and overseas pandemic and the development trend of the international situation, the Company will vigorously promote the implementation of key projects in the key regions and countries along "the Belt and Road" to complete the tasks on undertaking projects for the whole year. In the field of general contracting, the Company will adhere to the existing management and control requirements, continue to guide relevant subsidiaries to shift market focuses and reasonably allocate market resources, further develop in economic developed areas and appropriately improve the quality of projects undertaken on the basis of reasonably controlling the total number of projects with an aim to promote the urban transit, information technology and other core businesses.

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MANAGEMENT DISCUSSION AND ANALYSIS

Significant changes in the operations of the Company during the Reporting Period and events which had a significant impact on the operations of the Company during the Reporting Period and would be expected to have a significant impact on the operations of the Company in the future

Applicable Not applicable

V. RISK FACTORS

Applicable Not applicable

1. Core competitiveness risk:

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 and the demand for new growth of railways and urban rail may lead to the 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, emerging technologies and new needs of the industry, plan major scientific research projects, deploy strategic forces, coordinate innovation resources, 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, speed up the response to specific needs of users, and adjust the research and development strategy in a timely manner, to maintain the Company's leading position in scientific and technological innovation, and support the sustainable, healthy and high-quality development of the Company.

2. Macro-environmental risk:

The international economic environment is becoming increasingly complex and the confrontation of new and old forces is intensified as a result of the increased geopolitical conflicts, resulting in greater instabilities and uncertainties and rapid accumulation of comprehensive risk in relevant areas. Meanwhile, 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. The intensified unilateralism and trade protectionism, the combined impact and resonance of financial risks and sluggish real economy are posing huge challenges to CRSC's expansion into overseas markets.

Responsive measures: The Company will closely follow the "Belt and Road" Initiative, actively explore the markets by 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.

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3. Industry risk:

The scale of railway fixed asset investment has been declining year by year, the railway industry has emphasized the prevention and resolution of debt risks in the field, the implementation of railway investment plans has been tightened, and the pace of investment has changed from pursuing scale and speed to controlling investment rhythm. During the “14th Five-Year Plan” period, the National Development and Reform Commission will strictly control the debt risks of local governments due to urban rail investment, and raise the approval threshold for all urban rail transit projects including large, medium and low capacity.

Responsive measures: The Company will seize the favorable policy of steady national growth and appropriate infrastructure projects in advance, relying on technological advantages, strengthen communication with owners at all levels, and continue to consolidate industry-leading brand image and reputation through benchmarking projects and high-quality projects. The focus of operation has shifted from the construction of new lines to the construction of new lines and the upgrading of existing lines. At the same time, according to the development trend of the industry, combined with the change of construction mode, the Company will make full use of the resources of the whole system, and adopt various methods such as investment-driven, joint operation, and joint venture operation to consolidate the existing fields market and expand the market in new fields, form a multi-point support for the rail transit industry market operation pattern, and resolve the risks brought by the slowdown of industry investment.

4. Operating risk:

First, the Company’s product market distribution is relatively concentrated, and its anti-risk ability is relatively weak, which has hidden business risks; Second, various factors such as the international political situation, international political emergencies, and changes in the pattern of international relations pose risks to the Company’s overseas operations. In addition, based on the nature of the Company’s business, liability compensation or government penalties may be involved in the design, research and development, manufacturing, installation, testing, maintenance and sales of rail transit control system products or services.

Responsive measures: The Company will continue to strengthen the construction of scientific and technological innovation capabilities, take the market demand as the guide, speed up the research and development of new technologies and new products and market transformation, continue to expand new fields and markets, form new growth points as soon as possible to enhance the Company’s ability to resist risks; for overseas markets, the Company will strengthen the timely summary and analysis of the comprehensive information of the target country, maintain a high sensitivity to changes in the international market at all times, adjust response strategies in a timely manner to prevent and resolve overseas business risks.

5. Financial risk:

Some of the railway, urban rail and infrastructure construction projects undertaken by the Company have the characteristics of long construction period, large investment, slow settlement, and delayed recovery, and some contract assets or receivables have a long settlement period and recovery period, which may adversely affect current profits.

Responsive measures: The Company will establish a normalized management and control mechanism, strengthen source and process control, regularly analyze and dynamically monitor contract assets and accounts receivable of key projects, optimize the enterprise assessment mechanism, increase assessment efforts, mobilize the initiative of personnel, and speed up the progress of fund settlement and recovery.

SECTION III

MANAGEMENT DISCUSSION AND ANALYSIS

VI. MAIN OPERATIONS DURING THE REPORTING PERIOD

For details, please see “IV. DISCUSSION AND ANALYSIS ON BUSINESS OPERATIONS” of this section.

(I) Analysis of major businesses

1. Table of analysis of changes in relevant items in financial statements

Unit: Yuan Currency: RMB

Items	Amount for the current period	Amount for the corresponding period of last year	Change (%)
Revenue	18,383,362,437.75	17,864,747,289.30	2.90
Cost of sales	14,120,496,231.20	13,740,680,321.90	2.76
Selling and distribution expenses	311,237,350.96	361,627,986.51	-13.93
General and administrative expenses	955,395,376.86	981,981,072.26	-2.71
Finance costs	-187,784,678.88	-204,776,458.57	–
Research and development expenses	648,574,665.76	643,409,638.89	0.80
Net cash flows generated from operating activities	-1,091,172,765.94	-425,939,991.41	–
Net cash flows generated from investing activities	-2,775,279,996.13	569,075,003.01	–
Net cash flows generated from financing activities	654,158,084.88	-591,795,946.94	–

Explanation on reasons for changes in revenue: Revenue increased by 2.90% as compared to the corresponding period of last year mainly due to the fact that in the first half of 2022, faced with the severe and complex market operation situation and combined with the impact of the COVID-19 pandemic, the Company coordinated pandemic prevention and control with production and operation, expedited the construction of key projects, and steadily improved its scientific and technological innovation capabilities, driving a year-on-year growth in revenue.

Explanation on reasons for changes in cost of sales: Cost of sales increased by 2.76% as compared to the corresponding period of last year mainly due to the fact that the Company's construction of projects and supply of goods were normal for the current period, resulting in the increase in cost of sales as compared to the corresponding period of last year.

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MANAGEMENT DISCUSSION AND ANALYSIS

Main Businesses by Segment

Segment	Revenue	Cost of sales	Gross profit margin (%)	Increase/decrease in revenue as compared to the corresponding period of last year (%)	Increase/decrease in cost of sales as compared to the corresponding period of last year (%)	Increase/decrease in gross profit margin as compared to the corresponding period of last year (%)
Rail transit control system	13,863,975,446.96	10,201,993,683.75	26.41	8.13	10.67	Decreased by 1.69 percentage points
Equipment manufacturing	2,225,462,595.49	1,318,919,565.28	40.74	-22.08	-24.53	Increased by 1.93 percentage points
System implementation business	7,083,849,049.27	6,366,237,689.41	10.13	40.70	42.93	Decreased by 1.40 percentage points
Design and integration	4,554,663,802.20	2,516,836,429.06	44.74	-7.64	-16.58	Increased by 5.92 percentage points
Construction contracting	4,488,978,810.16	3,902,382,442.13	13.07	-10.40	-13.33	Increased by 2.94 percentage points
Others	30,408,180.63	16,120,105.32	46.99	-7.09	-16.04	Increased by 5.65 percentage points

Main Businesses by Terminal Market

Terminal market	Revenue	Cost of sales	Gross profit margin (%)	Increase/decrease in revenue as compared to the corresponding period of last year (%)	Increase/decrease in cost of sales as compared to the corresponding period of last year (%)	Increase/decrease in gross profit margin as compared to the corresponding period of last year (%)
Railway	8,455,828,926.43	6,169,704,046.02	27.04	-3.92	-1.04	Decreased by 2.13 percentage points
Urban transit	4,857,704,852.36	3,704,622,368.66	23.74	35.14	36.42	Decreased by 0.71 percentage point
Overseas businesses	550,441,668.17	327,667,269.07	40.47	29.18	22.01	Increased by 3.50 percentage points
Construction contracting	4,488,978,810.16	3,902,382,442.13	13.07	-10.40	-13.33	Increased by 2.94 percentage points
Others	30,408,180.63	16,120,105.32	46.99	-7.09	-16.04	Increased by 5.65 percentage points

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MANAGEMENT DISCUSSION AND ANALYSIS

Main Businesses by Region

Region	Revenue	Cost of sales	Gross profit margin (%)	Increase/decrease in revenue as compared to the corresponding period of last year (%)	Increase/decrease in cost of sales as compared to the corresponding period of last year (%)	Increase/decrease in gross profit margin as compared to the corresponding period of last year (%)
China	17,832,920,769.58	13,792,828,962.13	22.66	2.26	2.38	Decreased by 0.09 percentage point
Other countries and regions	550,441,668.17	327,667,269.07	40.47	29.18	22.01	Increased by 3.50 percentage points

Segment and terminal market:

The revenue from the system implementation business for the current period increased by 40.70% as compared to the corresponding period of last year, mainly because the Company made efforts in overcoming the impact of resurgence of COVID-19 pandemic and took the initiative to accelerate the implementation of national key projects such as the Hangzhou-Shaoxing-Taizhou High-speed Railway, the Huanggang-Huangmei High-speed Railway and the Zhengzhou-Chongqing High-speed Railway in accordance with the national requirements for stable growth to secure the smooth opening on schedule, and the Company strengthened efforts to the construction and installation of urban rail construction projects at the same time. As a result, the construction volume of the engineering projects of the system implementation enterprises increased accordingly, and the revenue for the current period increased as compared to the corresponding period of last year.

The revenue from the equipment manufacturing, design and integration business decreased year-on-year, mainly because the projects in some regions were affected by COVID-19 pandemic, the bidding plan was delayed, the number of new bidding projects was reduced, the implementation of projects in hand lagged, and the decrease in equipment supply and design and integration business year-on-year; meanwhile, under the guidance of requirements of high-quality development, the Company controlled the growth of the undertaking of construction contracting business in a reasonable manner, which resulted in a drop in the revenue from the construction contracting business.

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MANAGEMENT DISCUSSION AND ANALYSIS

Region:

Revenue from overseas business for the current period increased by 29.18% as compared to the corresponding period of last year. Such increase was mainly due to the increase in recognized revenue as compared to those in the corresponding period of last year driven by the Company's insistence on the integration of pandemic prevention and control with production and operation, as well as the Company's efforts to continuously promote the progress of overseas projects, such as 10th of Ramadan Light Rail Transit Project Phase I and a subway project in Mexico. Gross profit margin from overseas market was 40.47%, representing an increase of 3.50 percentage points as compared to the corresponding period of last year. Such increase was mainly due to the increase in revenue from projects as a result of the Company's active settlement of its projects according to their progress.

Explanation on reasons for changes in selling and distribution expenses: Selling and distribution expenses in the current period were RMB311 million, representing a decrease of 13.93% as compared to the corresponding period of last year, mainly due to the decrease in transportation expenses and tendering expenses, as affected by the resurgence of the COVID-19 pandemic.

Explanation on reasons for changes in general and administrative expenses: General and administrative expenses in the current period were RMB955 million, representing a decrease of 2.71% as compared to the corresponding period of last year, mainly due to more efforts made by the Company on the cost reduction and efficiency improvement to strictly control general and administrative expenses in the first half of the year.

Explanation on reasons for changes in finance costs: Finance income in the current period was RMB188 million, as compared to finance income of RMB205 million for the corresponding period of last year, mainly due to the decrease in interest income.

Explanation on reasons for changes in R&D expenses: R&D expenses in the current period were RMB649 million, representing an increase of 0.80% as compared to the corresponding period of last year, mainly due to the Company's continuous increase in investment in R&D while upholding science and technology innovation as the driver.

Explanation on reasons for changes in net cash flow from operating activities: Net cash flows from operating activities in the current period was a net cash outflow of RMB1.091 billion, representing a significant increase of RMB665 million as compared to the corresponding period of last year, mainly due to the decrease in the cash inflow from operating activities and the increase in tax paid regularly for the period.

Explanation on reasons for changes in net cash flow from investing activities: Net cash flows from investing activities in the current period was a net cash outflow of RMB2.775 billion, representing an increase of RMB3.344 billion as compared to the corresponding period of last year, mainly due to investment in establishment of a financial company of RMB1.9 billion and the increase in time deposits with maturity over three months of RMB810 million for the period.

Explanation on reasons for changes in net cash flow from financing activities: Net cash flows from financing activities in the current period was a net cash inflow of RMB654 million, while the net cash flows from financing activities during the corresponding period of last year was a net cash outflow of RMB592 million. Such change is mainly due to the net borrowings increased during the current period and decreased in the last period.

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MANAGEMENT DISCUSSION AND ANALYSIS

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

Applicable Not applicable

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

Applicable Not applicable

(III) Analysis of assets and liabilities

Applicable Not applicable

1. Assets-liabilities analysis table

Unit: Yuan Currency: RMB

Name of item	Amount at the end of the current period	Percentage of amount at the end of the current period to the total assets (%)	Amount at the end of the corresponding period of last year	Percentage of amount at the end of the corresponding period of last year to the total assets (%)	Change of the amount at the end of the current period as compared to that at the end of last year (%)	Explanation
Cash and bank balances	20,454,005,328.83	18.15	22,982,585,272.39	21.10	-11.00	
Accounts receivable	21,559,726,789.48	19.13	19,853,757,318.28	18.22	8.59	
Receivables for financing	1,429,297,655.75	1.27	2,142,993,114.00	1.97	-33.30	
Inventories	2,692,772,672.31	2.39	2,492,752,472.50	2.29	8.02	
Contract assets	39,551,631,309.75	35.09	37,318,249,499.32	34.25	5.98	
Long-term receivables	3,786,625,436.62	3.36	3,713,734,908.20	3.41	1.96	
Fixed assets	4,576,445,009.01	4.06	4,689,690,366.70	4.30	-2.41	
Construction in progress	827,146,715.11	0.73	800,282,649.47	0.73	3.36	
Intangible assets	2,481,907,549.49	2.20	2,529,711,941.27	2.32	-1.89	
Development expenditure	270,525,071.93	0.24	213,250,203.11	0.20	26.86	
Other non-current assets	7,468,014,897.57	6.63	5,004,496,508.18	4.59	49.23	
Short-term borrowings	108,967,675.88	0.10	75,629,684.59	0.07	44.08	
Bills payable	2,094,668,635.70	1.86	2,300,794,453.21	2.11	-8.96	
Accounts payable	46,878,483,593.58	41.59	46,455,196,868.52	42.64	0.91	
Contract liabilities	8,020,549,714.62	7.12	7,238,346,058.76	6.64	10.81	
Taxes payable	891,751,891.52	0.79	899,642,671.41	0.83	-0.88	
Long-term borrowings	3,494,202,482.40	3.10	3,127,722,482.40	2.87	11.72	

The decrease in cash and bank balances was mainly due to the increase in net cash outflows generated from operating activities and the expenditures on establishment of a financial company.

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MANAGEMENT DISCUSSION AND ANALYSIS

The increase in accounts receivable was mainly due to the growth of sales scale.

The decrease in receivables for financing was mainly due to the acceptance of the bills receivable received last year which were due for the current period.

The increase in inventories was mainly due to the increase in raw material reserves to manage the risk of higher price for raw material, and more efforts put into the production of stock goods based on the progress for projects by the Company.

The increase in contract assets was mainly due to certain projects yet to be inspected.

The increase in long-term receivables was mainly due to the increase in receivables of “Build – Transfer” project.

The increase in construction in progress was mainly due to the increase in decoration expenditures on the technology platform built up through the R&D bases purchased by CRSC CASCO.

The increase in development expenditure was mainly because the Company continued to put more efforts into R&D.

The increase in other non-current assets was mainly due to the increase in the expenditures on establishment of a financial company.

The increase in short-term borrowings was primarily due to the increase in the borrowings secured by commercial acceptance bills.

The decrease in bills payable was mainly due to the decrease in business for which the payment was settled by acceptance bills.

The increase in accounts payable was mainly due to the increase in payables for procurement on various raw materials and subcontracting costs in line with the increase in business volume for the current period.

The increase in contract liabilities was mainly due to the increase in receipts in advance relating to business operations for the current period.

The decrease in taxes payable was mainly due to the decrease in VAT paid as a result of increased efforts to retain tax refunds in the current period.

The increase in long-term borrowings was mainly due to the increase in financing through pledging income rights of PPP projects in the current period.

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MANAGEMENT DISCUSSION AND ANALYSIS

2. *Information of overseas assets*

Applicable Not applicable

(1) **Explanation on higher proportion of overseas assets**

Applicable Not applicable

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

Applicable Not applicable

Item	Closing book value
Cash and bank balances	317,644,407.70
Receivables for financing	283,879,309.61
Accounts receivable	350,836,342.12
Other non-current assets	4,288,244,537.43

For details, please refer to “81. Assets with restricted ownership or right of use” in “VII. Notes to Items in the Consolidated Financial Statements” of Section X Financial Report.

4. *Other explanations*

Applicable Not applicable

SECTION III

MANAGEMENT DISCUSSION AND ANALYSIS

(IV) Analysis of investment

1. Overall analysis of investment in external equities

As of the end of the Reporting Period, the Group has long-term equity investments of RMB1.470 billion, representing an increase of RMB92 million or 6.64% as compared to the beginning of the year. For details, please refer to 17 in “VII. Notes to Items in the Consolidated Financial Statements” of Section X Financial Report.

(1) Material equity investment

Applicable Not applicable

(2) Material non-equity investment

Applicable Not applicable

(3) Financial assets measured at fair value

Applicable Not applicable

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	1,124,819,159.20	-	-	-	-	1,124,819,159.20
Including: non-listed equity investments	1,124,819,159.20	-	-	-	-	1,124,819,159.20
2. Receivables for financing	1,429,297,655.75	-	-	-	-	1,429,297,655.75
Subtotal	<u>2,554,116,814.95</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>2,554,116,814.95</u>

(V) Disposal of significant assets and equity interest

Applicable Not applicable

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

Applicable Not applicable

For details, please refer to “17. Long-term equity investment” in “VII. Notes to Items in the Consolidated Financial Statements” and “IX. Interests in Other Entities” of Section X Financial Report.

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MANAGEMENT DISCUSSION AND ANALYSIS

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

Applicable Not applicable

VII. OTHER DISCLOSURES

Applicable Not applicable

(I) Use of proceeds raised from H shares:

The proceeds raised from H shares amounted to approximately RMB9,104 million. As of 1 January 2022, a total of RMB8,372 million of proceeds raised from H shares have been used, and a total of RMB732 million of proceeds raised from H shares have not been used. As of 30 June 2022, 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 intended 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 30 June 2022, 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 aforesaid plan for the use of proceeds is consistent with the use of proceeds as disclosed in the prospectus.

(II) Employees

As of 30 June 2022, the Company had a total of 19,723 full-time employees, including 18,817 employees in subsidiaries. The total labour cost in the first half of 2022 was RMB2.661 billion. The Company has established a comprehensive performance evaluation system, linking the annual operation targets with the performance evaluation of all departments and employees. The Company attaches great importance to corporate culture construction and focuses on improving the overall employee quality by proactively implementing a comprehensive staff training initiative by levels and layers. The Company, based on different position categories, has established a performance-and-capability-oriented employee remuneration system and has effectively safeguarded the capability to recruit, retain and incentivize talents.

During the Reporting Period, the Company's remuneration policy and training plan remained unchanged. For relevant information, please refer to "XIII. EMPLOYEES OF THE PARENT COMPANY AND MAJOR SUBSIDIARIES AS OF THE END OF REPORTING PERIOD" in the 2021 annual report of the Company.

SECTION IV CORPORATE GOVERNANCE

I. 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
2022 First Extraordinary General Meeting	25 February 2022	www.hkexnews.hk www.sse.com.cn	25 February 2022	<p>The following resolutions were considered and approved at the meeting:</p> <ol style="list-style-type: none"> 1. The Appointment of ZHOU Zhiliang as Executive Director of the fourth session of the Board of Directors; 2. The Appointment of XU Zongxiang as Executive Director of the fourth session of the Board of Directors; 3. The Appointment of YANG Yongsheng as Executive Director of the fourth session of the Board of Directors; 4. The Appointment of GUO Yonghong as Non-executive Director of the fourth session of the Board of Directors; 5. The Appointment of YAO Guiqing as Independent Non-executive Director of the fourth session of the Board of Directors; 6. The Appointment of YAO Cho Fai Andrew as Independent Non-executive Director of the fourth session of the Board of Directors; 7. The Appointment of FU Junyuan as Independent Non-executive Director of the fourth session of the Board of Directors; 8. The Appointment of KONG Ning as shareholder representative Supervisor of the fourth session of the Supervisory Committee; 9. The Appointment of LI Tienan as shareholder representative Supervisor of the fourth session of the Supervisory Committee;

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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 Annual General Meeting	10 June 2022	www.hkexnews.hk www.sse.com.cn	10 June 2022	<p>The following resolutions were considered and approved at the meeting:</p> <ol style="list-style-type: none"> 1. Resolution on Report of the Board of Directors for 2021 of China Railway Signal & Communication Corporation Limited; 2. Resolution on Report of the Supervisory Committee for 2021 of China Railway Signal & Communication Corporation Limited; 3. Resolution on Annual Report for 2021 of China Railway Signal & Communication Corporation Limited; 4. Resolution on Final Account Report for 2021 of China Railway Signal & Communication Corporation Limited; 5. Resolution on Profit Distribution Plan for 2021 of China Railway Signal & Communication Corporation Limited; 6. Resolution on Appointment of Auditor for 2022; 7. Resolution on Remuneration for Directors and Supervisors of the Company for 2021; 8. Resolution on Authorization to Deal with Matters regarding the Purchase of Liability Insurance of Directors, Supervisors and Senior Management of the Company; 9. 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

1. On 25 February 2022, the Company held the first extraordinary general meeting in 2022 by way of on-site and online voting combination. For details, please refer to the Resolution Announcement of the 2022 First Extraordinary General Meeting of China Railway Signal & Communication Corporation Limited dated 25 February 2022.
2. On 10 June 2022, the Company held the 2021 Annual General Meeting by way of on-site and online voting combination. For details, please refer to the Resolution Announcement of 2021 Annual General Meeting of China Railway Signal & Communication Corporation Limited dated 10 June 2022.

SECTION IV CORPORATE GOVERNANCE

II. CHANGES IN DIRECTORS, SUPERVISORS, SENIOR MANAGEMENT AND CORE TECHNICIANS OF THE COMPANY

✓ Applicable Not applicable

Name	Position held	Information on the change
YANG Yongsheng	Executive Director	Resignation
YAO Cho Fai Andrew	Independent Non-executive Director	Election
FU Junyuan	Independent Non-executive Director	Election
ZHANG Quan	Deputy secretary of the Party Committee, executive Director	Election
CHEN Jin'en	Independent Non-executive Director	Resignation
CHAN Ka Keung Peter	Independent Non-executive Director	Resignation
LI Lianqing	Member of the Standing Committee of the Party Committee, chief accountant, Board secretary, joint company secretary	Appointment
WAN Baohua	Member of the Standing Committee of the Party Committee, vice president	Appointment
QIU Wei	Board secretary, joint company secretary	Resignation
NG Wing Shan	Joint company secretary	Resignation
NGAI Wai Fung	Joint company secretary	Appointment
HU Shaofeng	Member of the Standing Committee of the Party Committee, chief accountant, Board secretary, joint company secretary	Appointment, resignation
YANG Yang	Employee Representative Supervisor	Election
CHEN Shikui	Employee Representative Supervisor	Resignation

Explanation on changes in directors, supervisors, senior management and core technicians of the Company

✓ Applicable Not applicable

On 17 January 2022, due to change in job arrangement, Ms. QIU Wei ceased to act as the Board secretary, joint company secretary and authorized representative of the Company under Rule 3.05 of the Listing Rules of the Hong Kong Stock Exchange with effect from 17 January 2022. Ms. QIU Wei has also confirmed that she has no disagreement with the Board in any respect and, there is no other matter in relation to her resignation that needs to be brought to the attention of the shareholders of the Company or the Hong Kong Stock Exchange. Mr. HU Shaofeng has been appointed as the Board secretary, a joint company secretary and an authorized representative of the Company with effect from 17 January 2022.

On 23 February 2022, the Company convened the employee representatives' general meeting, at which Ms. YANG Yang was elected as an employee representative Supervisor of the fourth session of the Supervisory Committee of the Company. Mr. CHEN Shikui shall cease to take any role as an employee representative Supervisor of the Company due to other work arrangement.

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CORPORATE GOVERNANCE

During the Reporting Period, the term of the third session of the Board of Directors expired. In accordance with the Company Law of the People's Republic of China and the Rules Governing the Listing of Stocks on the Science and Technology Innovation Board of Shanghai Stock Exchange and other laws and regulations and the Articles of Association, the Company conducted the re-election of the Board of Directors. As nominated by shareholders and considered and approved by the Nomination Committee on the qualifications, the Board of Directors of the Company agreed to nominate Mr. YAO Cho Fai Andrew and Mr. FU Junyuan as candidates for independent non-executive directors of the fourth session of the Board of Directors of the Company. The Company held the first extraordinary general meeting in 2022 by way of on-site and online voting combination on 25 February 2022, at which Mr. YAO Cho Fai Andrew and Mr. FU Junyuan were elected as independent non-executive directors of the fourth session of the Board of Directors of the Company. Mr. CHEN Jin'en and Mr. CHAN Ka Keung Peter ceased to be independent non-executive directors of the Company due to their ages.

On 25 March 2022, due to change in work arrangement, Ms. NG Wing Shan has tendered her resignation as the joint company secretary of the Company and the process agent for the acceptance of service of process and notices on behalf of the Company in Hong Kong under Part 16 of the Companies Ordinance (Chapter 622 of the Laws of Hong Kong) with effect from 25 March 2022. Ms. Ng Wing Shan has also confirmed that she has no disagreement with the Board and there is no matter relating to her resignation that needs to be brought to the attention of the Hong Kong Stock Exchange and the shareholders of the Company. Dr. NGAI Wai Fung has been appointed as the joint company secretary and the process agent with effect from 25 March 2022.

On 16 April 2022, Mr. HU Shaofeng has resigned as chief accountant, Board secretary, joint company secretary and authorized representative of the Company due to a job change and will cease to hold any position in the Company and its subsidiaries upon his resignation. Meanwhile, he has confirmed that he has no disagreement with the Board and the management and there is no matter that needs to be brought to the attention of the Hong Kong Stock Exchange and the shareholders of the Company.

On 30 May 2022, the Proposal on the Appointment of the Vice President of the Company was considered and approved at 5th meeting of the fourth session of the Board of Directors of the Company, appointing Mr. WAN Baohua as the vice president of the Company.

On 17 June 2022, the Proposal on the Appointment of the Chief Accountant of the Company was considered and approved at 6th meeting of the fourth session of the Board of Directors of the Company, appointing Mr. LI Lianqing as the chief accountant of the Company.

On 15 July 2022, the Proposal on the Appointment of LI Lianqing as Board Secretary, Joint Company Secretary and Authorized Representative of the Company was considered and approved at 7th meeting of the fourth session of the Board of Directors of the Company, appointing Mr. LI Lianqing as Board secretary, joint company secretary and authorized representative of the Company. The appointment of Mr. LI Lianqing as joint company secretary and authorized representative of the Company will become effective from 15 July 2022 and his appointment as Board secretary of the Company will become effective from the date on which he obtains the certificate of Board secretary from the Science and Technology Innovation Board of Shanghai Stock Exchange. Currently, Mr. ZHOU Zhiliang, the legal representative of the Company, performs the duties of the Board secretary.

On 8 August 2022, Mr. YANG Yongsheng resigned as executive director of the Company due to the change in work arrangements.

As of the date of this report, the executive directors of the Company are Mr. ZHOU Zhiliang, Mr. XU Zongxiang and Mr. ZHANG Quan, 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.

Explanation on recognition of core technicians of the Company

Applicable Not applicable

Core technicians of the Company are comprehensively recognized based on their professional capabilities, research results, leadership in the implementation of significant projects, working background, education background and other factors. During the Reporting Period, the Company has no core technicians to be recognized but not recognized.

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

Interim proposed profit distribution plan or reserve-to-equity transfer plan

Whether to distribute or transfer	No
Bonus shares for every 10 shares (shares)	—
Dividends distributed per 10 shares (yuan) (tax inclusive)	—
New shares for every 10 shares (shares)	—

Explanation of profit distribution plan or reserves-to-equity transfer plan

The Company has no plan for distribution of profits or transfer of capital reserve fund during the Reporting Period.

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

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

Applicable Not applicable

(II) Incentives not disclosed in the temporary announcements or with subsequent progress

Share incentives

Applicable Not applicable

Other explanations

Applicable Not applicable

Employee stock ownership plan

Applicable Not applicable

Other incentive measures

Applicable Not applicable

SECTION IV

CORPORATE GOVERNANCE

V. CORPORATE GOVERNANCE PRACTICES

The Company strives to maintain high levels of corporate governance to safeguard the interests of its shareholders and to enhance corporate value and accountability.

In order to ensure that the Company is able to fully perform its obligations under the Hong Kong Listing Rules, the Company has established an effective corporate governance structure and, from time to time, reviews and improves its internal control and corporate governance mechanism. The Company also operates in strict compliance with the Articles of Association of the Company, operating procedures for Board Committees, the Company Law and the requirements of relevant laws, regulations and regulatory documents, as well as the relevant rules and regulations of the Hong Kong Stock Exchange in relation to corporate information disclosure and investors' relations management and services.

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 all the code provisions as set out in the Corporate Governance Code during the Reporting Period.

VI. REPURCHASE, SALE OR REDEMPTION OF LISTED SECURITIES OF THE COMPANY

During the Reporting Period, neither the Company nor its subsidiaries repurchase, sell or redeem any of the listed securities of the Company.

VII. REVIEW OF THE INTERIM REPORT BY THE AUDIT AND RISK MANAGEMENT COMMITTEE

Members of the Audit and Risk Management Committee of the Company comprise of Mr. FU Junyuan (an independent non-executive director, chairman of the Committee), Mr. GUO Yonghong (a non-executive director) and Mr. YAO Cho Fai Andrew (an independent non-executive director).

The Audit and Risk Management Committee of the Company has reviewed the unaudited interim condensed consolidated financial statements, the interim results announcement and interim report of the Company for the six months ended 30 June 2022.

VIII. SUBSEQUENT EVENTS

On 20 July 2022, the Company has entered into a Joint Venture Agreement with CRSC Group, its parent in relation to the establishment of a joint venture to establish a financial company that engages in financial services. For further details of establishment of the joint venture, please refer to the announcement of the Company dated 20 July 2022.

SECTION V

ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

I. ENVIRONMENTAL INFORMATION

- (I) **Explanation on environmental protection of companies and their significant subsidiaries classified as the key pollutant discharging units announced by the environmental protection department**

Applicable Not applicable

- (II) **Explanation on environmental protection of companies other than those classified as the key pollutant discharging units**

Applicable Not applicable

1. ***Administrative punishment on environmental issues***

Applicable Not applicable

2. ***Other environmental information disclosed with reference to the key pollutant discharging units***

Applicable Not applicable

Pollutant discharging information: CRSC is an environmentally friendly “general class” enterprise with “low pollution emission.” Pollutant discharge is mainly divided into three categories: air pollutants, water pollutants and hazardous wastes. Air pollution emissions mainly include a small amount of nitrogen oxide and sulfur dioxide produced by boiler heating in the factory, and a small amount of volatile organic compounds (VOCS) in the production process; water pollution emissions mainly include ammonia nitrogen and chemical oxygen demand (COD); the hazardous waste is HW08, HW09, HW13 and HW49, mainly including the organic solvents used in the mechanical processing, organic solvents produced in the process of electronic product assembly and cable extrusion, and emulsions and waste oils generated during equipment maintenance. In the first half of 2022, the COD emission in sewage was 1.04 tons, the ammonia nitrogen emission was 0.24 ton, and the hazardous waste treatment capacity was 72.57 tons, maintaining a reasonable level, the air pollutant sulfur dioxide emission was 0.01 ton, and the nitrogen oxide emission was 0.48 ton. The discharge method of wastewater is mainly based on recycling, and unified discharge after complying with the standard treatment. The discharge method of VOCS and exhaust boiler is based on organized emission after adsorption treatment. All hazardous wastes are entrusted to professional enterprises with hazardous waste operation license, road transport of dangerous cargo license and other qualifications to handle. Enterprises in relation to fixed pollutants have submitted the application for and obtained new pollutants discharge licenses or completed the registration of the fixed pollutants source discharge. The discharge of major pollutants meets the discharge requirements stipulated by the state or local authorities.

SECTION V

ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

Construction and operation of pollution prevention and control facilities: CRSC has effectively treated the discharge outlets of pollution sources produced in all links of the production process, and the pollution control equipment is running well. For the links involved in the production of VOCS by cable processing, mechanical product processing and electronic product assembly in industrial enterprises, treatment devices, such as flue gas electronic purification systems, activated carbon purification systems, low temperature plasma and UV photolysis purification systems, are equipped to ensure the standard emission of volatile organic gas. The additional and upgraded enterprise-level sewage treatment stations resulted in a substantial increase in sewage treatment capacity and strong monitoring of water pollution discharge indicators. Hazardous wastes shall be stored and managed strictly in accordance with regulations. In the process of transfer and disposal of hazardous wastes, the joint bills of hazardous wastes transfer shall be filled out in accordance with the provisions of the Administrative Measures on the Joint Bills for the Transfer of Hazardous Wastes (《危險廢物轉移聯單管理辦法》), and qualified units shall be entrusted to carry out harmless and safe disposal according to law.

Environmental impact assessment and other administrative licenses in relation to environmental protection of construction projects: In the implementation of construction projects, CRSC implements the Environmental Impact Assessment Law (《環境影響評價法》) and the “three simultaneous” system of simultaneous design, construction and operation of environmental protection facilities and main projects. The total amount of pollutants shall be controlled and the principle of focusing on prevention, combining prevention with treatment shall be implemented to treat and bury all kinds of pollutants generated so as to ensure the discharge up to the standard. CRSC has formulated the Administrative Measures for Safety and Environmental Protection of Construction Projects (《建設項目安全環保管理辦法》) to ensure that the construction projects obtained the local government’s environmental assessment approval before the start of construction, and the environmental protection acceptance has been carried out in full accordance with the requirements of the Administrative Regulations on Environmental Protection of Construction Projects (《建設項目環境保護管理條例》).

Emergency plan for contingent environmental incidents: CRSC formulated the Measures for Reporting, Investigation and Handling of Environmental Emergencies (《突發環境事件報告和調查處理辦法》). According to the Safe Production Contingency Management Measures (《安全生產應急管理辦法》) issued by CRSC, CRSC has set up emergency organizations, classified emergency responsibilities at all levels, refined the classification of events, formulated emergency plans and conducted practical exercises, carried out relevant safety education and training, strengthened safety awareness and effectively improved the level of response to emergency.

Environmental self-monitoring program: CRSC strengthens the supervision and inspection of relevant enterprises’ pollution sources. Each of relevant enterprises has formulated pollution discharge outlets monitoring and management systems and third-party testing plans according to the actual conditions of the enterprise. In order to improve the monitoring effects, some enterprises have installed on-line monitoring system for wastewater and exhaust gas at the key pollutant discharge outlets as required, realizing 24-hour monitoring and warning of pollutant discharge and establishing a sound pollutant emission monitoring system.

During the Reporting Period, the Company has not received any administrative penalties due to environmental issues.

3. *Reasons for non-disclosure of other environmental information*

Applicable Not applicable

SECTION V

ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

(III) Explanation of the follow-up progress of or changes in the disclosure of environmental information during the Reporting Period

Applicable Not applicable

(IV) Relevant information beneficial to ecological protection, pollution prevention and fulfillment of environmental responsibilities

Applicable Not applicable

Guided by Xi Jinping's thought on ecological civilization, CRSC has been fully implementing the new development concept and adhering to ecological priority and green development. It unwaveringly carries out significant deployments on the civilized development path with production development, prosperous life and pleasant ecology, and promotes the notion of green development. Focusing on protecting the environment and saving resources, CRSC follows the relevant laws and regulations of the state on ecological and environmental protection, implements pollutant reduction and environmental governance simultaneously and actively fulfills its social responsibility. None of subsidiaries under CRSC is a key pollutant discharging unit.

CRSC Xi'an Industry Group and CRSC Cables have completed the installment of ventilation facilities for the exhaust gas VOCs generated by the production lines and ensured that each discharge outlet is equipped with activated carbon adsorption treatment devices or photo catalyzing devices to ensure the standard emission of waste gas and meet the requirements on environmental protection.

The BRSC of CRSCD carried out green diagnosis and determined eight items to be improved, including the establishment of the energy management system, the building of an intelligent management information platform and the use of recyclable energy.

CRSC CASCO organized the public riverside cleaning activity themed "Protecting the Blue Planet." More than 100 environmental protection volunteers participated in the riverside cleaning activity at Fuhe River in Chengdu. They collected 3,767 pieces of waste at the riverside with a total weight of 84.915kg.

CRSC Electrification Bureau installed dust monitoring and excessive dust warning systems (for the monitoring of PM2.5, PM10 and noises) at construction sites and strictly abided by local management and control policies on environmental protection, demonstrating the undertakings of a central enterprise in creating a beautiful ecology and environment.

SECTION V

ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

(V) Measures adopted for reducing its carbon emission during the Reporting Period and the effects thereof

Applicable Not applicable

CRSC actively practices the national high-quality and green development targets on carbon peak and carbon neutrality and formulated and issued the Work Plan for Implementation of the Carbon Peak and Carbon Neutrality (落實碳達峰碳中和工作方案). All secondary enterprises of CRSC have formulated plans for the implementation of the carbon peak and carbon neutrality. CRSC boosts innovation in construction process, production equipment and materials, undertakes the responsibilities and contributes the strength of central enterprises to the green and sustainable development of the state.

The BRSC of CRSCD completed the renovation of lighting source in production areas in the first quarter and replaced 182 metal halide lamps into LED lamps, reducing the unit power consumption from 400 watt each to 100 watt each. The power consumption reduced by 56,120 kWh in the second quarter as compared with the corresponding period last year and the energy conservation rate reached 33%.

The City Traffic Company conducted the research and development of the intelligent energy-saving ATO system. Through leveraging ramp conditions and margins for operation time, it optimized the manipulation strategies and curves of trains. Based on the on-site test at Beijing Subway Line 8, the energy consumption for driving a single train was reduced by 14.9%.

CRSC Construction Group vigorously promoted the use of new materials, new technologies and new processes. For the relocation and renovation of the Human Resources, Social Security and Public Services Center of Guiyang undertaken by the company, it adopted online monitoring and assessment technologies on green construction, insulation construction technologies for external walls with cast-in-place concrete, 3XPS extruded polystyrene board insulation layers and other energy-saving and environmental technologies in construction, which effectively reduced energy consumption and the emission of carbon dioxide and was awarded a demonstration project for the application of new technology in the construction industry in Guizhou Province in 2021.

CRSC actively organized publicity activities on the Environment Day on 5 June 2022, the week for national publicity of energy conservation and the National Low-carbon Day in the whole system. All enterprises gave full play to the leading role of enterprises, shifted the focus of the activities to the production site and organized various interesting activities with edutainment and interactions. All enterprises widely publicized the low-carbon concept and relevant knowledge through the Internet, WeChat official accounts, display boards, banners, electronic screens and other forms, with over 33,520 participants, which greatly improved the environmental awareness of all employees.

SECTION V

ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

II. DETAILS ON CONSOLIDATING AND EXPANDING THE ACHIEVEMENTS OF SHAKING OFF POVERTY AND RURAL REVITALIZATION

Applicable Not applicable

The Company fully implemented the decisions and plans of the CPC Central Committee and the Party Committee of the SASAC on targeting assistance, strived to overcome the adverse impacts of the pandemic and promoted targeting assistance to Sheqi County in Henan in a coordinated and solid manner.

Continuously promoting industrial revitalization. It invested RMB280 thousand in the construction of seeding greenhouses for tobaccos and vegetables in Miaodian Township, developed breeding and seeding rotation industries and further led local residents in developing advantageous industries bigger and stronger, continuing to increase the income of residents. It invested RMB200 thousand in the construction of a cold storage house for blueberries in Jinzhuang Township to guarantee the smooth picking, storage and transportation of blueberries after maturity. Through the operation model of “companies + bases + farmers + distributors,” it brought additional revenue to poverty-stricken farmers in surrounding areas from investment, labor work and the transfer of land. It invested RMB480 thousand in one production line for artificial flowers in Lidian Township. Through promoting the establishment of the Sheqi Artificial Flowers Association, it assisted approximately 6,000 poverty-stricken residents in working in nearby areas. It practically displayed the driving effect of industries and constantly consolidated the achievements of shaking off poverty.

Continuously facilitating ecological revitalization. The Company invested RMB100 thousand to purchase 2,000 red magnolias and greatly improved the living and ecological environment of Sheqi County by building a demonstration site of county-level forest villages. At the same time, during the critical period of the prevention and control of the COVID-19 pandemic, it donated 8 infrared thermometers to Health Center of Raoliang Town, which can complete temperature measurement quickly in case of large crowds, effectively prevent cross infection due to the contact with and gathering of high-risk groups and practically consolidate the defense line against the pandemic in Sheqi County.

Continuously conducting cultural revitalization. The Company deeply explored revolutionary and cultural heritages in Sheqi County, invested RMB200 thousand to improve the Third Red Army Cultural Square in Miaodian County and invested RMB170 thousand to renovate cemeteries, repair and set up scattered monuments for martyrs and relocate scattered cemeteries for martyrs. It relocated two cemeteries and six scattered cemeteries for martyrs to the county-level Taihe Town Martyrs Cemetery. The revolutionary education base has gradually become an important place for revolutionary ideological education, patriotism education and revolutionary tourism in Sheqi County, which is of positive significance for promoting the development of the local revolutionary tourism economy.

Continuously advancing organizational revitalization. The Company continued to carry out Party building activities, assisted the Party committees of enterprises in Henan and the organization department of Sheqi County in entering into pair-up agreements and practically enhanced communications with grass-roots Party organization on Party building experience. From 20 to 21 June 2022, CRSC (Zhengzhou) Electrification Bureau and the Party branch of Sheqi Shedian Wine Co., Ltd. carried out the joint building of Party branches. It provided key assistance to farms with unstable conditions after getting off poverty and poverty-stricken groups as a result of diseases and disasters. As at the end of the Reporting Period, it has assisted 40 special residents and distributed condolence payments of RMB40 thousand, further eradicating risks on returning to poverty. It constantly improved the skills of rural labors and trained 70 grass-roots cadres and 63 technical staff.

Continuously carrying out assistance through consumption. The Company promoted publicity and guided the labor unions, logistics and canteen departments of all subsidiaries of CRSC at all levels to give priority to the purchase of agricultural and sideline products from Sheqi County and other areas shaking off poverty, in the first half of 2022, the whole system purchased agricultural and sideline products with RMB790 thousand from areas shaking off poverty, including over RMB180 thousand of agricultural products were directly purchased from Sheqi County. It assisted Sheqi County in the sale of agricultural products with RMB300 thousand.

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

✓ 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	CRSC Group has made following undertakings in respect of shares lock-up: (1) within 36 months from the date when the CRSC's A shares upon initial public offering are listed on the Shanghai Stock Exchange, the CRSC's A shares held by CRSC Group shall not be transferred or entrusted to 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, 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	-	-

SECTION VI SIGNIFICANT EVENTS

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	CRSC Group has made undertakings to extend the lock-up period of domestic shares held by CRSC upon its initial public offering by 6 months to 21 January 2023. During the extended lock-up period, CRSC Group shall not transfer or entrust others to manage the CRSC's A shares held by it, nor shall CRSC repurchase such shares.	Time of undertakings: 15 July 2022; term: 6 months till 21 January 2023	Yes	Yes	-	-
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) of China Railway Signal & Communication Corporation Limited, 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	-	-

SECTION VI

SIGNIFICANT EVENTS

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	<p>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 or may 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 above-mentioned competitive business from CRSC Group or its holding enterprises at one or multiple times at any time, or CRSC may choose to entrust operation, lease or contract to operate the assets or business of the above-mentioned competitive business in accordance with the PRC 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 loss, damage 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 suspension of trading of CRSC's stock for any reason)</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	-	-

SECTION VI SIGNIFICANT EVENTS

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 have made the following undertakings in respect of regulating Related Party Transactions: (1) CRSC Group and the holding enterprises of CRSC Group (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 the holding enterprises of CRSC Group 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 loss, damage 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	-	-

SECTION VI SIGNIFICANT EVENTS

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 its undertakings as scheduled (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 its undertakings as scheduled 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	-	-

SECTION VI SIGNIFICANT EVENTS

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	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.	Time of undertakings: 15 April 2019; term: long-term effective	No	Yes	-	-

SECTION VI

SIGNIFICANT EVENTS

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	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 my undertakings as scheduled (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 my undertakings as scheduled 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.	Time of undertakings: 15 April 2019; term: long-term effective	No	Yes	-	-

SECTION VI SIGNIFICANT EVENTS

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 undertakings	CRSC Group	On 20 July 2015, CRSC Group issued to the Company 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	-	-

SECTION VI SIGNIFICANT EVENTS

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	CFSC	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 E.U., 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	-	-

SECTION VI SIGNIFICANT EVENTS

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. ILLEGAL GUARANTEES

Applicable Not applicable

IV. AUDIT OF THE INTERIM REPORT

Applicable Not applicable

V. CHANGES TO AND HANDLING OF MATTERS INVOLVED IN NON-STANDARD AUDIT OPINIONS IN ANNUAL REPORT LAST YEAR

Applicable Not applicable

VI. EVENTS REGARDING BANKRUPTCY AND RESTRUCTURING

Applicable Not applicable

VII. MATERIAL LITIGATION AND ARBITRATION

The Company was involved in material litigation or arbitration during the Reporting Period The Company was not involved in material litigation or arbitration during the Reporting Period

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

Applicable Not applicable

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

Applicable Not applicable

SECTION VI

SIGNIFICANT EVENTS

X. 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 the temporary announcements*

Applicable Not applicable

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

SECTION VI SIGNIFICANT EVENTS

(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 the 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

3. *Events not disclosed in the temporary announcements*

Applicable Not applicable

(V) Financial business between the Company and related financial companies, holding financial companies and related parties

Applicable Not applicable

(VI) Other material related party transactions

Applicable Not applicable

(VII) Others

Applicable Not applicable

SECTION VI SIGNIFICANT EVENTS

XI. MAJOR CONTRACTS AND PERFORMANCE

(I) Trust, contracting and leasing matters

Applicable Not applicable

(II) Significant guarantees performed and not fully performed during the Reporting Period

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)	–
Total balance of guarantee as at the end of the Reporting Period (A) (excluding those provided to subsidiaries)	–
Guarantees provided by the Company and its subsidiaries to its subsidiaries	
Total guarantee to its subsidiaries incurred during the Reporting Period	2,953,409,734.36
Total balance of guarantee to subsidiaries as at the end of the Reporting Period (B)	5,810,741,932.49
Aggregate guarantee of the Company (including those provided to subsidiaries)	
Aggregate guarantee (A+B)	5,810,741,932.49
Percentage of aggregate guarantee to net assets of the Company (%)	13.29%
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)	4,291,906,742.59
Excess amount of aggregate guarantee over 50% of net assets (E)	–
Aggregate amount of the above three categories (C+D+E)	4,291,906,742.59
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 30 June 2022, the balance of guarantee amounted to RMB5,811 million, accounting for 13.29% of the Company's net assets, of which, the balance of guarantees for wholly-owned subsidiaries was RMB5,811 million; the balance of guarantees for controlling subsidiaries was RMB0 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 current period, the balance of guarantee provided by the Company for its subsidiaries with an asset-liability ratio of more than 70% amounted to RMB4,292 million.

SECTION VI SIGNIFICANT EVENTS

(III) Other material contracts

Applicable Not Applicable

XII. 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)
IPO of A shares	10,530,000,000	10,354,342,373.23	10,354,342,373.23	10,354,342,373.23	4,741,805,815.54	45.80	316,627,593.73	3.06

SECTION VI SIGNIFICANT EVENTS

(II) Details of the investment project

✓ Applicable Not applicable

Unit: Yuan Currency: RMB

Project name	Whether the change of source is involved	Total investment amounts out of project proceeds	Total 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)	Date on which project reached expected available status	Whether process of investment is in line with plan	Specific reason for process of investment not achieved as planned	Efficiency or R&D results achieved of this project	Whether feasibility of project changes significantly, if yes, please specify	Amount of balance and reason
Advanced and intelligent technology research and development projects	No	4,600,000,000.00	4,600,000,000.00	1,711,968,688.54	37.22	2023	Yes	-	Pilot application of the regional coordinative transportation service system in Chongqing; put into operation of the ground equipment of ETCS train control system based on baseline 3 in Belgrade-Stara Pazova section of Hungary-Serbia Railway; pilot application of the railway comprehensive dispatching information system in Baoshen line and Shenshuo line of Shenhua Railway; completed several on-site functional verifications for the new train control system based on Beidou satellite positioning technology; the CBTC system based on full-electronic interlock system that commissioned in the extension project of Changchun Subway Line 3 and Changsha Subway Line 6; the research and development of the intelligent light rail transit control system was launched in Fenghuang Maglev Express; the urban rail train autonomous operation control system was launched in Shenzhen Metro Line 20; the integrated train control and interlocking equipment has passed the expert group test; type test and circular track test organized by the industry; pilot application of locomotive on-board relay on the track.	No	N/A

SECTION VI SIGNIFICANT EVENTS

Project name	Whether the change of source is involved	Source of proceeds	Total promised investment amounts out of project proceeds	Total investment amounts out of proceeds after adjustments (1)	Accumulated investment amount out of proceeds of the end of the Reporting Period (2)	Process of accumulated investment as of the end of the Reporting Period (%) (3)=(2)/(1)	Date on which project reached expected available status	Closed or not	Whether investment process is in line with plan	Specific reason for process of investment not achieved as planned	Efficiency or R&D results achieved of this project	Whether feasibility of project changes significantly, if yes, please specify	Amount of balance and reason
Advanced and intelligent manufacturing base project	No	IPO	2,500,000,000.00	2,500,000,000.00	-	-	-	No	No	Mainly due to the impact of the COVID-19 pandemic, the implementation conditions of the project have changed, but the feasibility of the project has not changed significantly. At present, the entity responsible for implementing the project has submitted a feasibility study report, and the Company is in the process of reviewing it. The Company will continue to actively advance the implementation of the project.	N/A	No	N/A
Information construction project	No	IPO	300,000,000.00	300,000,000.00	49,837,147.00	16.61	2022	No	Yes	-	N/A	No	N/A
Supplement liquidity	No	IPO	2,954,342,373.23	2,954,342,373.23	2,980,000,000.00	100	N/A	No	Yes	-	N/A	No	N/A

Note 1: A total of RMB1,711.97 million was invested in advanced and intelligent technology research and development projects as at the end of the Reporting Period, of which RMB1,245.33 million was invested in research on advanced rail transit control systems and key technologies, and RMB134.12 million was invested in research on intelligent integrated operation and maintenance systems and technologies for rail transit, RMB260.42 million was invested in smart city and industry communication information system research, RMB11.17 million was invested in chip technology applicable to rail transit, and RMB60.93 million was invested in rail transit intelligent construction technology research.

Note 2: As of 30 June 2022, 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 VI

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 29th meeting of the third session of the Board of Directors, the 14th meeting of the third session of the supervisory committee held on 25 August 2021, the Resolution on Utilizing Unused Raised Funds for Cash Management (《關於使用暫時閑置募集資金進行現金管理的議案》) 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, 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, and for purchasing investment products with high security, good liquidity and guaranteed principal (including but not limited to structured deposits, time deposits and large deposit certificate) for a term of not exceeding 12 months. As of 30 June 2022, CRSC's cash management of proceeds is detailed in the table below.

SECTION VI SIGNIFICANT EVENTS

Unit: 0'000 Yuan Currency: RMB

No.	Trustee	Product type	Approved investment amount	Actual investment amount	Term	Balance as of 30 June 2022	Interest as of 30 June 2022	Remarks
1	China Everbright Bank Company Limited Qinghuayuan Sub-branch	Structured deposit	245,000	245,000	September 2019 – December 2019	–	2,331	Redeemed
2	China Everbright Bank Company Limited Qinghuayuan Sub-branch	Large deposit certificate	245,000	245,000	December 2019 – August 2020	–	6,901	Redeemed
3	China Merchants Bank Co., Ltd. Beijing Branch	Large deposit certificate	25,000	25,000	August 2019 – August 2020	–	950	Redeemed
4	China Merchants Bank Co., Ltd. Beijing Branch	Large deposit certificate	25,000	25,000	September 2020 – redemption on demand	25,000	1,712	Redeemed upon expiry
5	China Everbright Bank Company Limited Qinghuayuan Sub-branch	Large deposit certificate	170,000	170,000	September 2020 – redemption on demand	170,000	11,418	Redeemed upon expiry
6	China Everbright Bank Company Limited Qinghuayuan Sub-branch	Large deposit certificate	75,000	75,000	September 2020 – redemption on demand	75,000	5,038	Redeemed upon expiry
Total	/	/	/	/	/ /	270,000	28,350	/

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

Applicable Not applicable

5. Others

Applicable Not applicable

XIII. EXPLANATION ON OTHER SIGNIFICANT EVENTS

Applicable Not applicable

SECTION VII

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

There was no change in the total number of ordinary shares and equity structure of the Company during the Reporting Period.

2. Explanation on changes in shares

Applicable Not applicable

3. The impact of changes in shares on financial indicators such as earnings per share, net asset per share from the Reporting Period to the disclosure date of the Interim Report (if any)

Applicable Not applicable

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

Applicable Not applicable

(II) Changes in shares subject to trading moratorium

Applicable Not applicable

II. PARTICULARS OF SHAREHOLDERS

(I) Total number of shareholders:

Total number of ordinary shareholders as at the end of the Reporting Period (account)	93,934
Total number of shareholders of preference shares with restored voting rights as at the end of the Reporting Period (account)	N/A
Total number of shareholders holding shares with special voting rights as at the end of the Reporting Period (account)	N/A

Number of depositary receipt holders

Applicable Not applicable

CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

(II) Particulars of shareholdings of the top ten Shareholders and the top ten Shareholders not subject to trading moratorium as at the end of the Reporting Period

Particulars of shareholdings of the top ten Shareholders through ordinary securities accounts and client credit trading guarantee securities accounts of securities companies

✓ Applicable □ Not applicable

Unit: Share

Name of shareholder (full name)	Change of shareholding during the Reporting Period	Particulars of shareholdings of the top ten Shareholders			Number of restricted shares including lending shares for securities financing	Shares pledged, marked or frozen		
		Number of shares held as at the end of the period	Percentage (%)	Number of shares held subject to trading moratorium		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	-	State-owned corporation
HKSCC NOMINEES LIMITED ^{Note 2}	+10,000	1,967,737,950	18.58	-	-	Unknown	-	Overseas corporation
HONG KONG SECURITIES CLEARING COMPANY LIMITED	+12,015,201	95,126,515	0.90	-	-	Unknown	-	Overseas corporation
China Merchants Bank Co., Ltd – ChinaAMC SSE STAR 50 Exchange Traded Fund	+22,942,219	76,832,205	0.73	-	-	Unknown	-	Other
China National Machinery Industry Corporation	-	63,507,192	0.60	-	-	Unknown	-	State-owned corporation
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	+5,054,626	33,043,035	0.31	-	-	Unknown	-	Other
Guangdong Hengjian Capital Management Co., Ltd.	-	23,677,500	0.22	-	-	Unknown	-	State-owned corporation
CETC Fund Management Co., Ltd. – Zhongdian Electronics Information Industry Investment Fund (Tianjin) Partnership (Limited Partnership)	-	23,677,500	0.22	-	-	Unknown	-	Other
Hunan Rail Transit Holding Group Co., Ltd. (湖南轨道交通控股集团有限公司)	-	23,677,500	0.22	-	-	Unknown	-	State-owned corporation

SECTION VII

CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

Name of shareholder	Particulars of shareholdings of the top ten Shareholders not subject to trading moratorium		Number
	Number of circulating shares held not subject to trading moratorium	Type and number of shares	
HKSCC NOMINEES LIMITED ^{Note 2}	1,967,737,950	Overseas listed foreign shares	1,967,737,950
HONG KONG SECURITIES CLEARING COMPANY LIMITED	95,126,515	RMB ordinary shares	95,126,515
China Merchants Bank Co., Ltd – ChinaAMC SSE STAR 50 Exchange Traded Fund	76,832,205	RMB ordinary shares	76,832,205
China National Machinery Industry Corporation	63,507,192	RMB ordinary shares	63,507,192
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	33,043,035	RMB ordinary shares	33,043,035
Guangdong Hengjian Capital Management Co., Ltd.	23,677,500	RMB ordinary shares	23,677,500
CETC Fund Management Co., Ltd. – Zhongdian Electronics Information Industry Investment Fund (Tianjin) Partnership (Limited Partnership)	23,677,500	RMB ordinary shares	23,677,500
Hunan Rail Transit Holding Group Co., Ltd. (湖南軌道交通控股集團有限公司)	23,677,500	RMB ordinary shares	23,677,500
Agricultural Bank of China Co., Ltd. – ICBC Credit Suisse SSE Science and Technology Innovation Board 50 Component ETF (中國農業銀行股份有限公司 – 工銀瑞信上證科創板50成份交易型開放式指數證券投資基金)	12,246,710	RMB ordinary shares	12,246,710
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	N/A		

Note 1: As of 30 June 2022, 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 note 1 and note 2, shares held by other top ten shareholders are A shares of the Company.

CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

Number of shareholdings of the top ten Shareholders subject to trading moratorium and conditions of trading moratorium✓ Applicable Not applicable

Unit: Share

No.	Name of shareholder subject to trading moratorium	Number of shares held subject to trading moratorium	Time available for listing and trading	Shares subject to trading moratorium available for listing and trading	Trading moratorium
				Number of additional shares available for listing and trading	
1	China Railway Signal and Communication (Group) Corporation Limited	6,604,426,424	21 January 2023		– On 15 July 2022, CRSC Group promised to extend the lock-up period for its holding of restricted shares by 6 months to 21 January 2023
	Explanation on the related party relationship or acting-in-concert arrangement among the above shareholders	N/A			

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 shareholdings of the top ten holders of depository receipts subject to trading moratorium and conditions of trading moratorium** Applicable Not applicable**(III) Particulars of top ten shareholders with voting rights as at the end of the Reporting Period** Applicable Not applicable**(IV) Top ten shareholders from strategic investors or general legal persons participating in the placing of the new shares/depository receipts** Applicable Not applicable

SECTION VII

CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

(V) Interests and short positions of substantial shareholders in shares and underlying shares of the Company

As at 30 June 2022, so far as is known to the Directors, the following persons (other than the directors, the supervisors or chief executives of the Company) had interests or short positions in the shares or underlying shares of the Company which would be required to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the Securities and Futures Ordinance (the "SFO") and which were entered in the register required to be kept by the Company pursuant to section 336 of the SFO:

Name of Shareholder	Class of shares	Capacity	Number of shares held	Approximate percentage of shares in the relevant class of shares of the Company	Approximate percentage of shares in the total issued shares of the Company
China Railway Signal and Communication (Group) Corporation Limited	A shares	Beneficial owner	6,604,426,424 (Long position)	76.61%	62.37%
Shanghai Zhenhua Heavy Industries Co., Ltd. ⁽¹⁾	H shares	Interests in a controlled corporation	123,063,000 (Long position)	6.25%	1.16%
Shanghai Zhenhua Port Machinery (Hong Kong) Company Limited ⁽¹⁾	H shares	Beneficial owner	123,063,000 (Long position)	6.25%	1.16%
China Railway Group Investment (Hong Kong) Limited ⁽²⁾	H shares	Beneficial owner	123,063,000 (Long position)	6.25%	1.16%
China Railway Engineering Corporation ⁽²⁾	H shares	Interests in a controlled corporation	123,063,000 (Long position)	6.25%	1.16%
China Railway Group Limited ⁽²⁾	H shares	Interests in a controlled corporation	123,063,000 (Long position)	6.25%	1.16%
China Railway International Group Co., Limited ⁽²⁾	H shares	Interests in a controlled corporation	123,063,000 (Long position)	6.25%	1.16%
Shanghai Ningquan Asset Management Co., Ltd. (上海寧泉資產管理有限公司)	H shares	Investment manager	158,775,000 (Long position)	8.06%	1.50%

Notes:

As at 30 June 2022, the number of issued shares of the Company was 10,589,819,000 shares, of which 1,968,801,000 shares were H shares and 8,621,018,000 shares were A shares.

1. Shanghai Zhenhua Heavy Industries Co., Ltd. had interests in such shares through Shanghai Zhenhua Port Machinery (Hong Kong) Company Limited.
2. China Railway Engineering Corporation had interests in such shares through China Railway Group Limited, China Railway International Group Co., Limited and China Railway Group Investment (Hong Kong) Limited.

Save as disclosed above, as at 30 June 2022, the Directors were not aware of any persons (other than the directors, the supervisors or chief executives of the Company) who had interests and/or short positions in the shares or underlying shares of the Company which would be required to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO and which were entered in the register required to be kept by the Company pursuant to section 336 of the SFO.

CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

III. DIRECTORS, SUPERVISORS, SENIOR MANAGEMENT AND CORE TECHNICIANS

(I) The changes in shareholding of current and resigned directors, supervisors, senior management and core technicians during the Reporting Period

Applicable Not applicable

Other explanations

Applicable Not applicable

During the Reporting Period, there was no change in the indirect shareholding of the Company's directors, supervisors, senior management and core technicians. As of 30 June 2022, the Company's senior management Zhang Zhihui, core technicians Fu Gang, Ma Lilan and others still indirectly hold the Company's shares by holding shares in the FengZhong Asset Management Plan, totaling 681,131 shares.

(II) The equity incentives granted to the directors, supervisors, 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

(III) **Other explanations**

Applicable Not applicable

SECTION VII

CHANGES IN SHARES AND PARTICULARS OF SHAREHOLDERS

IV. INTERESTS AND SHORT POSITIONS OF DIRECTORS, SUPERVISORS AND CHIEF EXECUTIVES OF THE COMPANY IN SHARES, UNDERLYING SHARES AND DEBENTURES OF THE COMPANY AND ITS ASSOCIATED CORPORATIONS

As at 30 June 2022, none of the directors, supervisors and chief executives of the Company had any interest and/or short position in the shares, underlying shares and debentures of the Company or its associated corporations (within the meaning of Part XV of the SFO) which will have to be notified to the Company and the Hong Kong Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests or short positions which he is taken or deemed to have under such provisions of the SFO) or which will be required, pursuant to Section 352 of the SFO, to be entered in the register referred to therein, or will be required, pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers (the “Model Code”) set out in Appendix 10 to the Hong Kong Listing Rules, to be notified to the Company and the Hong Kong Stock Exchange.

V. SECURITIES TRANSACTIONS CONDUCTED BY DIRECTORS AND SUPERVISORS

The Company has adopted a code of conduct no less exacting than the code of conduct as provided in the Model Code as the code of conduct for all the directors and supervisors trading securities of the Company (the “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 30 June 2022.

VI. CHANGES IN THE CONTROLLING SHAREHOLDER OR ACTUAL CONTROLLER

Applicable Not applicable

VII. IMPLEMENTATION AND CHANGES OF ARRANGEMENTS RELATED TO DEPOSITARY RECEIPTS DURING THE REPORTING PERIOD

Applicable Not applicable

VIII. SHARES WITH SPECIAL VOTING RIGHTS

Applicable Not applicable

SECTION VIII PARTICULARS OF PREFERENCE SHARES

Applicable Not applicable

SECTION IX PARTICULARS OF BONDS

ENTERPRISE BONDS, CORPORATE BONDS AND DEBT FINANCING INSTRUMENTS OF NON-FINANCIAL INSTITUTIONS

Applicable Not applicable

(I) Enterprise bonds

Applicable Not applicable

(II) Corporate bonds

Applicable Not applicable

SECTION IX PARTICULARS OF BONDS

(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 (%) and interest	Repayment of principal	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	102103285.IB	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.	2,800,000,000.00	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 IX PARTICULARS OF 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

Explanation on overdue debts

Applicable Not applicable

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

Applicable Not applicable

3. *Adjustment of credit rating results*

Applicable Not applicable

4. *Implementation and changes in guarantees, debt repayment plans and other repayment guarantees during the Reporting Period and their impact*

Applicable Not applicable

5. *Other explanations of debt financing instruments of non-financial enterprises*

Applicable Not applicable

SECTION IX PARTICULARS OF BONDS

(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) Key accounting data and financial indicators

Applicable Not applicable

Unit: Yuan Currency: RMB

Major indicators	As at the end of the Reporting Period	As at the end of last year	Change as compared with the end of last year (%)	Reason for changes
Current ratio	1.42	1.48	-0.06	
Quick ratio	0.71	0.77	-0.06	
Gearing ratio (%)	59.45	58.35	1.10	

Major indicators	For the Reporting Period (from January to June)	For the corresponding period of last year	Change as compared with the corresponding period of last year (%)	Reason for changes
Net profits after deducting non-recurring gains and losses (whether is it attributable to the parent)	1,881,314,263.17	1,771,582,249.39	6.19	/
Debt-to-EBITDA ratio (whether to apply interest-bearing debts)	0.05	0.04	0.01	/
Interest coverage ratio	72.31	140.99	-68.68	/
Cash interest coverage ratio	-19.65	0.23	-	/
EBITDA interest coverage ratio	81.24	161.41	-80.17	/
Loan repayment ratio (%)	100.00	100.00	-	/
Interest repayment ratio (%)	100.00	100.00	-	/
EBITDA	3,041,912,149.73	2,736,562,136.72	11.16	/

Note: gearing ratio refers to total liabilities divided by total assets

CONVERTIBLE CORPORATE BONDS

Applicable Not applicable

CONSOLIDATED BALANCE SHEET

30 June 2022

I. AUDIT REPORT

Applicable Not applicable

II. FINANCIAL STATEMENTS

CONSOLIDATED BALANCE SHEET

30 June 2022

Prepared by: China Railway Signal & Communication Corporation Limited

Unit: Yuan Currency: RMB

Item	Notes	Closing balance	Opening balance
Current assets:			
Cash and bank balances	VII.1	20,454,005,328.83	22,982,585,272.39
Balances with clearing companies		—	—
Placements with banks and other financial institutions		—	—
Held-for-trading financial assets		—	—
Derivative financial assets		—	—
Bills receivable		—	—
Accounts receivable	VII.5	21,559,726,789.48	19,853,757,318.28
Receivables for financing	VII.6	1,429,297,655.75	2,142,993,114.00
Prepayments	VII.7	1,341,012,640.33	908,511,854.83
Premiums receivable		—	—
Reinsurance accounts receivable		—	—
Deposits receivable from reinsurance treaty		—	—
Other receivables	VII.8	1,171,816,029.94	1,093,595,430.95
Including: Interest receivable			
Dividends receivable		24,650,000.00	6,525,000.00
Financial assets held under resale agreements			
Inventories	VII.9	2,692,772,672.31	2,492,752,472.50
Contract assets	VII.10	39,551,631,309.75	37,318,249,499.32
Assets held for sale		—	—
Non-current assets due within one year	VII.12	97,089,108.22	52,914,920.60
Other current assets	VII.13	990,487,010.58	1,187,176,665.81
Total current assets		89,287,838,545.19	88,032,536,548.68

CONSOLIDATED BALANCE SHEET

30 June 2022

Item	Notes	Closing balance	Opening balance
Non-current assets:			
Loans and advances to customers		–	–
Debt investment	VII.14	273,172,183.50	273,172,183.50
Other debt investments		–	–
Long-term receivables	VII.16	3,786,625,436.62	3,713,734,908.20
Long-term equity investments	VII.17	1,469,795,961.55	1,378,223,747.06
Other equity instrument investments	VII.18	1,124,819,159.20	1,124,819,159.20
Other non-current financial assets			
Investment properties	VII.20	276,459,243.35	284,692,545.57
Fixed assets	VII.21	4,576,445,009.01	4,689,690,366.70
Construction in progress	VII.22	827,146,715.11	800,282,649.47
Productive biological assets		–	–
Oil and gas assets		–	–
Right-of-use assets	VII.25	142,397,117.52	172,627,457.06
Intangible assets	VII.26	2,481,907,549.49	2,529,711,941.27
Development expenditure	VII.27	270,525,071.93	213,250,203.11
Goodwill	VII.28	305,324,128.58	305,324,128.58
Long-term prepaid expenses	VII.29	51,871,249.45	50,007,280.33
Deferred tax assets	VII.30	379,556,975.83	370,019,211.39
Other non-current assets	VII.31	7,468,014,897.57	5,004,496,508.18
Total non-current assets		23,434,060,698.70	20,910,052,289.62
Total assets		112,721,899,243.89	108,942,588,838.30

CONSOLIDATED BALANCE SHEET

30 June 2022

Item	Notes	Closing balance	Opening balance
Current liabilities:			
Short-term borrowings	VII.32	108,967,675.88	75,629,684.59
Borrowings from central bank		—	—
Placements from banks and other financial institutions		—	—
Financial liabilities held for trading		—	—
Derivative financial liabilities		—	—
Bills payable	VII.35	2,094,668,635.70	2,300,794,453.21
Accounts payable	VII.36	46,878,483,593.58	46,455,196,868.52
Advance receipts		—	—
Contract liabilities	VII.38	8,020,549,714.62	7,238,346,058.76
Financial assets sold for repurchase		—	—
Customers deposits and deposits from banks and other financial institutions		—	—
Amount paid for agency securities trading		—	—
Amount paid for agency securities underwriting		—	—
Employee benefits payable	VII.39	730,386,619.95	657,601,985.99
Tax payable	VII.40	891,751,891.52	899,642,671.41
Other payables	VII.41	2,981,798,121.35	1,063,620,223.11
Including: Interest payable		—	—
Dividends payable		1,908,543,639.83	—
Fees and commissions payable		—	—
Reinsurance accounts payable		—	—
Liabilities held for sale		—	—
Non-current liabilities due within one year	VII.43	445,883,229.11	328,560,596.20
Other current liabilities	VII.44	509,883,285.65	476,073,584.49
Total current liabilities		62,662,372,767.36	59,495,466,126.28

CONSOLIDATED BALANCE SHEET

30 June 2022

Item	Notes	Closing balance	Opening balance
Non-current liabilities:			
Insurance contract reserve		—	—
Long-term borrowings	VII.45	3,494,202,482.40	3,127,722,482.40
Bonds payable		—	—
Including: Preference shares		—	—
Perpetual bonds		—	—
Lease liabilities	VII.47	79,354,167.25	97,747,858.35
Long-term payables	VII.48	66,302,465.53	62,593,424.21
Long-term employee benefits payable	VII.49	520,156,000.00	530,775,000.00
Provisions	VII.50	34,070,279.13	33,531,824.87
Deferred income	VII.51	104,018,679.14	160,098,912.68
Deferred tax liabilities	VII.30	55,269,780.49	63,277,288.05
Other non-current liabilities		—	—
Total non-current liabilities		4,353,373,853.94	4,075,746,790.56
Total liabilities		67,015,746,621.30	63,571,212,916.84
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	2,796,935,660.38
Including: Preference shares		—	—
Perpetual bonds		2,796,935,660.38	2,796,935,660.38
Capital reserve	VII.55	15,964,372,423.88	15,964,108,133.50
Less: treasury stocks		—	—
Other comprehensive income	VII.57	-204,110,101.18	-183,635,652.68
Special reserve	VII.58	327,981,958.64	267,880,349.13
Surplus reserve	VII.59	1,811,324,694.45	1,811,324,694.45
General risk reserve		—	—
Retained earnings	VII.60	12,442,035,412.78	12,308,220,568.86
Total equity attributable to Shareholders of the parent company		43,728,359,048.95	43,554,652,753.64
Non-controlling interests		1,977,793,573.64	1,816,723,167.82
Total Shareholders' equity		45,706,152,622.59	45,371,375,921.46
Total liabilities and Shareholders' equity		112,721,899,243.89	108,942,588,838.30

Person-in-charge of the Company: ZHOU Zhiliang

Chief Financial Officer: LI Lianqing

Head of Accounting Department: ZHANG Shihu

PARENT COMPANY'S BALANCE SHEET

30 June 2022

Prepared by: China Railway Signal & Communication Corporation Limited

Unit: Yuan Currency: RMB

Item	Notes	Closing balance	Opening balance
Current assets:			
Cash and bank balances		14,488,742,097.29	17,821,358,618.20
Held-for-trading financial assets		—	—
Derivative financial assets		—	—
Bills receivable		—	—
Accounts receivable	XVII.1	1,733,773,460.03	1,949,665,011.07
Receivables for financing		31,611,450.00	162,628,503.49
Prepayments		176,038,363.96	178,067,195.29
Other receivables	XVII.2	8,823,931,077.96	6,569,134,199.92
Including: Interest receivable		—	—
Dividends receivable		2,093,973,530.31	356,533,862.95
Inventories		6,745,459.21	—
Contract assets		1,832,664,418.69	1,840,202,585.91
Assets held for sale		—	—
Non-current assets due within one year		4,958,216.46	—
Other current assets		84,364,247.01	151,428,268.78
Total current assets		27,182,828,790.61	28,672,484,382.66
Non-current assets:			
Debt investment		273,172,183.50	273,172,183.50
Other debt investments		—	—
Long-term receivables		1,746,113,068.78	1,816,483,821.44
Long-term equity investments	XVII.3	17,319,434,205.04	17,197,354,628.64
Other equity instrument investments		476,408,221.20	476,408,221.20
Other non-current financial assets		—	—
Investment properties		1,441,495,257.27	1,460,482,054.68
Fixed assets		512,347,096.11	526,008,611.39
Construction in progress		9,199,876.28	9,199,876.28
Productive biological assets		—	—
Oil and gas assets		—	—
Right-of-use assets		—	—
Intangible assets		464,498,506.28	478,257,923.35
Development expenditure		—	—
Goodwill		—	—
Long-term prepaid expenses		—	—
Deferred tax assets		31,709,945.75	25,833,621.35
Other non-current assets		1,992,521,329.00	14,939,305.93
Total non-current assets		24,266,899,689.21	22,278,140,247.76
Total assets		51,449,728,479.82	50,950,624,630.42

PARENT COMPANY'S BALANCE SHEET

30 June 2022

Item	Notes	Closing balance	Opening balance
Current liabilities:			
Short-term borrowings		–	–
Financial liabilities held for trading		–	–
Derivative financial liabilities		–	–
Bills payable		67,904,880.86	74,058,902.62
Accounts payable		4,442,170,216.72	4,335,980,609.76
Advance receipts		–	–
Contract liabilities		1,103,518,419.72	1,122,506,270.37
Employee benefits payable		27,106,621.20	28,449,031.48
Tax payable		56,947,913.79	3,833,264.62
Other payables		11,252,751,481.56	11,135,484,672.18
Liabilities held for sale		–	–
Non-current liabilities due within one year		–	–
Other current liabilities		28,787,573.85	29,551,335.32
Total current liabilities		16,979,187,107.70	16,729,864,086.35
Non-current liabilities:			
Long-term borrowings		800,000,000.00	800,000,000.00
Bonds payable		–	–
Including: Preference shares		–	–
Perpetual bonds		–	–
Lease liabilities		–	–
Long-term payables		–	–
Long-term employee benefits payable		66,977,000.00	66,977,000.00
Provisions		686,646.49	686,646.49
Deferred income		3,881,017.87	3,869,841.68
Deferred tax liabilities		–	–
Other non-current liabilities		–	–
Total non-current liabilities		871,544,664.36	871,533,488.17
Total liabilities		17,850,731,772.06	17,601,397,574.52

PARENT COMPANY'S BALANCE SHEET

30 June 2022

Item	Notes	Closing balance	Opening balance
Shareholders' equity:			
Share capital		10,589,819,000.00	10,589,819,000.00
Other equity instruments		2,796,935,660.38	2,796,935,660.38
Including: Preference shares		—	—
Perpetual bonds		2,796,935,660.38	2,796,935,660.38
Capital reserve		16,356,470,432.63	16,356,470,432.63
Less: treasury stocks		—	—
Other comprehensive income		-48,123,455.03	-48,002,800.35
Special reserve		33,506,006.47	18,097,489.74
Surplus reserve		1,811,324,694.45	1,811,324,694.45
Retained earnings		2,059,064,368.86	1,824,582,579.05
Total Shareholders' equity		33,598,996,707.76	33,349,227,055.90
Total liabilities and Shareholders' equity		51,449,728,479.82	50,950,624,630.42

Person-in-charge of the Company: ZHOU Zhiliang

Chief Financial Officer: LI Lianqing

Head of Accounting Department: ZHANG Shihu

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

January to June 2022

Unit: Yuan Currency: RMB

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
I. Total revenue		18,383,362,437.75	17,864,747,289.30
Including: Revenue	VII.61	18,383,362,437.75	17,864,747,289.30
Interest income		—	—
Premiums earned		—	—
Fees and commissions income		—	—
II. Total cost of sales		15,961,504,820.73	15,626,866,910.00
Including: Cost of sales	VII.61	14,120,496,231.20	13,740,680,321.90
Interest expenses		—	—
Fees and commissions expense		—	—
Surrenders		—	—
Net payments for insurance claims		—	—
Net provisions for insurance contract reserve		—	—
Policy dividend expenses		—	—
Reinsurance costs		—	—
Taxes and surcharges	VII.62	113,585,874.83	103,944,349.01
Selling and distribution expenses	VII.63	311,237,350.96	361,627,986.51
General and administrative expenses	VII.64	955,395,376.86	981,981,072.26
Research and development expenses	VII.65	648,574,665.76	643,409,638.89
Finance costs	VII.66	-187,784,678.88	-204,776,458.57
Including: Interest expenses		37,441,870.02	16,954,154.40
Interest income		201,603,681.72	251,485,060.60
Add: Other income	VII.67	248,526,114.08	114,953,008.64
Investment income (with “-” for loss)	VII.68	71,704,705.34	27,306,477.60
Including: Share of profits of associates and joint ventures		60,657,924.10	26,953,405.48
Derecognition of income from financial assets at amortized cost (with “-” for loss)		—	—
Foreign exchange gains (with “-” for loss)		—	—
Net gains from hedging exposure (with “-” for loss)		—	—
Gains from changes in fair value (with “-” for loss)		—	—
Credit impairment losses (with “-” for loss)	VII.71	-104,785,928.52	-56,954,622.39
Assets impairment losses (with “-” for loss)	VII.72	-4,581,610.97	-1,415,392.23
Gains from disposal of assets (with “-” for loss)	VII.73	26,780,716.67	25,298,364.85
III. Operating profit (with “-” for loss)		2,659,501,613.62	2,347,068,215.77
Add: Non-operating income	VII.74	14,624,225.56	28,555,007.51
Less: Non-operating expenses	VII.75	4,266,310.73	2,266,632.79
IV. Total profits (with “-” for total losses)		2,669,859,528.45	2,373,356,590.49
Less: Income tax expenses	VII.76	477,268,739.30	336,617,442.08

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

January to June 2022

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
V. Net profit (with “-” for net loss)		2,192,590,789.15	2,036,739,148.41
(I) Classified by continuity of operation			
1. Net profit from continuing operations (with “-” for net loss)		2,192,590,789.15	2,036,739,148.41
2. Net profit from discontinued operations (with “-” for net loss)		-	-
(II) Classified by the ownership			
1. Net profit attributable to the owners of the parent company (with “-” for net loss)		1,934,084,073.92	1,840,504,747.38
2. Net profit attributable to non-controlling interests (with “-” for net loss)		258,506,715.23	196,234,401.03
VI. Other comprehensive income, net of tax		-20,476,300.31	30,713,678.56
(I) Other comprehensive income attributable to the owners of the parent company, net of tax		-20,474,448.50	30,713,678.56
1. Other comprehensive income that may not be reclassified into profit or loss		-8,000.00	-53,000.00
(1) Changes of re-measurement of defined benefit plans		-8,000.00	-53,000.00
(2) Other comprehensive income that cannot be transferred to profit or loss under equity method		-	-
(3) Changes in fair value of other equity instrument investments		-	-
(4) Changes in fair value of the Company’s own credit risk		-	-
2. Other comprehensive income that will be reclassified into profit or loss		-20,466,448.50	30,766,678.56
(1) Other comprehensive income that can be transferred to profit or loss under equity method		-	-
(2) Changes in fair value of other debt investments		-	-
(3) The amount of financial assets reclassified into other comprehensive income		-	-
(4) Credit impairment provisions for other debt investments		-	-
(5) Hedging reserve arising from cash flows		-18,720,942.53	32,363,900.00
(6) Exchange differences on translation of foreign operations		540,911.58	-70,857.66
(7) Others		-2,286,417.55	-1,526,363.78
(II) Other comprehensive income attributable to non-controlling interests, net of tax		-1,851.81	-

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

January to June 2022

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
VII. Total comprehensive income		2,172,114,488.84	2,067,452,826.97
(I) Total comprehensive income attributable to Shareholders of the parent company		1,913,609,625.42	1,871,218,425.94
(II) Total comprehensive income attributable to non-controlling interests		<u>258,504,863.42</u>	<u>196,234,401.03</u>
VIII. Earnings per share:			
(I) Basic earnings per share (RMB/share)		<u>0.18</u>	0.16
(II) Diluted earnings per share (RMB/share)		<u>0.18</u>	<u>0.16</u>

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.

Person-in-charge of the Company: ZHOU Zhiliang

Chief Financial Officer: LI Lianqing

Head of Accounting Department: ZHANG Shihu

PARENT COMPANY'S STATEMENT OF PROFIT OR LOSS

January to June 2022

Unit: Yuan Currency: RMB

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
I. Revenue	XVII.4	1,680,869,631.90	3,090,570,159.84
Less: Cost of sale	XVII.4	1,425,132,556.29	2,840,307,028.28
Taxes and surcharges		20,294,013.70	20,750,878.31
Selling and distribution expenses		336,327.13	3,341,809.07
General and administrative expenses		105,512,855.00	100,611,577.86
Research and development expenses		64,461,456.16	1,743,736.05
Finance costs		-179,100,824.88	-143,026,732.95
Including: Interest expenses		29,794,079.48	33,749,125.53
Interest income		156,464,567.36	186,886,631.57
Add: Other income		1,585,023.88	738,122.32
Investment income (with "-" for loss)	XVII.5	1,884,282,047.65	1,598,757,498.45
Including: Share of profits of associates and joint ventures		34,079,576.40	9,927,843.51
Derecognition of income from financial assets at amortized cost (with "-" for loss)		—	—
Net gains from hedging exposure (with "-" for loss)		—	—
Gains from changes in fair value (with "-" for loss)		—	—
Credit impairment losses (with "-" for loss)		-23,640,198.23	-3,022,234.47
Assets impairment losses (with "-" for loss)		62,539.34	111,671.93
Gains from disposal of assets (with "-" for loss)		-14,625.00	3,977,506.70
II. Operating profit (with "-" for loss)		2,106,508,036.14	1,867,404,428.15
Add: Non-operating income		3,085,779.51	109,315.09
Less: Non-operating expenses		170.72	60,887.61
III. Total profits (with "-" for total losses)		2,109,593,644.93	1,867,452,855.63
Less: Income tax expenses		74,842,625.12	87,356,840.32
IV. Net profit (with "-" for net loss)		2,034,751,019.81	1,780,096,015.31
(I) Net profit from continuing operations (with "-" for net loss)		2,034,751,019.81	1,780,096,015.31
(II) Net profit from discontinued operations (with "-" for net loss)		—	—

PARENT COMPANY'S STATEMENT OF PROFIT OR LOSS

January to June 2022

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
V. Other comprehensive income, net of tax		-120,654.68	21,075.03
(I) Other comprehensive income that may not be reclassified into profit or loss		—	—
1. Changes of re-measurement of defined benefit plans		—	—
2. Other comprehensive income that cannot be transferred to profit or loss under equity method		—	—
3. Changes in fair value of other equity instrument investments		—	—
4. Changes in fair value of the Company's own credit risk		—	—
(II) Other comprehensive income that will be reclassified into profit or loss		-120,654.68	21,075.03
1. Other comprehensive income that can be transferred to profit or loss under equity method		—	—
2. Changes in fair value of other debt investments		—	—
3. Amount of financial assets reclassified to other comprehensive income		—	—
4. Provision for credit impairment of other debt investments		—	—
5. Hedging reserve arising from cash flows		—	—
6. Exchange differences on translation of foreign operations		70,605.20	21,075.03
7. Others		-191,259.88	—
VI. Total comprehensive income		<u>2,034,630,365.13</u>	<u>1,780,117,090.34</u>
VII. Earnings per share:			
(I) Basic earnings per share (RMB/share)		—	—
(II) Diluted earnings per share (RMB/share)		—	—

Person-in-charge of the Company: ZHOU Zhiliang

Chief Financial Officer: LI Lianqing

Head of Accounting Department: ZHANG Shihu

CONSOLIDATED STATEMENT OF CASH FLOWS

January to June 2022

Unit: Yuan Currency: RMB

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
I. Cash flows generated from operating activities:			
Cash received from the sale of goods or rendering of services		15,627,951,228.03	18,065,643,294.26
Net increase in customer deposits received and interbank deposits		—	—
Net increase in borrowings from central bank		—	—
Net increase in placements from other financial institutions		—	—
Cash received from original insurance contract premium		—	—
Net cash received from reinsurance business		—	—
Net increase in savings and investment funds		—	—
Interests, service charges and commission received		—	—
Net increase in placements from banks and other financial institutions		—	—
Net increase in returned business capital		—	—
Net cash received from accounts payables to brokerage clients		—	—
Refunds of tax		373,539,771.46	180,016,279.49
Cash received relating to other operating activities	VII.78(1)	362,681,604.66	245,142,804.84
Subtotal of cash inflows from operating activities		16,364,172,604.15	18,490,802,378.59
Cash paid for goods and services		-13,085,932,251.31	-14,818,888,204.69
Net increase in loans and advances to customers		—	—
Net increase in deposits with the central bank and interbank funds		—	—
Cash paid for original insurance contract compensation		—	—
Net increase in placements with banks and other financial institutions		—	—
Interests, service charges and commission paid		—	—
Cash paid for bonus of guarantee slip		—	—
Cash paid to and on behalf of employees		-2,306,171,589.75	-2,339,198,143.51
Cash paid for all taxes		-1,481,873,526.23	-1,226,397,040.59
Cash paid relating to other operating activities	VII.78(2)	-581,368,002.80	-532,258,981.21
Subtotal of cash outflows from operating activities		-17,455,345,370.08	-18,916,742,370.00
Net cash flows generated from operating activities	VII.79(1)	-1,091,172,765.94	-425,939,991.41

CONSOLIDATED STATEMENT OF CASH FLOWS

January to June 2022

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
II. Cash flows generated from investing activities:			
Cash received from disposal of investments		–	–
Cash received from return on investment		19,025,000.00	65,385,792.99
Net cash received from disposal of fixed assets, intangible assets and other long-term assets		37,014,249.73	49,168,027.51
Net cash from disposal of subsidiaries and other operating units		–	–
Decrease in unsecured/pledged and unrestricted time deposits with maturity over three months		–	781,383,752.84
Cash received relating to other investing activities	VII.78(3)	90,513,359.04	181,524,717.52
Subtotal of cash inflows from investing activities		146,552,608.77	1,077,462,290.86
Cash paid for acquisition of fixed assets, intangible assets and other long-term assets		-137,651,793.23	-281,495,298.11
Cash paid for investments		-1,967,800,000.00	-224,699,569.07
Net increase in pledged loan		–	–
Net cash paid on acquisition of subsidiaries and other operating units		–	–
Increase in unsecured/pledged and unrestricted time deposits with maturity over three months		-809,775,921.67	–
Cash paid relating to other investing activities	VII.78(4)	-6,604,890.00	-2,192,420.67
Subtotal of cash outflows from investing activities		-2,921,832,604.90	-508,387,287.85
Net cash flows generated from investing activities		-2,775,279,996.13	569,075,003.01
III. Cash flows generated from financing activities:			
Cash received as capital contributions		10,245,000.00	–
Including: Cash received by subsidiaries from minority shareholders' investment		10,245,000.00	–
Cash received from borrowings		615,897,675.88	287,264,573.51
Cash received relating to other financing activities	VII.78(5)	182,977,579.62	–
Subtotal of cash inflows from financing activities		809,120,255.50	287,264,573.51
Cash paid on repayments of borrowings		-91,459,230.99	-476,351,196.61
Cash paid for distribution of dividends or profits and for interest expenses		-29,947,851.04	-263,953,417.80
Including: Dividend and profit of minority shareholder paid by subsidiaries		–	-152,157,041.18
Cash paid relating to other financing activities	VII.78(6)	-33,555,088.59	-138,755,906.04
Subtotal of cash outflows from financing activities		-154,962,170.62	-879,060,520.45

CONSOLIDATED STATEMENT OF CASH FLOWS

January to June 2022

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
Net cash flows generated from financing activities		654,158,084.88	-591,795,946.94
IV. Effect of fluctuations in exchange rate on cash and cash equivalents		56,916,391.58	-20,810,015.95
V. Net increase in cash and cash equivalents		-3,155,378,285.61	-469,470,951.29
Add: Balance of cash and cash equivalents at the beginning of the period	VII.79(1)	17,595,724,106.74	18,184,861,073.07
VI. Balance of cash and cash equivalents at the end of the period	VII.79(1)	14,440,345,821.13	17,715,390,121.78

Person-in-charge of the Company: ZHOU Zhiliang

Chief Financial Officer: LI Lianqing

Head of Accounting Department: ZHANG Shihu

STATEMENT OF CASH FLOWS OF THE PARENT COMPANY

January to June 2022

Unit: Yuan Currency: RMB

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
I. Cash flows generated from operating activities:			
Cash received from the sale of goods or rendering of services		2,029,765,072.49	3,505,621,362.90
Refunds of tax		33,266,100.67	42,220,918.11
Cash received relating to other operating activities		165,523,904.65	205,956,904.29
Subtotal of cash inflows from operating activities		2,228,555,077.81	3,753,799,185.30
Cash paid for goods and services		-1,597,585,645.16	-2,548,611,753.04
Cash paid to and on behalf of employees		-124,869,233.79	-84,794,476.73
Cash paid for all taxes		-72,176,866.52	-120,824,534.91
Cash paid relating to other operating activities		-2,071,946,824.43	-520,881,075.48
Subtotal of cash outflows from operating activities		-3,866,578,569.90	-3,275,111,840.16
Net cash flows generated from operating activities		-1,638,023,492.09	478,687,345.14
II. Cash flows generated from investing activities:			
Cash received from disposal of investments		—	—
Cash received from return on investment		253,029,857.38	371,042,498.59
Net cash received from disposal of fixed assets, intangible assets and other long-term assets		27,500.00	8,279,981.91
Net cash from disposal of subsidiaries and other operating units		—	—
Decrease in unsecured/pledged and unrestricted time deposits with maturity over three months		—	676,591,700.00
Cash received relating to other investing activities		73,517,222.22	200,065,838.90
Subtotal of cash inflows from investing activities		326,574,579.60	1,255,980,019.40
Cash paid for acquisition of fixed assets, intangible assets and other long-term assets		-221,948.70	-365,037.86
Cash paid for investments		-1,988,000,000.00	—
Net cash paid on acquisition of subsidiaries and other operating units		—	—
Increase in unsecured/pledged and unrestricted time deposits with maturity over three months		-809,160,900.00	—
Cash paid relating to other investing activities		—	-1,373,380,942.44
Subtotal of cash outflows from investing activities		-2,797,382,848.70	-1,373,745,980.30
Net cash flows generated from investing activities		-2,470,808,269.10	-117,765,960.90

STATEMENT OF CASH FLOWS OF THE PARENT COMPANY

January to June 2022

Item	Notes	For the six months ended 30 June 2022	For the six months ended 30 June 2021
III. Cash flows generated from financing activities:			
Cash received as capital contributions		—	—
Cash received from borrowings		—	—
Cash received relating to other financing activities		—	—
Subtotal of cash inflows from financing activities		—	—
Cash paid on repayments of borrowings		—	-400,000,000.00
Cash paid for distribution of dividends or profits and for interest expenses		-29,794,079.48	-94,842,222.22
Cash paid relating to other financing activities		—	—
Subtotal of cash outflows from financing activities		-29,794,079.48	-494,842,222.22
Net cash flows generated from financing activities		-29,794,079.48	-494,842,222.22
IV. Effect of fluctuations in exchange rate on cash and cash equivalents			
		51,966,555.60	-13,379,710.60
V. Net increase in cash and cash equivalents			
Add: Balance of cash and cash equivalents at the beginning of the period		12,984,265,297.85	13,737,400,620.01
VI. Balance of cash and cash equivalents at the end of the period			
		8,897,606,012.78	13,590,100,071.43

Person-in-charge of the Company: ZHOU Zhiliang

Chief Financial Officer: LI Lianqing

Head of Accounting Department: ZHANG Shihu

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

January to June 2022

Unit: Yuan Currency: RMB

Item	Equity attributable to owners of the Company											Total shareholder's equity		
	Paid-in capital (or share capital)	Preferred share	Other equity instruments		Less: treasury stocks	Other comprehensive income	Special reserve	Surplus reserve	General risk reserve	Retained earnings	Others		Subtotal	Non-controlling interest
I. As at 31 December 2021	10,589,819,000.00	-	Perpetual bonds	Others	Capital reserve	-	257,880,349.13	1,811,324,694.45	-	12,309,220,588.86	-	43,554,652,753.64	1,815,723,167.82	45,371,375,921.46
Advt. changes in accounting policies	-	-	2,795,935,660.38	-	15,954,108,133.50	-	-	-	-	-	-	-	-	-
Corrections of errors in prior period	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Business combination of entities under common control	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-
II. As at 1 January 2022	10,589,819,000.00	-	2,795,935,660.38	-	15,954,108,133.50	-	257,880,349.13	1,811,324,694.45	-	12,309,220,588.86	-	43,554,652,753.64	1,815,723,167.82	45,371,375,921.46
III. Increase/(decrease) during the period (with "*" for decrease)	-	-	-	-	264,290.38	-	60,101,609.51	-	-	133,814,943.32	-	173,706,265.31	161,070,465.82	334,776,701.13
(I) Total comprehensive income	-	-	-	-	-	-	-	-	-	1,931,084,073.92	-	1,931,604,625.42	253,501,663.42	2,172,114,488.84
(II) Capital contributions and withdrawals	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1. Ordinary shares contributed by shareholders by shareholders	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Capital contributed by holders of other equity instruments	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Share-based payment recorded in Shareholders' equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(III) Profit distribution	-	-	-	-	-	-	-	-	-	-1,800,269,230.00	-	-1,800,269,230.00	-108,274,409.83	-1,908,543,639.83
1. Appropriation of surplus reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Accrual of general risk reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Profits distributed to owners (or shareholders)	-	-	-	-	-	-	-	-	-	-1,800,269,230.00	-	-1,800,269,230.00	-108,274,409.83	-1,908,543,639.83
4. Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(IV) Internal transfer of Shareholders' equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1. Transfer of capital reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Transfer of surplus reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Recovery of loss by surplus reserve (or share capital)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Changes arising from defined benefit plan carried forward to retained earnings	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Other comprehensive income carried forward to retained earnings	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(V) Special reserve	-	-	-	-	-	-	60,101,609.51	-	-	-	-	60,101,609.51	594,952.23	60,696,561.74
1. Appropriated in current period	-	-	-	-	-	-	172,579,717.52	-	-	-	-	172,579,717.52	7,435,814.20	180,015,531.72
2. Used in current period	-	-	-	-	-	-	112,478,108.01	-	-	-	-	112,478,108.01	6,940,861.98	119,318,969.99
(VI) Others	-	-	-	-	264,290.38	-	-	-	-	-	-	264,290.38	-	264,290.38
IV. As at 30 June 2022	10,589,819,000.00	-	2,795,935,660.38	-	15,954,372,423.88	-	327,981,958.64	1,811,324,694.45	-	12,443,035,412.78	-	43,728,353,048.95	1,977,793,573.64	45,706,152,622.59

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

January to June 2022

For the six months ended 30 June 2021
Equity attributable to owners of the Company

Item	Paid-in capital (or share capital)		Other equity instruments			Less: treasury stocks	Other comprehensive income		Special reserve	Surplus reserve	General risk reserve	Retained earnings	Others	Subtotal	Non-controlling interest	Total shareholders' equity
	Preferred share	Others	Perpetual bonds	Others	Capital reserve		Other comprehensive income	Special reserve								
I. As at 31 December 2020	10,588,819,000.00	-	2,800,000,000.00	-	15,984,304,188.86	-	-207,680,607.13	306,215,150.31	1,537,692,257.98	-	11,512,882,058.38	-	42,563,468,050.40	1,733,869,464.00	44,297,337,514.40	
Add: changes in accounting policies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Corrections of errors in prior period	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Business combination of entities under common control	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
II. As at 1 January 2021	10,588,819,000.00	-	2,800,000,000.00	-	15,984,304,188.86	-	-207,680,607.13	306,215,150.31	1,537,692,257.98	-	11,512,882,058.38	-	42,563,468,050.40	1,733,869,464.00	44,297,337,514.40	
III. Increase (decrease) during the period (with "-" for decrease)	-	-	-	-	245,310.39	-	30,713,676.56	-23,759,019.72	-	-	-402,141,884.84	-	-384,941,915.61	-134,055,060.51	-528,996,976.12	
(I) Total comprehensive income	-	-	-	-	-	-	30,713,676.56	-23,759,019.72	-	-	-402,141,884.84	-	-384,941,915.61	-134,055,060.51	-528,996,976.12	
(II) Capital contributions and withdrawals by shareholders	-	-	-	-	-	-	-	-	-	-	1,840,304,747.38	-	1,871,218,425.94	196,234,401.03	2,067,452,826.97	
1. Ordinary shares contributed by shareholders	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2. Capital contributed by holders of other equity instruments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3. Share-based payment recorded in Shareholders' equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4. Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(III) Profit distribution	-	-	-	-	-	-	-	-	-	-	-2,242,846,632.22	-	-2,242,846,632.22	-330,758,885.75	-2,573,605,517.97	
1. Appropriation of surplus reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2. Accrual of general risk reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3. Profits distributed to owners (or shareholders)	-	-	-	-	-	-	-	-	-	-	-2,117,963,800.00	-	-2,117,963,800.00	-302,086,145.75	-2,420,050,255.75	
4. Profits distributed to other holders of equity	-	-	-	-	-	-	-	-	-	-	-94,842,222.22	-	-94,842,222.22	-	-94,842,222.22	
5. Others	-	-	-	-	-	-	-	-	-	-	-28,840,610.00	-	-28,840,610.00	-28,670,300.00	-58,511,000.00	
(IV) Internal transfer of Shareholders' equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1. Transfer of capital reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2. Transfer of surplus reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3. Recovery of loss by surplus reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4. Changes arising from defined benefit plan carried forward to retained earnings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5. Other comprehensive income carried forward to retained earnings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6. Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(V) Special reserve	-	-	-	-	-	-	-	-23,759,019.72	-	-	-	-	-23,759,019.72	467,424.21	-22,291,595.51	
1. Appropriated in current period	-	-	-	-	-	-	-	146,405,330.87	-	-	-	-	146,405,330.87	4,755,387.20	151,160,718.07	
2. Used in current period	-	-	-	-	-	-	-	170,164,350.59	-	-	-	-	170,164,350.59	4,287,982.99	174,452,333.58	
(VI) Others	-	-	-	-	245,310.39	-	-	-	-	-	-	-	245,310.39	-	245,310.39	
IV. As at 30 June 2021	10,588,819,000.00	-	2,800,000,000.00	-	15,984,549,500.25	-	-176,976,930.57	282,456,130.59	1,537,692,257.98	-	11,110,720,174.54	-	42,168,526,134.79	1,599,814,403.49	43,768,340,538.28	

Person-in-charge of the Company: ZHOU Zhiliang

Chief Financial Officer: LI Lianqing

Head of Accounting Department: ZHANG Shihu

PARENT COMPANY'S STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

January to June 2022

Unit: Yuan Currency: RMB

Item	For the six months ended 30 June 2022							Total shareholder's equity			
	Paid-in capital (or share capital)	Preferred share	Perpetual bonds	Others	Capital reserve	Less: treasury stocks	Other comprehensive income		Special reserve	Surplus reserve	Retained earnings
I. As at 31 December 2021	10,589,819,000.00	-	2,796,935,660.38	-	16,356,470,432.63	-	-48,002,800.35	18,097,489.74	1,811,324,694.45	1,824,582,579.05	33,349,227,055.90
Add: changes in accounting policies	-	-	-	-	-	-	-	-	-	-	-
Corrections of errors in prior period	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-
II. As at 1 January 2022	10,589,819,000.00	-	2,796,935,660.38	-	16,356,470,432.63	-	-48,002,800.35	18,097,489.74	1,811,324,694.45	1,824,582,579.05	33,349,227,055.90
III. Increase/(decrease) during the period (with "+", for decrease)	-	-	-	-	-	-	-120,654.68	15,408,516.73	-	234,481,789.81	249,769,651.86
(I) Total comprehensive income	-	-	-	-	-	-	-120,654.68	-	-	2,034,751,019.81	2,034,630,365.13
(II) Capital contributions and withdrawals by shareholders	-	-	-	-	-	-	-	-	-	-	-
1. Ordinary shares contributed by shareholders	-	-	-	-	-	-	-	-	-	-	-
2. Capital contributed by holders of other equity instruments	-	-	-	-	-	-	-	-	-	-	-
3. Share-based payment recorded in Shareholders' equity	-	-	-	-	-	-	-	-	-	-	-
4. Others	-	-	-	-	-	-	-	-	-	-	-
(III) Profit distribution	-	-	-	-	-	-	-	-	-	-1,800,269,230.00	-1,800,269,230.00
1. Appropriation of surplus reserves	-	-	-	-	-	-	-	-	-	-	-
2. Profits distributed to owners (for shareholders)	-	-	-	-	-	-	-	-	-	-1,800,269,230.00	-1,800,269,230.00
3. Others	-	-	-	-	-	-	-	-	-	-	-
(IV) Internal transfer of Shareholders' equity	-	-	-	-	-	-	-	-	-	-	-
1. Transfer of capital reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-
2. Transfer of surplus reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	-	-
3. Recovery of loss by surplus reserve	-	-	-	-	-	-	-	-	-	-	-
4. Changes arising from defined benefit plan carried forward to retained earnings	-	-	-	-	-	-	-	-	-	-	-
5. Other comprehensive income carried forward to retained earnings	-	-	-	-	-	-	-	-	-	-	-
6. Others	-	-	-	-	-	-	-	-	-	-	-
(V) Special reserve	-	-	-	-	-	-	-	15,408,516.73	-	-	15,408,516.73
1. Appropriated in current period	-	-	-	-	-	-	-	29,209,028.36	-	-	29,209,028.36
2. Used in current period	-	-	-	-	-	-	-	-13,800,511.63	-	-	-13,800,511.63
(VI) Others	-	-	-	-	-	-	-	-	-	-	-
IV. As at 30 June 2022	10,589,819,000.00	-	2,796,935,660.38	-	16,356,470,432.63	-	-48,123,455.03	33,506,006.47	1,811,324,694.45	2,059,064,368.86	33,598,996,707.76

PARENT COMPANY'S STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

January to June 2022

For the six months ended 30 June 2021

Item	Other equity instruments						Less: treasury stocks	Other comprehensive income	Retained earnings	Total shareholder's equity
	Paid-in capital (or share capital)	Preferred share	Perpetual bonds	Others	Capital reserve	Special reserve				
I. As at 31 December 2020	10,569,819,000.00	-	2,800,000,000.00	-	16,356,470,432.63	30,739,738.39	-47,706,142.52	2,140,391,784.33	33,467,673,070.81	
Add: changes in accounting policies	-	-	-	-	-	-	-	-	-	
Corrections of errors in prior period	-	-	-	-	-	-	-	-	-	
Others	-	-	-	-	-	-	-	-	-	
II. As at 1 January 2021	10,569,819,000.00	-	2,800,000,000.00	-	16,356,470,432.63	30,739,738.39	-47,706,142.52	2,140,391,784.33	33,467,673,070.81	
III. Increase/(decrease) during the period (with " - " for decrease)	-	-	-	-	-	4,011,815.80	21,075.03	-432,710,006.91	-428,677,116.08	
(I) Total comprehensive income	-	-	-	-	-	21,075.03	21,075.03	1,780,096,015.31	1,780,117,090.34	
(II) Capital contributions and withdrawals by shareholders	-	-	-	-	-	-	-	-	-	
1. Ordinary shares contributed by shareholders	-	-	-	-	-	-	-	-	-	
2. Capital contributed by holders of other equity instruments	-	-	-	-	-	-	-	-	-	
3. Share-based payment recorded in Shareholders' equity	-	-	-	-	-	-	-	-	-	
4. Others	-	-	-	-	-	-	-	-	-	
(III) Profit distribution	-	-	-	-	-	-	-	-2,212,806,022.22	-2,212,806,022.22	
1. Appropriation of surplus reserves	-	-	-	-	-	-	-	-	-	
2. Profits distributed to owners (or shareholders)	-	-	-	-	-	-	-	-2,117,963,800.00	-2,117,963,800.00	
3. Others	-	-	-	-	-	-	-	-94,842,222.22	-94,842,222.22	
(IV) Internal transfer of Shareholders' equity	-	-	-	-	-	-	-	-	-	
1. Transfer of capital reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	
2. Transfer of surplus reserve into capital (or share capital)	-	-	-	-	-	-	-	-	-	
3. Recovery of loss by surplus reserve	-	-	-	-	-	-	-	-	-	
4. Changes arising from defined benefit plan carried forward to retained earnings	-	-	-	-	-	-	-	-	-	
5. Other comprehensive income carried forward to retained earnings	-	-	-	-	-	-	-	-	-	
6. Others	-	-	-	-	-	-	-	-	-	
(V) Special reserve	-	-	-	-	-	4,011,815.80	-	-	4,011,815.80	
1. Appropriated in current period	-	-	-	-	-	23,769,917.25	-	-	23,769,917.25	
2. Used in current period	-	-	-	-	-	19,758,101.45	-	-	19,758,101.45	
(VI) Others	-	-	-	-	-	-	-	-	-	
IV. As at 30 June 2021	10,569,819,000.00	-	2,800,000,000.00	-	16,356,470,432.63	34,751,554.19	-47,685,067.49	1,707,681,777.42	33,038,995,954.73	

Person-in-charge of the Company: ZHOU Zhiliang

Chief Financial Officer: LI Lianqing

Head of Accounting Department: ZHANG Shihu

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 & Communication Corporation (which renamed as China Railway Signal and Communication (Group) Corporation Limited in 2017, 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

30 June 2022
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III. CORPORATE INFORMATION (Continued)

1. Company profile (Continued)

As of 30 June 2022, 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 29 August 2022.

III. CORPORATE INFORMATION (Continued)

2. Scope of consolidated financial statements

Applicable Not applicable

As at 30 June 2022, the subsidiaries of the Group within the scope of consolidated financial statements are as follows:

No.	Level	Name of subsidiary
1	2	CRSC (Beijing) Rail Industry Group Co., Ltd. (通號(北京)軌道工業集團有限公司)
2	2	CRSC (Xi'an) Rail Industry Group Co., Ltd. (通號(西安)軌道交通工業集團有限公司)
3	2	CRSC Cables Company Ltd. (通號電纜集團有限公司) ("CRSC Cables")
4	2	CRSC Research & Design Institute Group Co., Ltd. (北京全路通信信號研究設計院集團有限公司)
5	2	CASCO Signal Ltd. (卡斯柯信號有限公司)
6	2	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)
7	2	CRSC Urban Rail Transit Technology Co., Ltd. (通號城市軌道交通技術有限公司)
8	2	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)
9	2	CRSC Engineering Group Company Ltd. (通號工程局集團有限公司)
10	2	CRSC International Holdings Company Limited (通號國際控股有限公司)
11	2	CRSC Innovation Investment Co., Ltd. (通號創新投資有限公司)
12	2	CRSC (Changsha) Rail Transit Control Technology Company Limited (通號(長沙)軌道交通控制技術有限公司)
13	2	CRSC Construction Group Co., Ltd. (通號建設集團有限公司)
14	2	Zhengzhou Zhongyuan Railway Engineering Co., Ltd. (鄭州中原鐵道工程有限責任公司)
15	2	CRSC (Zhengzhou) Electrification Bureau Co., Ltd. (通號(鄭州)電氣化局有限公司)
16	2	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)
17	2	CRSC Jishou Tengda Project Management Co., Ltd. (吉首通號騰達項目管理有限責任公司)
18	2	China Railway Signal & Communication International Co., Ltd. (中國通號國際有限公司)
19	2	CRSC (Jiangsu) Smart City Construction & Development Co., Ltd. (通號(江蘇)智慧城市建設開發有限公司)
20	2	CRSC (Beijing) Tendering Company Ltd. (通號(北京)招標有限公司)

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.

NOTES TO FINANCIAL STATEMENTS

30 June 2022

RMB

IV. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

1. Basis of preparation

These financial statements have been prepared in accordance with the Accounting Standards for Business Enterprises – Basic Standards and various specific accounting standards, its practice notes, its interpretations and other relevant regulations (collectively “ASBEs”) promulgated by the Ministry of Finance and the Regulation on the Preparation of Information Disclosure by Companies Offering Securities to the Public No.15 – General Requirements for Financial Reporting issued by the China Securities Regulatory Commission.

2. Continuing operations

✓ Applicable Not applicable

The interim financial statements are presented on a going concern basis.

After appraisal, there were no events that resulted in material doubts about the Company’s ability of continuing operations within 12 months from 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 30 June 2022 and operating results and cash flows of the Company and the Group for the six months ended 30 June 2022 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. The reporting period of the financial statements is from 1 January to 30 June 2022.

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.

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.

NOTES TO FINANCIAL STATEMENTS

30 June 2022

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 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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**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.

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.

NOTES TO FINANCIAL STATEMENTS

30 June 2022

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

9. Foreign currency transactions and foreign currency translations (Continued)

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.

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.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments (Continued)

Recognition and derecognition of financial instruments (Continued)

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.

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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**10. Financial instruments (Continued)****Classification and measurement of financial assets** (Continued)*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.

Classification and measurement of financial liabilities

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.2 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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

10. Financial instruments (Continued)

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.

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 assets 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.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

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.

13. Receivable 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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**15. Inventories (Continued)**

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.

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

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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 taken 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.

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.

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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.

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

Depreciation is calculated on the straight-line basis to write off the cost of each item of fixed assets to its residual value over its estimated useful life. The estimated useful lives, estimated residual value and annual depreciation rates of fixed assets are as follows.

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 makes adjustments when necessary.

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%

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

Applicable Not applicable

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

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;
- (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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**25. Borrowing costs (Continued)**

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

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.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**29. Intangible assets (Continued)****(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.

30. Long-term impairment of assets

Applicable Not applicable

The Group determines the impairment of assets other than inventories, contract assets 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.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

30. Long-term impairment of assets (Continued)

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.

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

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**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.

(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.

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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)

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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**33. Employee benefits (Continued)****(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.

(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.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**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.

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.

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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)

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.

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.

41. Deferred tax asset/deferred tax liabilities

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.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

41. Deferred tax asset/deferred tax liabilities (Continued)

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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**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.

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.

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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

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.

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

42. Leases (Continued)

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

As a lessee (Continued)*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.

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.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

42. Leases (Continued)

(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

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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**43. Other significant accounting policies and estimates (Continued)****(1) Hedge accounting (Continued)**

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.

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.

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V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

43. Other significant accounting policies and estimates (Continued)

(1) *Hedge accounting* (Continued)

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.

(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.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**43. Other significant accounting policies and estimates (Continued)****(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.

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.

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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*

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.

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.

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 is 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.

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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 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.

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.

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)***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.

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.

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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

Other explanations:

(1) Implementation of the Interpretation of Accounting Standards for Business Enterprises No. 15

On 30 December 2021, the Ministry of Finance issued the Interpretation of Accounting Standards for Business Enterprises No. 15 (Cai Kuai [2021] No. 35, hereinafter referred to as the “Interpretation No. 15”).

① With respect to accounting for the trial operation sales

The Interpretation No. 15 provides for the accounting for the external sales of products or by-products produced by enterprises before their fixed assets are in their intended usable condition or during research and development process and its presentation, and provides that the net amount of the relevant income from trial operation sales after offsetting relevant costs shall not be written off against the cost of fixed assets or research and development expenditures. This provision has been effective from 1 January 2022 and the trial operation sales that occurred between the beginning of the earliest period presented in the financial statements to 1 January 2022 shall be adjusted retrospectively. The implementation of this provision has no material impact on the Group’s financial position and results of operations.

② With respect to the determination of onerous contracts

The Interpretation No. 15 clarified that the “cost of performing the contract” considered by an enterprise when determining whether a contract constitutes an onerous contract, shall include the incremental cost of performing the contract and the apportioned amount of other costs directly related to the performance of the contract. This provision has been effective from 1 January 2022, and enterprises should apply this provision to contracts under which obligations have not fully fulfilled as at 1 January 2022; as a result, the retained earnings and other related financial statement items at the beginning of the year of the implementation will be adjusted, and comparative data in financial statements for prior periods shall not be adjusted. The implementation of this provision has no material impact on the Group’s financial position and results of operations.

V. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)**44. Changes in significant accounting policies and estimates (Continued)****1. Changes in significant accounting policies (Continued)**

- (2) Implementation of the Notice Concerning the Application of the Provisions on the Accounting Treatment of the COVID-19 Pandemic-Related Rental Concessions

On 19 May 2022, the Ministry of Finance issued the Notice Concerning the Application of the Provisions on the Accounting Treatment of the COVID-19 Pandemic-Related Rental Concessions (Cai Kuai [2022] No. 13), which re-adjusted the scope of the COVID-19 pandemic-related rental concessions that apply to use the simplified method, and abolished the previous limitation that the simplified method could apply to the “concessions that are only for lease payments payable before 30 June 2022”. For rent concessions on lease payments payable after 30 June 2022 directly arising from COVID-19 pandemic, lessees and lessors can still continue to elect to apply the simplified method as provided in the Provisions on the Accounting Treatment of the COVID-19 Pandemic-Related Rental Concessions with other applicable conditions remain unchanged. The implementation of this provision has no material impact on the Group’s financial position and results of operations.

2. Changes in significant accounting estimates

Applicable Not applicable

45. Others

Applicable Not applicable

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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	The VAT payable is the difference between output tax (calculated based on sales of goods and taxable service income under the tax laws) and the deductible input tax for the current period.	6%, 9%, 13%
Corporate income tax	Levied on the basis of taxable profits.	15%, 20%, 25%
Urban maintenance and construction tax	Levied on the basis of turnover taxes paid.	5%, 7%
Educational surcharge	Levied on the basis of turnover taxes paid.	3%
Local educational surcharge	Levied on the basis of turnover taxes paid.	1%, 2%

Disclosure statement of taxable entities subject to different enterprise income tax rates

✓ Applicable Not applicable

VI. TAXATION (Continued)

1. Main taxes and tax rates (Continued)

Name of taxable entity	Income tax rate (%)
China Railway Signal & Communication Corporation Limited	25
CRSC (Beijing) Rail Industry Group Co., Ltd. (通號(北京)軌道工業集團有限公司)	25
CRSC (Xi'an) Rail Industry Group Co., Ltd. (通號(西安)軌道交通工業集團有限公司)	25
CRSC Cables Company Ltd. (通號電纜集團有限公司) (“CRSC Cables”)	25
CRSC Research & Design Institute Group Co., Ltd. (北京全路通信信號研究設計院集團有限公司)	15
CASCO Signal Ltd. (卡斯柯信號有限公司)	15
CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	15
CRSC Urban Rail Transit Technology Co., Ltd. (通號城市軌道交通技術有限公司)	15
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)	25
CRSC Engineering Group Company Ltd. (通號工程局集團有限公司)	25
CRSC International Holdings Company Limited (通號國際控股有限公司)	25
CRSC Innovation Investment Co., Ltd. (通號創新投資有限公司)	25
CRSC (Changsha) Rail Transit Control Technology Company Limited (通號(長沙)軌道交通控制技術有限公司)	15
CRSC Construction Group Co., Ltd. (通號建設集團有限公司)	25
Zhengzhou Zhongyuan Railway Engineering Co., Ltd. (鄭州中原鐵道工程有限責任公司)	25
CRSC (Zhengzhou) Electrification Bureau Co., Ltd. (通號(鄭州)電氣化局有限公司)	25
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)	25
CRSC Jishou Tengda Project Management Co., Ltd. (吉首通號騰達項目管理有限責任公司)	25
China Railway Signal & Communication International Co., Ltd. (中國通號國際有限公司)	16.50
CRSC (Jiangsu) Smart City Construction & Development Co., Ltd. (通號(江蘇)智慧城市建設開發有限公司)	25
CRSC (Beijing) Tendering Company Ltd. (通號(北京)招標有限公司)	25

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VI. TAXATION (Continued)

2. Tax preference

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 Co., LTD. enjoy the refund-upon-collection policy for the portion of VAT exceeding 3% 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 and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

VI. TAXATION (Continued)

2. Tax preference (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

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 shall pay enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

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 shall pay enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

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 enterprise income tax at the preferential tax rate of 15% from 2019 to 2021. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2022.

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VI. TAXATION (Continued)

2. Tax preference (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

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 enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

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 enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

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 enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

Shanghai China Railway Communication & Signal Testing Co., Ltd.:

Shanghai China Railway Communication & Signal Testing Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

VI. TAXATION (Continued)

2. Tax preference (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

CASCO Signal Ltd.:

CASCO Signal Ltd. applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

CRSC Communication & Information Group Shanghai Company Ltd.:

CRSC Communication & Information Group Shanghai Company Ltd. applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

CRSC Information Industry Co., Ltd.:

CRSC Information Industry Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

Shanghai Xinhai Information Transportation Information Technology Co., Ltd.:

Shanghai Xinhai Information Transportation Information Technology Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2019 to 2021.

Chengdu Railway Communication Equipment Co., Ltd.:

Chengdu Railway Communication Equipment Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

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VI. TAXATION (Continued)

2. Tax preference (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 and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

CRSC Engineering Bureau Group Information Technology Co., Ltd.:

CRSC Engineering Bureau Group Information Technology Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

CRSC Engineering Bureau Group Construction Engineering Co., Ltd.:

CRSC Engineering Bureau Group Construction Engineering Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 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 20 September 2019. The certificate is valid for three years. The company shall pay enterprise income tax at the preferential tax rate of 15% from 2019 to 2021. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2022.

CRSC (Changsha) Rail Transit Control Technology Company Limited:

CRSC (Changsha) Rail Transit Control Technology Company Limited applied and was finally recognised as a high-new technology enterprise in 2017. 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 enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

VI. TAXATION (Continued)

2. Tax preference (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 and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2019 to 2021. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2022.

CRSC Institute of Smart City Research & Design:

CRSC Institute of Smart City Research & Design applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

CRSC Railway Vehicles Co., Ltd.:

CRSC Railway Vehicles Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2019. The certificate is valid for three years. The company shall pay enterprise income tax at the preferential tax rate of 15% from 2019 to 2021. The company submitted the high-tech enterprise qualification review materials to the competent authorities in 2022.

Beijing Guo Tie Hua Chen Communication Technology Co., Ltd.:

Beijing Guo Tie Hua Chen Communication Technology Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2020. The certificate is valid for three years. The company shall pay enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

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VI. TAXATION (Continued)

2. Tax preference (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

CRSC Urban Rail Transit Technology Co., Ltd.:

CRSC Urban Rail Transit Technology Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2020. The certificate is valid for three years. The company shall pay enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

Changsha Architectural Design Institute Co., Ltd.:

Changsha Architectural Design Institute Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2020. The certificate is valid for three years. The company shall pay enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

CRSC Guangdong-Hong Kong-Macao (Guangzhou) Transportation Technology Co., Ltd.:

CRSC Guangdong-Hong Kong-Macao (Guangzhou) Transportation Technology Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2020. The certificate is valid for three years. The company shall pay enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

CRSC Engineering Group Electric Engineering Co., Ltd.:

CRSC Engineering Group Electric Engineering Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 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 enterprise income tax at the preferential tax rate of 15% from 2021 to 2023.

VI. TAXATION (Continued)

2. Tax preference (Continued)

Tax preferential policy for high-new technology enterprises (Continued)

CRSC Hezhou Assembly Construction Co., Ltd.:

CRSC Hezhou Assembly Construction Co., Ltd. applied and was finally recognised as a high-new technology enterprise in 2020. The certificate is valid for three years. The company shall pay enterprise income tax at the preferential tax rate of 15% from 2020 to 2022.

Preferential taxation policies for the western development strategy

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 subject 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) and Announcement of the Ministry of Finance and the State Administration of Taxation on Further Implementing the Preferential Income Tax Policies for Small and Micro Enterprises (Announcement No. 13 [2022] of the MOF and the SAT), from 1 January 2022 to 31 December 2024, the portion of annual taxable income of a small low-profit enterprise which does not exceed RMB1 million shall be calculated at a reduced rate of 12.5% as taxable income amount and shall be subject to EIT at 20% tax rate. The portion of annual taxable income of a small low-profit enterprise which exceeds RMB1 million but does not exceed RMB3 million shall be calculated at a reduced rate of 25% as taxable income amount and shall be subject to EIT at 20% tax rate. 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

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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	774,363.14	455,141.96
Bank deposits	20,135,586,557.99	22,481,508,143.11
Other monetary funds	317,644,407.70	500,621,987.32
Total	<u>20,454,005,328.83</u>	<u>22,982,585,272.39</u>
Including: Total amount deposited abroad	<u>1,092,701,229.64</u>	<u>1,075,162,755.53</u>

Other explanations:

Among them, cash and bank balances which are restricted by pledge, secure or freeze and repatriation from abroad are shown below:

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Closing balance of monetary funds for the period	20,454,005,328.83	22,982,585,272.39
Less: Non-pledged/secured and unrestricted time deposits with maturity of three months or above	5,696,015,100.00	4,886,239,178.33
Less: Other monetary funds with restricted use	317,644,407.70	500,621,987.32
Closing balance of cash and cash equivalents for the period/year	<u>14,440,345,821.13</u>	<u>17,595,724,106.74</u>

Note: Restricted cash and bank balances mainly represent acceptance bill deposits, guarantee letter deposits and migrant workers wage deposits, please refer to "VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS 81. Assets with restricted ownership or right of use" in Section X Financial Report for details.

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. Bills receivable

(1). Classified presentation of bills receivable

Applicable Not applicable

(2). Bills receivable pledged by the Company at the end of the period

Applicable Not applicable

(3). Bills 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). Bills 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 the method of provision for bad debt

Applicable Not applicable

(6). Provision for bad debt

Applicable Not applicable

(7). The situation of the write-off of bills receivable for the period

Applicable Not applicable

Other explanations:

Applicable Not applicable

NOTES TO FINANCIAL STATEMENTS

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Accounts receivable

(1). Disclosure by aging

Applicable Not applicable

Unit: Yuan Currency: RMB

Aging	Closing gross carrying amount	Opening gross carrying amount
Subtotal for within 1 year	16,386,639,285.32	15,228,073,847.61
1 to 2 years	3,929,991,760.45	3,063,044,071.95
2 to 3 years	1,007,456,454.83	1,249,039,727.99
Over 3 years	1,184,817,283.25	1,157,937,970.20
Subtotal	22,508,904,783.85	20,698,095,617.75
Less: provision for bad debt of accounts receivable	949,177,994.37	844,338,299.47
Total	21,559,726,789.48	19,853,757,318.28

(2). Disclosure by the method of provision for bad debt

Applicable Not applicable

Unit: Yuan Currency: RMB

Category	Closing balance					Opening balance				
	Gross carrying amount		Provision for bad debt			Gross carrying amount		Provision for bad debt		
	Amount	Proportion (%)	Amount	Percentage of provision (%)	Book value	Amount	Proportion (%)	Amount	Percentage of provision (%)	Book value
Single provision for bad debt	1,063,777,295.15	4.73	66,673,656.53	6.27	997,103,638.62	1,083,646,735.75	5.24	64,217,847.44	5.93	1,019,428,888.31
Provision withdrawn for bad debt on a combination basis	21,445,127,488.70	95.27	882,504,337.84	4.12	20,562,623,150.86	19,614,448,882.00	94.76	780,120,452.03	3.98	18,834,328,429.97
Total	22,508,904,783.85	100.00	949,177,994.37	4.22	21,559,726,789.48	20,698,095,617.75	100.00	844,338,299.47	4.08	19,853,757,318.28

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Accounts receivable (Continued)

(2). Disclosure by the method of provision for bad debt (Continued)

Single provision for bad debt:

Applicable Not applicable

Unit: Yuan Currency: RMB

Name	Closing balance			Reason for provision
	Gross carrying amount	Provision for bad debt	Percentage of provision (%)	
Accounts receivable of single provision for bad debt	1,063,777,295.15	66,673,656.53	6.27	Note
Total	<u>1,063,777,295.15</u>	<u>66,673,656.53</u>	<u>6.27</u>	/

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.

Provision withdrawn for bad debt on a combination basis:

Applicable Not applicable

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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 for bad debt (Continued)

Items of provision on a group basis: aging group

Unit: Yuan Currency: RMB

Name	Closing balance		
	Accounts receivable	Provision for bad debt	Percentage of provision (%)
Within 1 year	15,771,205,203.67	78,856,026.02	0.50
1 to 2 years	3,489,734,916.09	174,486,745.80	5.00
2 to 3 years	989,504,126.50	98,950,412.65	10.00
Over 3 years	1,194,683,242.44	530,211,153.37	44.38
Total	<u>21,445,127,488.70</u>	<u>882,504,337.84</u>	<u>4.12</u>

Recognition standards and descriptions of provision withdrawn for bad debt on a combination basis:

Applicable Not Applicable

If provisions for bad debt are made as per the general model of ECL, please make disclosure with reference to other receivables:

Applicable Not Applicable

(3). Provision for bad debt

Applicable Not applicable

Unit: Yuan Currency: RMB

Category	Opening balance	Increase/decrease during the period			Closing balance
		Provision	Recovery or reversal	Write-off or cancellation	
Accounts receivable	<u>844,338,299.47</u>	<u>138,905,974.65</u>	<u>34,066,279.75</u>	<u>-</u>	<u>949,177,994.37</u>

Including significant amounts of provision for bad debt recovered or reversed in the period:

Applicable Not Applicable

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Accounts receivable (Continued)

(4). The situation of the write-off of accounts receivable for the period

Applicable Not Applicable

(5). Top five debtors with the largest closing balance of accounts receivable

Applicable Not applicable

As at 30 June 2022, top five debtors with the largest balance of accounts receivable 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
Aggregate closing balance of the top five accounts receivable	1,722,811,154.69	7.65	29,572,423.80
Total	<u>1,722,811,154.69</u>	<u>7.65</u>	<u>29,572,423.80</u>

(6). Accounts receivable derecognised due to the transfer of financial assets

Applicable Not Applicable

(7). Amount of assets or liabilities resulting from transfer of accounts receivable and its continuing involvement

Applicable Not Applicable

Other explanations:

Applicable Not applicable

As at 30 June 2022, the Group's gross carrying amount of other non-current assets of RMB4,288,244,537.43 and gross carrying amount of accounts receivable of RMB350,836,342.12 (31 December 2021: gross carrying amount of other non-current assets of RMB4,426,249,414.22 and gross carrying amount of accounts receivable of RMB201,458,572.34), which were formed by the earning rights of the franchise pledged and all proceeds thereunder, were used to obtain long-term loans of RMB2,827,892,028.80 (31 December 2021: RMB2,336,791,575.20), please refer to Note VII. 45 for details.

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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	454,463,788.80	685,394,281.11
Commercial acceptance bills	801,247,814.85	1,079,909,469.63
Other credit instruments measured at fair value through other comprehensive income	173,586,052.10	377,689,363.26
Total	<u>1,429,297,655.75</u>	<u>2,142,993,114.00</u>

As at 30 June 2022, the ownership of bills receivable with book value of RMB283,879,309.61 (as at 31 December 2021: RMB498,692,321.85) 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
Commercial acceptance bills	—	40,000,000.00
Total	<u>—</u>	<u>48,875,684.59</u>

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 2022, the Group measured the bad debt provision at the lifetime expected credit loss, and the relevant amount was RMB2,405,624.82 (31 December 2021: RMB4,693,894.18). 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 incur significant loss due to the default of the acceptor.

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Receivables for financing (Continued)

The bills receivable that have been endorsed or discounted and are not yet due on the balance sheet date are listed as follow:

Unit: Yuan Currency: RMB

	Closing balance		Opening balance	
	Derecognised	Not derecognised	Derecognised	Not derecognised
Bank acceptance bills	377,786,061.91	73,847,675.88	466,753,794.07	179,573,211.17
Commercial acceptance bills	–	210,031,633.73	–	270,243,426.09
Total	<u>377,786,061.91</u>	<u>283,879,309.61</u>	<u>466,753,794.07</u>	<u>449,816,637.26</u>

The increase/decrease in and fair value change of receivables for financing in the period:

Applicable Not Applicable

If provisions for bad debt are made as per the general model of ECL, please make disclosure with reference to other receivables:

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

7. Prepayments

(1). Prepayments by aging

Applicable Not applicable

Unit: Yuan Currency: RMB

Aging	Closing balance		Opening balance	
	Amount	Proportion (%)	Amount	Proportion (%)
Within 1 year	995,126,569.25	54.00	740,701,431.28	81.53
1 to 2 years	198,024,476.58	34.35	93,202,191.91	10.26
2 to 3 years	84,984,595.53	6.39	38,248,853.77	4.21
Over 3 years	62,876,998.97	5.26	36,359,377.87	4.00
Total	<u>1,341,012,640.33</u>	<u>100.00</u>	<u>908,511,854.83</u>	<u>100.00</u>

NOTES TO FINANCIAL STATEMENTS

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. Prepayments (Continued)

(1). *Prepayments by aging* (Continued)

Reason for delayed settlement of significant prepayments aged over 1 year:

	Gross carrying amount
Aggregate top five prepayments aged over one year	<u>90,328,957.01</u>

The above large-amount prepayments aged over one year are not settled in time mainly because the relevant materials and equipment for the projects were not received.

(2). *Top five entities with the largest closing balances of prepayments by subjects of prepayment*

Applicable Not applicable

As at 30 June 2022, the top five prepayments in terms of amounts owed were as follows:

30 June 2022	Gross carrying amount	Proportion of total prepayments (%)
Aggregate top five closing balance of the prepayments	<u>175,922,200.23</u>	<u>13.12</u>

Other explanations

Applicable Not Applicable

8. Other receivables

Presentation of item

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Dividends receivable	24,650,000.00	6,525,000.00
Other receivables	<u>1,147,166,029.94</u>	<u>1,087,070,430.95</u>
Total	<u>1,171,816,029.94</u>	<u>1,093,595,430.95</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

Other explanations:

Applicable Not Applicable

Interest receivable

(1). Classification of interest receivable

Applicable Not Applicable

(2). Significant overdue interest

Applicable Not Applicable

(3). Provision for bad debt

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

Dividends receivable

(1). Dividends receivable

Applicable Not applicable

Unit: Yuan Currency: RMB

Item (or investee)	Closing balance	Opening balance
Siemens Signalling Company Ltd. (西門子信號有限公司)	12,150,000.00	6,525,000.00
Xi'an Schaltbau Electric Corp., Ltd. (西安沙爾特寶電氣有限公司)	12,500,000.00	—
Total	24,650,000.00	6,525,000.00

(2). Significant dividends receivable aged over 1 year

Applicable Not Applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(3). Provision for bad debt

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

Other receivables

(1). Disclosure by aging

Applicable Not applicable

Unit: Yuan Currency: RMB

Aging	Closing gross carrying amount	Opening gross carrying amount
Subtotal for within 1 year	739,474,698.78	694,245,259.29
1 to 2 years	165,426,149.13	155,041,253.12
2 to 3 years	143,201,130.71	138,939,517.84
Over 3 years	217,106,073.26	219,697,624.11
Subtotal	1,265,208,051.88	1,207,923,654.36
Less: provision for bad debt of other receivables	118,042,021.94	120,853,223.41
Total	<u>1,147,166,029.94</u>	<u>1,087,070,430.95</u>

(2). Classification by nature of receivables

Applicable Not applicable

Unit: Yuan Currency: RMB

Nature of receivables	Closing gross carrying amount	Opening gross carrying amount
Performance and tender bonds	393,108,888.83	574,478,299.28
Advance payments	506,095,467.84	305,462,203.46
Various deposits	119,936,954.26	125,469,060.56
Others	246,066,740.95	202,514,091.06
Subtotal	1,265,208,051.88	1,207,923,654.36
Less: provision for bad debts of other receivables	118,042,021.94	120,853,223.41
Total	<u>1,147,166,029.94</u>	<u>1,087,070,430.95</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(3). Provision for bad debt

Applicable Not applicable

Unit: Yuan Currency: RMB

Provision for bad debt	Stage 1	Stage 2	Stage 3	Total
	12-month ECL	Lifetime ECL (non-credit impaired)	Lifetime ECL (credit-impaired)	
Amounts as at 1 January 2022	31,685,499.23	18,477,101.40	70,690,622.78	120,853,223.41
Amounts due for the period as at 1 January 2022	-	-	-	-
- Transferred to stage 2	-	-	-	-
- Transferred to stage 3	-	-	-	-
- Reversed to stage 2	-	-	-	-
- Reversed to stage 1	-	-	-	-
Provision for the period	-	144,291.87	16,071,814.33	16,216,106.20
Reversal for the period	-19,027,307.67	-	-	-19,027,307.67
Write-off for the period	-	-	-	-
Cancellation for the period	-	-	-	-
Other changes	-	-	-	-
Amounts as at 30 June 2022	<u>12,658,191.56</u>	<u>18,621,393.27</u>	<u>86,762,437.11</u>	<u>118,042,021.94</u>

Description about obvious changes in gross carrying amount of other receivables for which loss provision has changed in the period:

Applicable Not applicable

Unit: Yuan Currency: RMB

Provision for bad debt	Stage 1	Stage 2	Stage 3	Total
	12-month ECL	Lifetime ECL (non-credit impaired)	Lifetime ECL (credit-impaired)	
Amounts as at 1 January 2022	1,098,891,380.93	36,232,060.42	72,800,213.01	1,207,923,654.36
Amounts due for the period as at 1 January 2022	-	-	-	-
- Transferred to stage 2	-	-	-	-
- Transferred to stage 3	-	-	-	-
Increase for the period	739,474,698.78	22,314,170.00	35,652,833.37	797,441,702.15
Derecognized	-740,157,304.63	-	-	-740,157,304.63
Cancellation for the period	-	-	-	-
Amounts as at 30 June 2022	<u>1,098,208,775.08</u>	<u>58,546,230.42</u>	<u>108,453,046.38</u>	<u>1,265,208,051.88</u>

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(3). Provision for bad debt (Continued)

Amount of provision for bad debt for the period and basis for evaluating whether credit risk of financial instruments increases significantly:

Applicable Not Applicable

(4). Provision for bad debt

Applicable Not applicable

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	<u>120,853,223.41</u>	<u>16,216,106.20</u>	<u>19,027,307.67</u>	<u>-</u>	<u>118,042,021.94</u>
Total	<u>120,853,223.41</u>	<u>16,216,106.20</u>	<u>19,027,307.67</u>	<u>-</u>	<u>118,042,021.94</u>

Including significant amounts of provision for bad debt reversed or recovered in the period:

Applicable Not Applicable

(5). The situation of the write-off of other receivables for the period

Applicable Not Applicable

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Other receivables (Continued)

(6). Top five debtors with the largest closing balance of other receivables

Applicable Not applicable

Unit: Yuan Currency: RMB

Name of entity	Nature of receivables	Closing balance	Aging	Proportion of the closing balance of other receivables (%)	Closing balance of provision for bad debt
Aggregate closing balance of top five other receivables	-	262,812,322.77	-	20.77	46,162,312.62
Total	/	262,812,322.77	/	20.77	46,162,312.62

(7). Receivables involving government subsidies

Applicable Not Applicable

(8). Other receivables derecognised due to the transfer of financial assets

Applicable Not Applicable

(9). Amount of assets or liabilities resulting from transfer of other receivables and its continuing involvement

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

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	1,177,840,168.30	5,359,505.45	1,172,480,662.85	949,223,792.88	5,362,466.80	943,861,326.08
Work-in-progress	735,404,217.17	247,528.10	735,156,689.07	675,132,893.24	252,878.98	674,880,014.26
Finished goods	774,224,325.43	3,809.20	774,220,516.23	864,524,012.79	847.85	864,523,164.94
Turnover materials	10,914,804.16	-	10,914,804.16	9,488,266.30	299.08	9,487,967.22
Total	<u>2,698,383,515.06</u>	<u>5,610,842.75</u>	<u>2,692,772,672.31</u>	<u>2,498,368,965.21</u>	<u>5,616,492.71</u>	<u>2,492,752,472.50</u>

(2). Provision for decline in value of inventories and provision for impairment of contract performance cost

Applicable Not applicable

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	5,362,466.80	-	-	-2,961.35	-	5,359,505.45
Work-in-progress	252,878.98	-	-	-5,350.88	-	247,528.10
Finished goods	847.85	2,961.35	-	-	-	3,809.20
Turnover materials	299.08	-	-	-299.08	-	-
Total	<u>5,616,492.71</u>	<u>2,961.35</u>	<u>-</u>	<u>-8,611.31</u>	<u>-</u>	<u>5,610,842.75</u>

(3). Explanation about inclusion of capitalized amount of the borrowing cost in the closing balance of inventories

Applicable Not Applicable

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. Inventories (Continued)

(4). Explanation about amortization amount of contract performance cost for the period

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

10. Contract assets

(1). Information about 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	39,739,405,072.84	187,773,763.09	39,551,631,309.75	37,501,436,001.48	183,186,502.16	37,318,249,499.32
Total	<u>39,739,405,072.84</u>	<u>187,773,763.09</u>	<u>39,551,631,309.75</u>	<u>37,501,436,001.48</u>	<u>183,186,502.16</u>	<u>37,318,249,499.32</u>

(2). Amount of and reason for significant change in carrying amount during the Reporting Period

Applicable Not Applicable

(3). Provision for impairment of contract assets in the period

Applicable Not Applicable

Unit: Yuan Currency: RMB

Item	31 December 2021	Provision for the period	Reversal for the period	Write-off/cancellation for the period	30 June 2022
Completed but not yet settled	183,186,502.16	8,582,402.22	3,995,141.29	–	187,773,763.09
Total	<u>183,186,502.16</u>	<u>8,582,402.22</u>	<u>3,995,141.29</u>	<u>–</u>	<u>187,773,763.09</u>

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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)

If provisions for bad debt are made as per the general model of ECL, please make disclosure with reference to other receivables:

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

11. Asset 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	97,576,993.19	52,948,266.17
Less: Provision for bad debt	487,884.97	33,345.57
Total	<u>97,089,108.22</u>	<u>52,914,920.60</u>

Significant debt investments and other debt investments at the end of the period:

Applicable Not Applicable

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	981,754,059.62	1,163,971,696.57
Prepaid enterprise income tax	2,877,714.73	16,133,725.80
Others	5,855,236.23	7,071,243.44
Total	990,487,010.58	1,187,176,665.81

14. Debt investment

(1). Information about 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

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%*0.9=4.41%), and the interest 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 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 obtaining 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.

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

14. Debt investment (Continued)

(2). *Significant debt investments at the end of the period*

Applicable Not Applicable

(3). *Provision for impairment*

Applicable Not Applicable

15. Other debt investments

(1). *Information about other debt investments*

Applicable Not Applicable

(2). *Other significant debt investments at the end of the period*

Applicable Not Applicable

(3). *Information about provision for impairment*

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

16. Long-term receivables

(1) Information about long-term receivables

Applicable Not Applicable

Unit: Yuan Currency: RMB

Item	Closing balance			Opening balance			Discount rate range
	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)	282,817,692.39	1,414,088.47	281,403,603.92	118,805,273.89	594,026.37	118,211,247.52	
Project receivable	3,522,836,012.76	17,614,180.06	3,505,221,832.70	3,608,773,013.19	13,249,352.51	3,595,523,660.68	
Total	3,805,653,705.15	19,028,268.53	3,786,625,436.62	3,727,578,287.08	13,843,378.88	3,713,734,908.20	/

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 such bodies shall pay the repurchase price within the time limit specified in the repurchase agreement.

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.

(2) Provision for bad debt

Applicable Not applicable

Unit: Yuan Currency: RMB

Provision for bad debt	Receivables of "Build-Transfer" project	Project receivable	Total
Amounts as at 1 January 2022	594,026.37	13,249,352.51	13,843,378.88
Provision for the period	820,062.10	4,364,827.55	5,184,889.65
Reversal for the period	—	—	—
Write-off for the period	—	—	—
Cancellation for the period	—	—	—
Other changes	—	—	—
Amounts as at 30 June 2022	1,414,088.47	17,614,180.06	19,028,268.53

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

16. Long-term receivables (Continued)

(2) *Provision for bad debt* (Continued)

Description 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 increases significantly:

Applicable Not Applicable

(3) *Long-term receivables derecognised due to the transfer of financial assets*

Applicable Not Applicable

(4) *Amount of assets or liabilities resulting from transfer of long-term receivables and its continuing involvement*

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

17. Long-term equity investments

Applicable Not applicable

Unit: Yuan Currency: RMB

	30 June 2022	31 December 2021
Investments in joint ventures	214,753,937.73	229,687,703.77
Investments in associates	1,255,042,023.81	1,148,536,043.29
Subtotal	1,469,795,961.54	1,378,223,747.06
Less: Provision for impairment of long-term equity investment	—	—
Total	<u>1,469,795,961.54</u>	<u>1,378,223,747.06</u>

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

17. Long-term equity investments (Continued)

Unit: Yuan Currency: RMB

Investee	Opening balance	Increase/decrease during the period			Declared and paid cash dividends or profits	Closing balance	Closing balance of provision for impairment
		Increase in investment	Investment gains/losses recognised under equity method	Other equity changes			
I. Joint ventures							
Xi'an Schaltbau Electric Corp., Ltd. ("Schaltbau") (西安沙爾特寶電氣有限公司)	147,602,671.03	-	6,500,000.00	-	25,000,000.00	129,102,671.03	-
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)	5,581,260.25	1,800,000.00	1,766,233.96	-	-	9,147,494.21	-
Subtotal	229,687,703.77	1,800,000.00	8,266,233.96	-	25,000,000.00	214,753,937.73	-
II. Associates							
Siping Integrated Pipeline Construction Co., Ltd. ("Siping 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	9,093,873.17	-	-	-	-	9,093,873.17	-
Siemens Signalling Company Ltd. ("SSCX") (西門子信號有限公司)	71,158,626.78	-	6,000,000.00	-	12,150,000.00	65,008,626.78	-
CSCEC Foshan Joint Investment Co., Ltd. ("CSCEC Foshan") (佛山中建交通聯合投資有限公司)	12,616,233.38	-	-	-	-	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	63,000,000.00	14,892,726.10	-	-	149,892,726.10	-
Beijing Solong Electronic Technology Co., Ltd. ("Solong Electronic") (北京索隆電子科技有限公司) note 3	2,768,705.07	-	3,510.74	-	-	2,772,215.81	-
Guangdong Utrust Financial Leasing Co., Ltd. ("Guangdong Utrust Financial Leasing") (廣東粵財金融租賃股份有限公司)	344,091,086.75	-	10,869,067.62	-	-	354,960,154.37	-
China Tietong Railway Operation Co., Ltd. ("China Tietong Railway") (中鐵通軌道運營有限公司)	22,270,395.17	-	-1,743,947.91	264,290.38	-	20,790,737.64	-
CRSC Tianshui Tram Co., Ltd. ("CRSC Tianshui") (天水通軌有軌電車有限責任公司)	206,313,477.05	-	23,210,508.78	-	-	229,523,985.83	-
Tianjin Jingui Huihai Technology Development Co., Ltd. ("Tianjin Jingui") (天津津軌匯海科技發展有限公司) note 4	2,940,040.90	3,000,000.00	-436,313.50	-	-	5,503,727.40	-
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	-	-	-	-	4,800,000.00	-
Henan Huazhou Railway Co., Ltd. ("Huazhou Railway") (河南滑州鐵路有限公司) note 6	149,458,777.00	-	-	-	-	149,458,777.00	-
Zhongguancun Chipsea Prioritizing Technology Co., Ltd. ("Chipsea Prioritizing") (中關村芯海擇優科技有限公司)	20,011,106.07	-	-	-	-	20,011,106.07	-
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)	6,249,775.59	-	-403,861.69	-	-	5,845,913.90	-
CRSC Changxing (Zhejiang) Technology Co., Ltd. ("CRSC Changxing Technology") (通號暢行(浙江)科技股份有限公司)	-	-	-	-	-	-	-
Subtotal	1,148,536,043.29	66,000,000.00	52,391,690.14	264,290.38	12,150,000.00	1,255,042,023.81	-
Total	1,378,223,747.06	67,800,000.00	60,657,924.10	264,290.38	37,150,000.00	1,469,795,961.54	-

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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

For the six months ended 30 June 2022

	Principal place of business/place of registration	Nature of business	Registered capital	Shareholding by the Group (%)		Voting ratio of the Group (%)
				Direct	Indirect	
Joint ventures						
Schaltbau	Xi'an City	Manufacturing of product	US\$4,400,000.00	–	50.00	33.00
Wenzhou-Hangwen 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
China Liantou 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

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

	For the six months ended 30 June 2022	2021
Total book value of investment	214,753,937.73	229,687,703.77
Total amount of the following items calculated on the basis of shareholding percentage:		
Net profit	8,266,233.96	21,433,178.65
Total comprehensive income	8,266,233.96	21,433,178.65

The following table sets out a summary of the financial information of the Group's insignificant associates:

Unit: Yuan Currency: RMB

	For the six months ended 30 June 2022	2021
Total book value of investment	1,255,042,023.81	1,148,536,043.29
Total amount of the following items calculated on the basis of shareholding percentage:		
Net profit	52,391,690.14	64,695,916.17
Total comprehensive income	52,391,690.14	64,695,916.17

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

18. Other equity instrument investments

(1). Information about 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	405,810,000.00
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	147,230,466.00
Total	<u>1,124,819,159.20</u>	<u>1,124,819,159.20</u>

(2). Information about non-trading equity instrument investments

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

19. Other non-current financial assets

Applicable Not Applicable

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

20. Investment properties

Measurement model for investment properties

(1). Investment properties measured under cost method

Unit: Yuan Currency: RMB

Item	Buildings	Land use rights	Total
I. Original book value			
1. Opening balance	362,094,307.71	118,614,400.00	480,708,707.71
2. Increase during the current period			
(1) Acquisition	—	—	—
(2) Transfer from inventories/fixed assets/ construction in progress	—	—	—
(3) Additions due to business combinations	—	—	—
3. Decrease during the current period			
(1) Disposal	—	—	—
(2) Other transfer-from	—	—	—
4. Closing balance	362,094,307.71	118,614,400.00	480,708,707.71
II. Accumulated depreciation and accumulated amortization			
1. Opening balance	163,796,425.34	32,219,736.80	196,016,162.14
2. Increase during the current period	6,862,249.58	1,371,052.64	8,233,302.22
(1) Provision or amortization	—	—	—
3. Decrease during the current period			
(1) Disposal	—	—	—
(2) Other transfer-from	—	—	—
4. Closing balance	170,658,674.92	33,590,789.44	204,249,464.36
III. Provision for impairment			
1. Opening balance	—	—	—
2. Increase during the current period			
(1) Provision	—	—	—
3. Decrease during the current period			
(1) Disposal	—	—	—
(2) Other transfer-from	—	—	—
4. Closing balance	—	—	—
IV. Carrying amount			
1. Closing carrying amount	191,435,632.79	85,023,610.56	276,459,243.35
2. Opening carrying amount	198,297,882.37	86,394,663.20	284,692,545.57

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

20. Investment properties (Continued)

(2). *Information about investment properties for which title certificates have not been obtained:*

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

21. Fixed assets

Presentation of item

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Fixed asset	4,576,445,009.01	4,689,690,366.70
Disposal of fixed assets	—	—
Total	<u>4,576,445,009.01</u>	<u>4,689,690,366.70</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

21. Fixed assets (Continued)

(1). Information about fixed assets

✓ Applicable □ Not applicable

Unit: Yuan Currency: RMB

Item	Buildings	Machinery equipment	Means of transportation vehicle	Electronic equipment and others	Total
I. Original book value:					
1. Opening 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
2. Increase during the current period	1,161,775.91	38,295,271.22	1,492,308.17	36,372,877.54	77,322,232.84
(1) Acquisition	-	20,823,947.38	1,430,007.05	31,162,723.86	53,416,678.29
(2) Transferred from construction in progress	1,161,775.91	17,471,323.84	-	5,197,829.42	23,830,929.17
(3) Additions due to business combinations	-	-	-	-	-
(4) Others	-	-	62,301.12	12,324.26	74,625.38
3. Decrease during the current period	245,655.21	16,731,618.82	8,633,022.83	13,121,298.06	38,731,594.92
(1) Disposal or retirement	245,655.21	16,731,618.82	8,633,022.83	13,121,298.06	38,731,594.92
4. Closing balance	4,817,176,854.23	1,200,793,842.53	423,271,024.05	1,496,740,214.95	7,937,981,935.76
II. Accumulated depreciation					
1. Opening balance	1,062,775,607.10	812,019,593.26	391,057,388.67	943,816,224.05	3,209,668,813.08
2. Increase during the current period	57,448,168.35	41,930,665.30	13,771,680.77	66,569,452.43	179,719,966.85
(1) Provision	57,448,168.35	41,930,665.30	13,771,680.77	66,569,452.43	179,719,966.85
3. Decrease during the current period	155,891.91	8,143,614.65	7,639,548.78	11,944,915.90	27,883,971.24
(1) Disposal or retirement	155,891.91	8,143,614.65	7,639,548.78	11,944,915.90	27,883,971.24
4. Closing balance	1,120,067,883.54	845,806,643.91	397,189,520.66	998,440,760.58	3,361,504,808.69
III. Provision for impairment					
1. Opening balance	-	32,118.06	-	-	32,118.06
2. Increase during the current period	-	-	-	-	-
3. Decrease during the current period	-	-	-	-	-
4. Closing balance	-	32,118.06	-	-	32,118.06
IV. Carrying amount					
1. Closing carrying amount	3,697,108,970.69	354,955,080.56	26,081,503.39	498,299,454.37	4,576,445,009.01
2. Opening carrying amount	3,753,485,126.43	367,178,478.81	39,354,350.04	529,672,411.42	4,689,690,366.70

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

21. Fixed assets (Continued)

(2). Temporarily-idle fixed assets

Applicable Not Applicable

(3). Fixed assets leased under finance leases

Applicable Not Applicable

(4). Fixed assets leased out under operating leases

Applicable Not Applicable

(5). Fixed assets for which title certificates have not been obtained

Applicable Not Applicable

Unit: Yuan Currency: RMB

Item	Carrying amount	Reasons for not obtaining title certificates
Houses and buildings	<u>1,407,451,902.33</u>	In processing

As of the date of approval of these financial statements, the Group was in the process of applying for the certificate of title and going through the registration or transfer procedures for the houses and buildings with a total carrying amount of RMB1,407,451,902.33 as of 30 June 2022. The management of the Group is the opinion that the Group has the right to legally and effectively occupy and use the above houses, and the management of the Group believes that the above matters will not have any material adverse effect on the overall financial position of the Group as at 30 June 2022.

Other explanations:

Applicable Not Applicable

(6). Disposal of fixed assets

Applicable Not Applicable

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	827,146,715.11	800,282,649.47
Construction materials	—	—
Total	<u>827,146,715.11</u>	<u>800,282,649.47</u>

Construction in progress

(1). Construction in progress

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
Technology upgrade of rail transportation safety control system	—	—	—	10,287,385.88	—	10,287,385.88
CRSC Changsha Industrial Park Project	29,780,880.11	—	29,780,880.11	28,451,298.93	—	28,451,298.93
One Center Tower II (壹中心2號樓) Renovation Project	642,084,088.76	—	642,084,088.76	623,899,559.94	—	623,899,559.94
CRSC Electrochemical Science and Technology Mansion (通號電化科創大廈)	74,585,877.59	—	74,585,877.59	63,345,958.30	—	63,345,958.30
Others	80,695,868.65	—	80,695,868.65	74,298,446.42	—	74,298,446.42
Total	<u>827,146,715.11</u>	<u>—</u>	<u>827,146,715.11</u>	<u>800,282,649.47</u>	<u>—</u>	<u>800,282,649.47</u>

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

22. Construction in progress (Continued)

(2). Changes in important projects under construction for the current period

Applicable Not applicable

Unit: Yuan Currency: RMB

Project name	Budget	Opening balance	Increase during the period	Transferred into fixed assets during the period	Closing balance	Proportion of project investment to budget (%)	Source of funds
Technology upgrade of rail transportation safety control system	-	10,287,385.88	-	10,287,385.88	-	-	-
CRSC Changsha Industrial Park Project	0.300 billion	28,451,298.93	1,329,581.18	-	29,780,880.11	9.93	Equity fund
One Center Tower II (壹中心2號樓) Renovation Project	0.720 billion	623,899,559.94	18,638,435.70	453,906.88	642,084,088.76	89.18	Equity fund
CRSC Electrochemical Science and Technology Mansion (通號電化科創大廈)	0.600 billion	63,345,958.30	11,239,919.29	-	74,585,877.59	12.43	Equity fund
Others	-	74,298,446.42	19,487,058.64	13,089,636.41	80,695,868.65	-	Equity fund
Total	-	<u>800,282,649.47</u>	<u>50,694,994.81</u>	<u>23,830,929.17</u>	<u>827,146,715.11</u>	/	/

(3). Provision for impairment of construction in progress made during the period

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

Construction materials

Applicable Not Applicable

23. Productive biological assets

(1). Productive biological assets measured under cost method

Applicable Not Applicable

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

23. Productive biological assets (Continued)

(2). Productive biological assets measured at fair value

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

24. Oil and gas assets

Applicable Not Applicable

25. Right-of-use assets

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Houses and buildings	Means of transportation vehicles	Total
I. Original book value			
1. Opening balance	377,413,880.51	1,731,001.25	379,144,881.76
2. Increase during the current period	8,462,821.55	—	8,462,821.55
3. Decrease during the current period	6,232,837.58	—	6,232,837.58
4. Closing balance	<u>379,643,864.48</u>	<u>1,731,001.25</u>	<u>381,374,865.73</u>
II. Accumulated depreciation			
1. Opening balance	205,684,793.18	832,631.52	206,517,424.70
2. Increase during the current period	37,268,297.47	22,902.74	37,291,200.21
3. Decrease during the current period	4,830,876.70	—	4,830,876.70
4. Closing balance	<u>238,122,213.95</u>	<u>855,534.26</u>	<u>238,977,748.21</u>
III. Provision for impairment			
1. Opening balance	—	—	—
2. Increase during the current period	—	—	—
3. Decrease during the current period	—	—	—
4. Closing balance	<u>—</u>	<u>—</u>	<u>—</u>
IV. Carrying amount			
1. Closing carrying amount	<u>141,521,650.53</u>	<u>875,466.99</u>	<u>142,397,117.52</u>
2. Opening carrying amount	<u>171,729,087.33</u>	<u>898,369.73</u>	<u>172,627,457.06</u>

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

26. Intangible assets

(1). Information about intangible assets

✓ Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Land use rights	Patent	Software	Unfinished contract	Customer relationships	Total
I. Original book value						
1. Opening 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
2. Increase during the current period	-	49,429,631.53	2,025,484.21	-	-	51,455,115.74
(1) Acquisition	-	-	2,025,484.21	-	-	2,025,484.21
(2) Internal R&D	-	49,429,631.53	-	-	-	49,429,631.53
3. Decrease during the current period	2,618,145.85	-	19,145.30	-	-	2,637,291.15
(1) Disposal	2,618,145.85	-	19,145.30	-	-	2,637,291.15
4. Closing balance	2,448,759,980.17	885,162,879.94	374,310,111.67	169,921,119.24	244,325,834.78	4,122,479,925.80
II. Accumulated amortization						
1. Opening 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
2. Increase during the current period	33,216,016.68	36,943,126.20	5,125,351.74	-	21,918,938.74	97,203,433.36
(1) Provision	33,216,016.68	36,943,126.20	5,125,351.74	-	21,918,938.74	97,203,433.36
3. Decrease during the current period	572,442.05	-	8,774.94	-	-	581,216.99
(1) Disposal	572,442.05	-	8,774.94	-	-	581,216.99
4. Closing balance	476,901,598.37	429,330,997.29	352,202,051.19	169,921,119.24	212,216,610.22	1,640,572,376.31
III. Provision for impairment						
1. Opening balance	-	-	-	-	-	-
2. Increase during the current period	-	-	-	-	-	-
3. Decrease during the current period	-	-	-	-	-	-
4. Closing balance	-	-	-	-	-	-
IV. Carrying amount						
1. Closing carrying amount	1,971,858,381.80	455,831,882.65	22,108,060.48	-	32,109,224.56	2,481,907,549.49
2. Opening carrying amount	2,007,120,102.28	443,345,377.32	25,218,298.37	-	54,028,163.30	2,529,711,941.27

As at the end of the current period, the intangible assets derived from the Company's internal research and development accounted for 8.04% (31 December 2021: 7.48%) of the balance of intangible assets.

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

26. Intangible assets (Continued)

(2). Information about land use rights for which title certificates have not been obtained

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

27. Development expenditure

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase during the current period	Decrease during the current period		Closing balance
		Internal development expenditure	Recognised as intangible assets	Transferred to profit or loss for the period	
Development expenditure	213,250,203.11	106,704,500.35	49,429,631.53	–	270,525,071.93
Total	213,250,203.11	106,704,500.35	49,429,631.53	–	270,525,071.93

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

28. Goodwill

(1). Original carrying amount of goodwill

Applicable Not applicable

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		Closing balance
			Disposal		
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	<u>305,324,128.58</u>	<u>-</u>	<u>-</u>		<u>305,324,128.58</u>

(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

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

28. Goodwill (Continued)

(4). *Explanation of 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. used in estimating present value of future cash flow, if applicable) and the recognition method of goodwill impairment loss*

Applicable Not Applicable

(5). *Impact of goodwill impairment test*

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

29. Long-term prepaid expenses

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase during the period	Amortization amount for the period	Other decrease	Closing balance
Expenses on leasehold improvements	50,007,280.33	14,026,817.74	12,162,848.62	–	51,871,249.45
Total	<u>50,007,280.33</u>	<u>14,026,817.74</u>	<u>12,162,848.62</u>	<u>–</u>	<u>51,871,249.45</u>

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

30. Deferred tax assets/deferred tax liabilities

(1). Deferred tax assets not offset

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance		Opening balance	
	Deductible temporary difference	Deferred tax assets	Deductible temporary difference	Deferred tax assets
Provision for impairment of assets	1,293,643,325.07	275,559,432.89	1,203,514,009.49	264,049,363.06
Unrealized profit in intragroup transactions	130,048,271.41	32,512,067.85	117,051,523.38	28,262,880.84
Recognition of lease liabilities	145,519,463.23	25,326,401.14	162,800,666.72	29,294,300.98
Deferred income	104,018,679.14	14,451,781.54	160,098,912.68	26,988,834.46
Estimated liabilities	48,388,439.65	8,778,443.64	54,521,980.83	9,011,389.65
Unpaid employee benefits payable	46,561,204.41	8,849,424.07	48,020,478.00	9,521,795.02
Others	59,029,745.53	14,079,424.71	14,810,520.52	2,890,647.38
Total	<u>1,827,209,128.44</u>	<u>379,556,975.83</u>	<u>1,760,818,091.62</u>	<u>370,019,211.39</u>

(2). Deferred tax liabilities not offset

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance		Opening balance	
	Taxable temporary difference	Deferred tax liabilities	Taxable temporary difference	Deferred tax liabilities
Asset valuation appreciation of business combination not under common control	83,389,063.31	21,146,426.63	108,907,821.80	27,226,955.45
Recognition of right-of-use assets	161,578,451.47	24,236,767.72	181,494,017.69	29,039,042.83
Depreciation of fixed assets	67,118,478.02	9,886,586.14	46,562,831.77	6,984,424.77
Floating profit and loss in portion of positions of copper futures	—	—	179,100.00	26,865.00
Total	<u>312,085,992.80</u>	<u>55,269,780.49</u>	<u>337,143,771.26</u>	<u>63,277,288.05</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

30. Deferred tax assets/deferred tax 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	68,097,667.85	33,392,975.11
Deductible loss	242,198,135.70	210,418,204.81
Total	310,295,803.55	243,811,179.92

(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 amount	Opening amount	Remarks
2022	35,785,793.93	100,020,681.17	
2023	23,379,215.40	62,742,917.19	
2024	382,652.82	13,098,485.21	
2025	1,654,559.56	22,378,632.72	
2026	663,426.87	12,177,488.52	
2027	41,200,178.19	—	
2028	8,908,778.71	—	
2029	40,301,273.32	—	
2030	39,194,406.56	—	
2031	37,274,511.25	—	
2032	13,453,339.09	—	
Total	242,198,135.70	210,418,204.81	/

Other explanations:

Applicable Not Applicable

NOTES TO FINANCIAL STATEMENTS

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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	Provision for impairment	Book value	Gross carrying amount	Provision for impairment	Book value
Project quality deposit	330,305,243.83	1,651,526.22	328,653,717.61	306,214,244.09	1,616,378.16	304,597,865.93
Prepayment for fixed assets	38,523,869.97	-	38,523,869.97	37,721,630.55	-	37,721,630.55
Construction period/PPP project payment without collection right	5,348,061,184.87	50,134,766.66	5,297,926,418.21	4,765,401,032.26	50,309,099.96	4,715,091,932.30
Investment Funds of CRSC Group Finance Limited* (通號集團財務有限公司) (under development)	1,900,000,000.00	-	1,900,000,000.00	-	-	-
Less: Non-current assets due within one year	97,576,993.19	487,884.97	97,089,108.22	52,948,266.17	33,345.57	52,914,920.60
Total	7,519,313,305.48	51,298,407.91	7,468,014,897.57	5,056,388,640.73	51,892,132.55	5,004,496,508.18

Other explanations:

Changes of provision for impairment of other non-current assets:

Unit: Yuan Currency: RMB

Category	Opening balance	Increase/decrease during the period			Closing balance
		Provision	Recovery or reversal	Transfer-from	
Project quality deposit	1,616,378.16	35,148.06	-	-	1,651,526.22
“Build-Operate-Transfer” project receivables (BOT project)	50,309,099.96	-174,333.30	-	-	50,134,766.66
Less: Non-current assets due within one year	33,345.57	454,539.40	-	-	487,884.97
	51,892,132.55	-593,724.64	-	-	51,298,407.91

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

32. Short-term borrowings

(1). Classification of short-term borrowings

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Discounted bills, secured borrowings	105,467,675.88	48,875,684.59
Credit loans	3,500,000.00	26,754,000.00
Total	108,967,675.88	75,629,684.59

Explanation on classification of short-term borrowings:

As at 30 June 2022, the book value of bank acceptances and commercial acceptances discounted by the Group were RMB0.00 and RMB105,467,675.88, respectively, which were used to obtain short-term borrowings of RMB105,467,675.88 (as at 31 December 2021, the book value of bank acceptances and commercial acceptances secured by the Group were RMB8,875,684.59 and RMB40,000,000.00, respectively, which were used to obtain short-term borrowings of RMB48,875,684.59, please refer to Note VII. 81).

As at 30 June 2022, the annual interest rate on the above borrowings ranged from 3.80% to 4.65% (as at 31 December 2021, the annual interest rate on the above borrowings ranged from 3.65% to 4.35%).

As at 30 June 2022, the Group had no unpaid overdue short-term borrowing balance payable.

(2). Information about overdue but unpaid short-term borrowings

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

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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

Applicable Not applicable

Unit: Yuan Currency: RMB

Type of bills	Closing balance	Opening balance
Commercial acceptance bills	1,298,539,545.00	1,378,390,031.99
Bank acceptance bills	796,129,090.70	922,404,421.22
Total	<u>2,094,668,635.70</u>	<u>2,300,794,453.21</u>

Total overdue but unpaid bills payable as at the end of the period amounted to RMB0.

36. Accounts payable

(1). Breakdown of accounts payable

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Within 1 year	35,891,595,956.78	38,334,305,236.02
1 to 2 years	7,045,383,968.38	4,640,322,277.65
2 to 3 years	2,531,768,194.62	2,070,833,881.05
Over 3 years	1,409,735,473.80	1,409,735,473.80
Total	<u>46,878,483,593.58</u>	<u>46,455,196,868.52</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

36. Accounts payable (Continued)

(2). Major accounts payable aged over 1 year

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Reason for unsettlement or carrying forward
Aggregate top five accounts payable aged over one year	<u>725,961,480.90</u>	Project payment or materials payment, not settled
Total	<u><u>725,961,480.90</u></u>	/

Other explanations:

Applicable Not Applicable

37. Advance receipts

(1). Breakdown of advance receipts

Applicable Not Applicable

(2). Major advance receipts aged over 1 year

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

38. Contract liabilities

(1). Information about contract liabilities

Applicable Not Applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Advance receipts	1,915,281,843.85	1,761,791,337.26
Incomplete project, settled	6,105,267,870.77	5,476,554,721.50
Total	8,020,549,714.62	7,238,346,058.76

(2). Amount of and reason for significant change in carrying amount within the Reporting Period

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

39. Employee benefits payable

(1). Breakdown of employee benefits payable

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
I. Short-term benefits	582,411,623.25	1,977,619,082.25	1,907,331,505.30	652,699,200.20
II. Post-employment benefits (defined contribution plan)	30,370,965.95	323,474,053.63	320,976,996.62	32,868,022.96
III. Dismissal benefits	50,396.79	425,060.15	425,060.15	50,396.79
IV. Other benefits due within one year	44,769,000.00	18,921,000.00	18,921,000.00	44,769,000.00
Total	657,601,985.99	2,320,439,196.03	2,247,654,562.07	730,386,619.95

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

39. Employee benefits payable (Continued)

(2). Breakdown of short-term benefits

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
I. Wages, bonuses, allowances and subsidies	111,073,752.54	1,430,636,723.48	1,376,496,120.07	165,214,355.95
II. Employee welfare benefits	250,443,668.84	71,062,655.69	70,640,288.58	250,866,035.95
III. Social insurance premiums	59,414,423.39	168,286,495.87	166,288,103.95	61,412,815.31
Including: medical insurance premiums	58,664,167.65	157,516,801.81	155,422,020.65	60,758,948.81
Industrial injury insurance premiums	375,693.73	7,716,387.92	7,689,382.69	402,698.96
Maternity insurance premiums	374,562.01	3,053,306.14	3,176,700.61	251,167.54
IV. Housing provident fund	2,229,973.50	183,430,718.82	182,419,951.87	3,240,740.45
V. Labor union funds and staff education funds	158,857,951.26	37,198,419.35	29,307,765.03	166,748,605.58
VI. Other short-term remunerations	391,853.72	87,004,069.04	82,179,275.80	5,216,646.96
Total	582,411,623.25	1,977,619,082.25	1,907,331,505.30	652,699,200.20

(3). Breakdown of defined contribution plan

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
1. Basic pension insurance	16,583,744.38	237,774,774.91	235,955,787.39	18,402,731.90
2. Unemployment insurance	586,299.43	8,269,080.22	8,267,939.31	587,440.34
3. Enterprise annuity payment	13,200,922.14	77,430,198.50	76,753,269.92	13,877,850.72
Total	30,370,965.95	323,474,053.63	320,976,996.62	32,868,022.96

Other explanations:

Applicable Not Applicable

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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	418,116,568.77	500,379,362.36
Enterprise income tax	444,221,077.93	292,286,097.41
Individual income tax	7,485,635.68	72,253,279.61
City construction and maintenance tax	9,994,701.62	16,469,037.53
Land use tax and property tax	3,011,372.26	3,268,498.66
Educational surcharge	7,570,874.34	12,494,768.05
Other	1,351,660.92	2,491,627.79
Total	<u>891,751,891.52</u>	<u>899,642,671.41</u>

41. Other payables

Presentation of item

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Dividends payable	1,908,543,639.83	—
Other payables	1,073,254,481.52	1,063,620,223.11
Total	<u>2,981,798,121.35</u>	<u>1,063,620,223.11</u>

Interest payable

Applicable Not Applicable

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

41. Other payables (Continued)

Dividends payable

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Dividends of ordinary shares	1,800,269,230.00	—
Dividends of minority shareholders of subsidiaries	108,274,409.83	—
Total	<u>1,908,543,639.83</u>	<u>—</u>

Other payables

(1). Breakdown of other payables by nature

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Deposits and margins	594,358,023.94	528,577,321.17
Current payments	249,688,852.97	315,903,956.33
Acquisition of fixed assets	141,723,472.45	172,688,933.51
Public facility maintenance funds	16,274,398.03	18,891,114.03
Other	71,209,734.13	27,558,898.07
Total	<u>1,073,254,481.52</u>	<u>1,063,620,223.11</u>

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

41. Other payables (Continued)

Other payables (Continued)

(2). Major other payables aged over 1 year

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Reason for unsettlement or carrying forward
Aggregate top five other payables aged over one year	99,520,380.17	–
Total	<u>99,520,380.17</u>	/

Other explanations:

Applicable Not Applicable

Aging of other payables:

Unit: Yuan Currency: RMB

Aging	Closing balance	Opening balance
Within 1 year	816,738,831.02	863,525,097.36
1-2 years	127,664,860.68	95,618,390.96
2-3 years	34,929,701.85	62,825,011.45
Over 3 years	93,921,087.97	41,651,723.34
	<u>1,073,254,481.52</u>	<u>1,063,620,223.11</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

42. Liabilities held for sale

Applicable Not Applicable

43. Non-current liabilities due within one year

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Long-term borrowings due within one year	350,689,546.40	226,069,092.80
Long-term payables due within one year	29,028,386.73	37,438,695.03
Lease liabilities due within one year	66,165,295.98	65,052,808.37
Total	445,883,229.11	328,560,596.20

44. Other current liabilities

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Estimated liabilities	17,913,110.64	20,990,155.96
Output VAT to be transferred	491,970,175.01	455,083,428.53
Total	509,883,285.65	476,073,584.49

Increase or decrease in short-term bonds payable:

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

45. Long-term borrowings

(1). Classification of long-term borrowings

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Pledged borrowings	2,827,892,028.80	2,336,791,575.20
Guaranteed borrowings	217,000,000.00	–
Credit borrowings	800,000,000.00	1,017,000,000.00
Less: Long-term borrowings due within one year	350,689,546.40	226,069,092.80
Total	<u>3,494,202,482.40</u>	<u>3,127,722,482.40</u>

Explanation on classification of long-term borrowings:

Note 1: As at 30 June 2022, the Group's book balance of other non-current assets of RMB4,288,244,537.43 and book balance of accounts receivable of RMB350,836,342.12 (31 December 2021: book balance of other non-current assets of RMB4,426,249,414.22, book balance of accounts receivable of RMB201,458,572.34), which were formed by the earning rights of the franchise pledged and all proceeds under it, were used to obtain long-term loans of RMB2,827,892,028.80 (31 December 2021: RMB2,336,791,575.20).

Note 2: As at 30 June 2022, the Group's credit borrowings amounted to RMB800,000,000.00 was the credit borrowings from the Export-Import Bank of China by the head office of the Company; guaranteed borrowings amounted to RMB217,000,000.00 was the guaranteed borrowings from the Bank of Chengdu guaranteed by the Company's third-tier subsidiary First Construction for its subsidiary Yibin Tonghao Hongshun Project Management Co., Ltd.

Note 3: As at 30 June 2022, the long-term borrowing balance due within one to five years was RMB2,347,212,189.72, and the long-term borrowing balance due over five years was RMB1,146,990,292.68 (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). The above borrowings are bank borrowings made at variable annual interest rates ranging from 2.70% to 5.39% (as at 31 December 2021: 2.70% to 5.39%).

Other explanations, including interest rate range:

Applicable Not Applicable

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 explanations:

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	145,519,463.23	162,800,666.72
Less: lease liabilities due within one year	66,165,295.98	65,052,808.37
Total	79,354,167.25	97,747,858.35

Other explanations:

The book value of lease liabilities and its changes for the year are as follows:

	Current period	Last period
Opening balance for the year	162,800,666.72	125,631,000.71
Increase for the year	10,561,287.66	106,093,251.14
Interest expense	7,494,018.98	8,797,303.53
Lease payments for the year	-33,555,088.59	-77,244,113.03
Modification of lease for the year	-1,781,421.54	-476,775.63
Closing balance for the year	145,519,463.23	162,800,666.72

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	66,302,465.53	62,593,424.21
Total	66,302,465.53	62,593,424.21

Long-term payables

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Construction quality guarantee deposits	95,330,852.26	100,032,119.24
Less: long-term payables due within one year	29,028,386.73	37,438,695.03
Total	66,302,465.53	62,593,424.21

Special payables

Applicable Not Applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee remunerations payable

Applicable Not applicable

(1) *Statement on long-term employee remunerations payable*

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
I. Post-employment benefits (net liabilities under defined benefit plans)	545,730,000.00	554,500,000.00
II. Dismissal benefits	19,195,000.00	21,044,000.00
Less: Remunerations payable within one year	44,769,000.00	44,769,000.00
Total	<u>520,156,000.00</u>	<u>530,775,000.00</u>

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.

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee remunerations payable (Continued)

(1) Statement on long-term employee remunerations payable (Continued)

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.

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 of 30 June 2022 and 31 December 2021.

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 annual growth rate of average medical costs, the annual growth rate of unreimbursed funeral costs, the annual growth rate of supplementary retirement benefits for retired employee, the annual growth rate of testament grant benefits, the annual growth rate of early retirement benefits and the death rate remain unchanged.

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee remunerations payable (Continued)

(1) Statement on long-term employee remunerations payable (Continued)

The following table shows the main actuarial assumptions used on the balance sheet date:

	Closing balance	Opening balance
Discount rate	3.00%	3.00%
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:

	Amount for the current period	Amount for the last period
Historical service costs included in management expenses		
Settlement losses/(gains) included in management expenses	36,000.00	4,090,000.00
Net interests included in management expenses	8,258,000.00	19,393,000.00
	8,294,000.00	23,483,000.00

Relevant plans recognised in other comprehensive income are as follows:

	Amount for the current period	Amount for the last period
Actuarial loss due to changes in financial assumptions	-	15,466,000.00
Actuarial profit due to empirical differences	8,000.00	-40,307,000.00
	8,000.00	-24,841,000.00

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

49. Long-term employee remunerations payable (Continued)

(2) Changes in defined benefit plans

Present value of obligations under defined benefit plans:

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
I. Opening balance	575,544,000.00	622,005,000.00
II. The defined benefit cost included in the current profit and loss	8,294,000.00	23,483,000.00
1. Current service costs	—	—
2. Previous service costs	—	—
3. Settlement gains (losses indicated by “-”)	36,000.00	4,090,000.00
4. Net interests	8,258,000.00	19,393,000.00
III. The defined benefits cost included in other comprehensive income	8,000.00	-24,841,000.00
1. Actuarial gains (losses indicated by “-”)	8,000.00	-24,841,000.00
IV. Other changes	-18,921,000.00	-45,103,000.00
1. Consideration paid at settlement	—	—
2. Benefits paid	-18,921,000.00	-45,103,000.00
V. Closing balance	564,925,000.00	575,544,000.00

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

Key actuarial assumptions and sensitivity analysis results of defined benefit plans

Applicable Not Applicable

Other explanations:

Applicable Not Applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

50. Estimated liabilities

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Closing balance	Reason
Product quality guarantees	44,409,443.04	41,870,851.98	–
Onerous contracts to be performed	10,112,537.79	10,112,537.79	–
Less: estimated liabilities due within one year	<u>20,990,155.96</u>	<u>17,913,110.64</u>	–
Total	<u><u>33,531,824.87</u></u>	<u><u>34,070,279.13</u></u>	/

Statements of changes in estimated liabilities:

Item	Product quality guarantee deposits (note)	Pending onerous contracts and others	Total
Opening balance	44,409,443.04	10,112,537.79	54,521,980.83
Increase for the year	5,464,450.33	–	5,464,450.33
Reversal for the year	-69,498.16	–	-69,498.16
Use for the year	-7,933,543.23	–	-7,933,543.23
Closing balance	41,870,851.98	10,112,537.79	51,983,389.77
Including: estimated liabilities due within one year	<u>17,913,110.64</u>	–	<u>17,913,110.64</u>
	<u><u>23,957,741.34</u></u>	<u><u>10,112,537.79</u></u>	<u><u>34,070,279.13</u></u>

Other explanations, including significant assumptions and estimates related to significant estimated liabilities:

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.

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

51. Deferred income

Deferred income

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance	Reason
Government grants related to assets	70,263,540.42	–	904,479.51	69,359,060.91	–
Government grants related to income	89,835,372.26	5,861,609.73	61,037,363.76	34,659,618.23	–
Total	<u>160,098,912.68</u>	<u>5,861,609.73</u>	<u>61,941,843.27</u>	<u>104,018,679.14</u>	/

Items related to government grants:

Applicable Not applicable

Unit: Yuan Currency: RMB

Liability Item	Opening balance	Additions of grants for the period	Amount included in non-operating income for the period	Amount included in other income for the period	Closing balance	Related to assets/income
Demolition grants	65,821,920.77	–	386,062.14	–	65,435,858.63	Assets
Research grants	89,835,372.26	5,861,609.73	–	61,037,363.76	34,659,618.23	Income
Other grants	4,441,619.65	–	–	518,417.37	3,923,202.28	Assets
Total	<u>160,098,912.68</u>	<u>5,861,609.73</u>	<u>386,062.14</u>	<u>61,555,781.13</u>	<u>104,018,679.14</u>	–

Other explanations:

Applicable Not Applicable

52. Other non-current liabilities

Applicable Not Applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

53. Share capital

Applicable Not applicable

Unit: Yuan Currency: RMB

	Opening balance	Issue new shares	Changes for the period (+, -)			Others	Subtotal	Closing balance
			Bonus share	Reserve fund transferred into shares				
CRSC Group	6,686,069,771.51	-	-	-	-	-	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	1,708,175,652.49	-	-	-	-	-	1,708,175,652.49	
Domestic-listed A shares	1,800,000,000.00	-	-	-	-	-	1,800,000,000.00	
Total number of shares	<u>10,589,819,000.00</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>10,589,819,000.00</u>	

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

The details of the Group's outstanding perpetual bonds are as follows:

Outstanding financial instruments	Issue date	Accounting classification	Interest rate	Issue price	Number	Offering amount	Cost	Carrying amount	Expiry date	Condition of conversion	Transformation status
									or renewal 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

Note 1: 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.

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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

Applicable Not applicable

Unit: Yuan Currency: RMB

Outstanding financial instruments	Beginning of the period		Increase for the period		Decrease for the period		End of the period	
	Number	Carrying amount	Number	Carrying amount	Number	Carrying amount	Number	Carrying amount
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	-	2,796,935,660.38	-	-	-	-	-	2,796,935,660.38

The specific information of outstanding financial instruments attributable to other equity holders is as follows:

Equity attributable to shareholders of the parent	
Equity attributable to ordinary shareholders of the parent	
Equity attributable to other equity holders of the parent	
Including: Dividends distributed during the period	-
Accumulated retained dividends	-

Closing balance

43,728,359,048.95
40,931,423,388.57
2,796,935,660.38

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 explanations:

Applicable Not Applicable

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 to long-term equity investments under equity method	660,686.75	264,290.38	–	924,977.13
Others	406,663,539.95	–	–	406,663,539.95
Total	15,964,108,133.50	264,290.38	–	15,964,372,423.88

56. Treasury stocks

Applicable Not Applicable

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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	Amounts before income tax during the period	Amount for the period					Closing balance
			Less: Amount transferred to profit or loss from other comprehensive income	Less: Amount transferred to retained earnings from other comprehensive income	Less: Income tax expenses	Amount attributable to the parent company after tax	Amount attributable to the minority shareholders after tax	
I. Other comprehensive income that may not reclassified into profit or loss	-208,221,000.00	-8,000.00	-	-	-	-8,000.00	-	-208,229,000.00
Including: changes of the re-measurement of defined benefit plan	-208,221,000.00	-8,000.00	-	-	-	-8,000.00	-	-208,229,000.00
II. Other comprehensive income to be reclassified to profit or loss	24,585,347.32	-20,468,300.31	-	-	-	-20,466,448.50	-1,851.81	4,118,898.82
Hedging reserve arising from cash flows	20,697,985.28	-18,720,942.53	-	-	-	-18,720,942.53	-	1,977,042.75
Exchange differences on translation of foreign operations	-805,059.14	540,911.58	-	-	-	540,911.58	-	-264,147.56
Receivables financing credit impairment allowance	4,692,421.18	-2,288,269.36	-	-	-	-2,286,417.55	-1,851.81	2,406,003.63
Total of other comprehensive income	<u>-183,635,652.68</u>	<u>-20,476,300.31</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-20,474,448.50</u>	<u>-1,851.81</u>	<u>-204,110,101.18</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

58. Special reserve

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Production safety expenses	267,880,349.13	172,579,717.52	112,478,108.01	327,981,958.64
Total	267,880,349.13	172,579,717.52	112,478,108.01	327,981,958.64

59. Surplus reserve

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Opening balance	Increase for the period	Decrease for the period	Closing balance
Statutory surplus reserve	1,811,324,694.45	–	–	1,811,324,694.45
Total	1,811,324,694.45	–	–	1,811,324,694.45

Description of surplus reserve, including changes in the period and reason for the changes:

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.

After the Company withdraws the statutory surplus reserve fund, it can withdraw discretionary surplus reserve fund. Upon approval, the discretionary surplus reserve can be used to make up for losses of the preceding year or increase share capital.

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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 year
Retained earnings at the end of last period before adjustment	12,308,220,568.86	11,512,862,059.38
Adjustment to the total amount of retained earnings at the beginning of the period (increase +, decrease -)	—	—
Retained earnings at the beginning of the period after adjustment	12,308,220,568.86	11,512,862,059.38
Add: Net profit attributable to owners of the parent for the current period	1,934,084,073.92	3,274,672,689.28
Less: Appropriation to statutory surplus reserve	—	213,366,436.47
Cash dividends payable	1,800,269,230.00	2,117,963,800.00
Dividends paid to other equity holders	—	118,143,333.33
Appropriation to employee reward and welfare fund	—	29,840,610.00
Others	—	—
Retained earnings at the end of the period	<u>12,442,035,412.78</u>	<u>12,308,220,568.86</u>

Note 1: In accordance with the resolution at the 2021 annual general meeting of Company, on 11 June 2022, the Company declared a dividend out of the remaining distributable profits as of 31 December 2021, and distributed cash dividend of RMB0.17 per share (including tax), with total amount of RMB1,800,269,230.00.

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

60. Retained earnings (Continued)

Breakdown of the adjustments to the retained earnings at the beginning of the period:

1. Due to retrospective adjustment under Accounting Standard for Business Enterprises and related new regulations, the retained earnings at the beginning of the period of RMB0 were affected.
2. Due to changes in accounting policies, the retained earnings at the beginning of the period of RMB0 were affected.
3. Due to the correction of major accounting errors, the retained earnings at the beginning of the period of RMB0 were affected.
4. Due to the change of scope after merger under the same control, the retained earnings at the beginning of the period of RMB0 were affected.
5. Due to other adjustments, the retained earnings at the beginning of the period of RMB0 were affected.

61. 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	18,242,674,883.36	14,025,194,148.14	17,747,348,314.59	13,672,526,570.43
Other operations	140,687,554.39	95,302,083.06	117,398,974.71	68,153,751.47
Total	18,383,362,437.75	14,120,496,231.20	17,864,747,289.30	13,740,680,321.90

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

61. Revenue and costs of sales (Continued)

(1). Revenue and costs of sales (Continued)

1. Revenue is presented as follows

Unit: Yuan Currency: RMB

Item	For the six months ended 30 June 2022	For the six months ended 30 June 2021
Rail transportation control system	13,863,975,446.96	12,821,909,015.50
Equipment manufacturing	2,225,462,595.49	2,856,026,614.05
System implementation	7,083,849,049.27	5,034,710,376.67
Design and integration	4,554,663,802.20	4,931,172,024.78
Construction contracting	4,488,978,810.16	5,010,111,175.27
Others	30,408,180.63	32,727,098.53
Total	<u>18,383,362,437.75</u>	<u>17,864,747,289.30</u>

2. Cost of sales is listed as follows

Unit: Yuan Currency: RMB

Item	For the six months ended 30 June 2022	For the six months ended 30 June 2021
Rail transportation control system	10,201,993,683.75	9,218,667,215.75
Equipment manufacturing	1,318,919,565.28	1,747,605,941.60
System implementation	6,366,237,689.41	4,454,164,254.36
Design and integration	2,516,836,429.06	3,016,897,019.79
Construction contracting	3,902,382,442.13	4,502,813,866.38
Others	16,120,105.32	19,199,239.77
Total	<u>14,120,496,231.20</u>	<u>13,740,680,321.90</u>

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

Unit: Yuan Currency: RMB

Classification of contract	Rail transportation control system	Construction contracting	Others	Total
By region of operation				
China	13,697,962,903.37	4,215,009,445.17	36,415,586.25	17,949,387,934.79
Other countries and regions	433,974,502.96	-	-	433,974,502.96

(3). Details of performance obligation

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Rail transportation control system	Construction contracting	Others	Total
Time of revenue recognition				
Revenue recognised at a certain point of time	1,725,461,635.71	-	30,408,180.63	1,755,869,816.34
Revenue recognised within a certain period of time	12,138,513,811.25	4,488,978,810.16	-	16,627,492,621.41
Total	<u>13,863,975,446.96</u>	<u>4,488,978,810.16</u>	<u>30,408,180.63</u>	<u>18,383,362,437.75</u>

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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:

Unit: Yuan Currency: RMB

	For the six months ended 30 June 2022	For the six months ended 30 June 2021
Rail transportation control system	2,883,060,725.89	2,353,146,122.87
Equipment manufacturing	1,225,289,094.37	177,176,140.83
System implementation	658,045,291.52	905,951,575.74
Design and integration	999,726,340.00	1,270,018,406.30
Construction contracting	277,885,949.18	805,925,328.27
Others	—	323,362.01
Total	<u>3,160,946,675.07</u>	<u>3,159,394,813.15</u>

(4). Explanation about allocation to the remaining performance obligations

Applicable Not applicable

Other explanations:

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 at 30 June 2022, 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. As at 30 June 2022, the outstanding performance obligations of the Group are mainly related to the construction contracts or service rendering contracts of the Group. The outstanding performance obligations are expected to be recognized as revenue in accordance with the progress of performance of the construction contracts or service rendering contracts within the coming 1 to 5 years.

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

62. Taxes and surcharges

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Urban maintenance and construction tax	35,117,537.98	31,454,731.58
Educational surcharge	26,039,109.36	24,052,870.17
Property tax	30,557,013.40	27,862,230.69
Land use tax	5,475,544.10	5,502,818.37
Stamp duty	14,704,777.23	11,933,793.35
Others	1,691,892.76	3,137,904.85
Total	<u>113,585,874.83</u>	<u>103,944,349.01</u>

Other explanations:

For tax determination basis, please refer to Note VI. Taxation.

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

63. Selling and distribution expenses

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Employee benefits	202,591,297.16	215,944,004.56
Sales service expenses	63,858,653.61	62,091,542.25
Transportation expenses	3,288,256.34	30,582,610.18
Tendering expenses	15,651,441.59	17,646,337.40
Quality guarantee deposits	13,332,261.42	9,656,936.18
Rental expenses	4,395,515.09	7,853,191.53
Others	8,119,925.75	17,853,364.41
Total	<u>311,237,350.96</u>	<u>361,627,986.51</u>

64. General and administrative expenses

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Employee benefits	536,507,962.96	585,896,111.78
Depreciation and amortization expenses	127,913,599.67	133,971,815.14
Production safety expenses	107,291,786.60	92,003,382.58
Office and rental expenses	49,153,155.08	29,245,265.16
Travel costs and business entertainment expenses	14,915,924.82	24,700,673.18
Others	119,612,947.73	116,163,824.42
Total	<u>955,395,376.86</u>	<u>981,981,072.26</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

65. Research and development expenses

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Labor expenses	438,995,774.54	418,792,248.99
Materials expenses	44,569,842.56	59,623,546.57
Depreciation and amortization expenses	49,331,693.61	55,909,173.06
Testing and processing expenses	21,879,222.46	33,689,358.52
General and administrative expenses	19,546,582.02	19,240,482.90
Travel costs	11,292,841.14	15,385,996.62
Others	62,958,709.43	40,768,832.23
Total	<u>648,574,665.76</u>	<u>643,409,638.89</u>

66. Finance costs

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Interest expense	37,441,870.02	16,954,154.40
Less: interest income	201,603,681.72	251,485,060.60
Exchange losses/(gains)	-47,602,671.83	7,598,755.52
Financial institutions commissions	23,999,804.65	22,155,692.11
Others	-20,000.00	-
Total	<u>-187,784,678.88</u>	<u>-204,776,458.57</u>

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

67. Other income

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Government grants related to asset		
Other grants	518,417.37	644,130.50
Government grants related to income		
Special Fund of Changsha High-tech Zone for Industrial Development	—	—
Refund of taxes (immediate refund of VAT in respect of software)	94,423,392.64	75,135,785.86
Other research grants	153,584,304.07	39,173,092.28
Total	<u>248,526,114.08</u>	<u>114,953,008.64</u>

68. 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 equity method	60,657,924.10	26,953,405.48
Income on debt restructuring	11,320,931.24	268,245.64
Income/(loss) from futures transactions	-274,150.00	84,826.48
Others	0	0
Total	<u>71,704,705.34</u>	<u>27,306,477.60</u>

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

69. Gains on net exposure hedges

Applicable Not applicable

70. Gains on changes in fair value

Applicable Not applicable

71. Credit impairment losses

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Losses from bad debts of bills receivable	-	-
Losses from bad debts of accounts receivable	104,839,694.90	54,301,588.12
Losses from bad debts of other receivables	-2,811,201.43	4,705,485.33
Impairment losses on debt investment	-	-
Impairment losses on other debt investment	-	-
Losses from bad debts of long-term receivables	5,184,889.65	-193,252.62
Impairment losses on contract assets	-	-
Impairment losses on receivables financing	-2,288,269.36	-1,526,363.78
Reversal/(losses) from bad debts of other non-current assets	-593,724.64	-332,834.66
Losses from bad debts of non-current assets due within one year	454,539.40	-
Total	104,785,928.52	56,954,622.39

72. Asset impairment losses

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Losses from bad debts	-	-
Losses from decline in value of inventories and impairment losses on contract performance cost	-	-
Impairment losses on long-term equity investments	-	-
Impairment losses on investment properties	-	-
Impairment losses on fixed assets	-	-
Impairment losses on construction materials	-	-
Impairment losses on construction in progress	-	-
Impairment losses on productive biological assets	-	-
Impairment losses on oil and gas assets	-	-
Impairment losses on intangible assets	-	-
Impairment losses on goodwill	-	-
Contract asset impairment (losses)/reversal	4,587,260.93	1,453,919.76
Reversal from decline in value of inventories	-5,649.96	-38,527.53
Total	4,581,610.97	1,415,392.23

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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 for the current period	Amount for the last period
Gains on disposal of fixed assets	-871,034.53	25,298,364.85
Gains on disposal of intangible assets	27,651,751.20	-
Total	<u>26,780,716.67</u>	<u>25,298,364.85</u>

Other explanations:

Applicable Not applicable

74. Non-operating income

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period	Amount included in current non-recurring profit or loss
Government grants	3,386,062.14	1,242,091.14	3,386,062.14
Compensation payments	1,808,526.10	6,205,418.46	1,808,526.10
Accounts payable	1,741,762.65	16,618,668.59	1,741,762.65
Others	7,687,874.67	4,488,829.32	7,687,874.67
Total	<u>14,624,225.56</u>	<u>28,555,007.51</u>	<u>14,624,225.56</u>

Government grants recognized through profit and loss for the period

Applicable Not applicable

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

74. Non-operating income (Continued)

Unit: Yuan Currency: RMB

Grant item	Amount for the current period	Amount for the last period	Related to assets/ income
Demolition grants	386,062.14	1,242,091.14	Assets
Listed company subsidies	3,000,000.00	—	Income

Other explanations:

Applicable Not applicable

75. Non-operating expenses

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period	Amount included in current non-recurring profit or loss
Total losses from disposal of non-current assets	2,670,164.78	529,779.84	2,670,164.78
Including: losses from disposal of fixed assets	2,670,164.78	529,779.84	2,670,164.78
Losses from disposal of intangible assets	—	—	—
Losses from debt restructuring	—	—	—
Losses from exchange of non-monetary assets	—	—	—
External donation	—	80,000.00	—
Lawsuit compensation	1,710.93	250,500.00	1,710.93
Others	1,594,435.02	1,406,352.95	1,594,435.02
Total	4,266,310.73	2,266,632.79	4,266,310.73

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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 for the current period	Amount for the last period
Current income tax expenses	494,814,011.30	345,853,276.87
Deferred income tax expenses	-17,545,272.00	-9,235,834.79
Total	<u>477,268,739.30</u>	<u>336,617,442.08</u>

(2) Adjustment process for accounting profit and income tax

✓ Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Total profit	2,669,859,528.45	2,373,356,590.49
Income tax at the statutory/applicable income tax rate	667,464,882.11	593,339,147.62
Effect of different tax rates for subsidiaries	-161,196,051.23	-167,549,296.51
Effect of adjustments in respect of income tax of previous periods	8,243,560.18	-80,966,092.03
Effect of non-taxable income	-	-8,393,104.22
Effect of non-deductible cost, expenses and loss	4,278,570.21	19,915,362.81
Effect of utilization of deductible losses in deferred income tax assets not recognized in previous period	-263,536.18	-276,265.33
Effect of deductible temporary differences or deductible losses in deferred income tax assets not recognized in the current period	15,600,331.83	18,505,935.95
Profit or loss attributable to joint ventures and associates	-15,164,481.02	-6,738,351.38
Tax effect of additional deductions	-41,594,536.61	-30,877,974.59
Others	-	-341,920.24
Income tax expenses	<u>477,268,739.30</u>	<u>336,617,442.08</u>

Other explanations:

✓ Applicable Not applicable

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)

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.

77. Other comprehensive income

Applicable Not applicable

Please refer to note for details

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 last period
Income from other businesses	140,687,554.39	96,337,115.35
Government grants	101,408,550.04	68,124,560.29
Interest income	111,090,322.68	69,960,343.09
Others	9,495,177.55	10,720,786.11
Total	<u>362,681,604.66</u>	<u>245,142,804.84</u>

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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 last period
Research and development expenses	160,247,197.61	198,805,937.69
Production safety expenses	107,291,786.60	92,003,382.58
Travel and business entertainment expenses	14,915,924.82	24,700,673.18
Others	298,913,093.77	216,748,987.76
Total	<u>581,368,002.80</u>	<u>532,258,981.21</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 last period
Interest income	90,513,359.04	181,524,717.52
Total	<u>90,513,359.04</u>	<u>181,524,717.52</u>

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 last period
Futures margin	6,604,890.00	2,192,420.67
Total	6,604,890.00	2,192,420.67

(5). Other cash received relating to financing activities

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Bill bond and performance bond	182,977,579.62	—
Total	182,977,579.62	—

(6). Other cash paid related to financing activities

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Rental expenses and others	33,555,088.59	138,755,906.04
Total	33,555,088.59	138,755,906.04

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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 last period
1. Adjustment of net profit to cash flow of operating activities:		
Net profit	2,192,590,789.15	2,036,739,148.41
Add: Provision for impairment of assets	4,581,610.97	1,415,392.23
Credit impairment losses	104,785,928.52	56,954,622.39
Depreciation of fixed assets, oil and gas assets, productive biological assets	179,719,966.85	188,890,178.11
Amortization of right-of-use assets	37,291,200.21	38,888,380.09
Amortization of intangible assets	97,203,433.36	86,646,225.78
Amortization of long-term prepaid expenses	12,162,848.62	24,047,355.71
Loss from disposal of fixed assets, intangible assets and other long-term assets (income as sign "-")	-26,780,716.67	-25,298,364.85
Losses from damage and scrap of fixed assets (income as sign "-")	2,670,164.78	-
Losses due to changes in fair value (income as sign "-")	-	-
Financial costs (income as sign "-")	-109,987,880.60	-143,760,547.16
Investment loss (income as sign "-")	-71,704,705.34	-27,306,477.60
Decrease in deferred income tax assets (increase as sign "-")	-9,537,764.44	-4,185,835.49
Increase in deferred income tax liabilities (decrease as sign "-")	-8,007,507.56	-5,049,999.30
Decrease in inventories (increase as sign "-")	-200,014,549.85	-512,801,841.97
Decrease in operating receivables (increase as sign "-")	-2,139,973,562.72	-241,191,450.70
Increase in operating payables (decrease as sign "-")	226,388,893.93	1,012,220,147.39
Others	-1,382,560,915.15	-2,912,146,924.45
Net cash flow generated from operating activities	-1,091,172,765.94	-425,939,991.41
2. Significant investment and financing activities not involving cash receipts and payments:		
Capital transferred from debts	-	-
Discounted bills with maturity	8,875,684.59	52,492,742.32
Right-of-use assets acquired by committing lease liabilities	10,561,287.66	94,730,787.67
Convertible corporate bonds due within one year	-	-
Fixed assets acquired under financing leases	-	-
3. Net change in cash and cash equivalents:		
Closing balance of cash	14,440,345,821.13	17,715,390,121.78
Less: Opening balance of cash	17,595,724,106.74	18,184,861,073.07
Add: Closing balance of cash equivalents	-	-
Less: Opening balance of cash equivalents	-	-
Net increase in cash and cash equivalents	-3,155,378,285.61	-469,470,951.29

VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

79. Supplementary information to the statement of cash flows (Continued)

(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

(4) Composition of cash and cash equivalents

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
I. Cash		
Including: Cash on hand	774,363.14	690,699.87
Bank deposits available for payment	14,439,571,457.99	17,714,699,421.91
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	14,440,345,821.13	17,715,390,121.78
Including: cash and cash equivalents with restriction on use by the parent or subsidiaries within the Group	-	-

Other explanations:

Applicable Not applicable

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

80. Notes to items in statement of changes in owner's equity

Explanation of the name of "Others" item that adjusted the closing balance at the end of last year and the amount of adjustment, etc.:

Applicable Not applicable

81. Assets with restricted ownership or right of use

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing book value	Reasons of restriction
Monetary funds	317,644,407.70	See Note VII. 1. Cash and bank balances –
Including: Monetary funds – acceptance bill deposits	140,121,612.09	Others are mainly used
Monetary funds – guarantee letter deposits	44,816,880.60	as migrant workers wage
Monetary funds – other purposes	132,705,915.01	deposits, performance
		deposits and housing
		maintenance fund for
		details
Receivables for financing	283,879,309.61	See Note VII. 6 for the bills
		receivable that are
		not derecognized,
		have been endorsed or
		discounted but have not
		expired on the balance
		sheet date
Accounts receivable	350,836,342.12	See Notes VII. 5, 16, 31
		and 45
Other non-current assets	4,288,244,537.43	See Notes VII. 5, 16, 31
		and 45
Total	<u>5,240,604,596.86</u>	/

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

Item	Closing balance of foreign currency	Exchange rate	Closing balance in RMB equivalent
Monetary funds		–	2,435,970,514.56
Including: US Dollar	55,012,652.13	6.7114	369,211,913.51
Euro	4,836,908.07	7.0084	33,898,986.52
HK Dollar	2,291,551,014.85	0.8552	1,959,734,427.90
Thai Baht	212,984,952.48	0.1906	40,594,931.94
Others	–	–	32,530,254.69
Accounts payable			
Including: US Dollar	3,494,580.20	6.7114	23,453,525.55

(2). Explanations 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

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VII. NOTES TO ITEMS IN THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

84. Government grants

1. Basic information about government grants

Applicable Not applicable

Unit: Yuan Currency: RMB

Type	Amount	Item reported	Amount included in current profits or loss
Demolition grants	386,062.14	Non-operating income	386,062.14
Grants for listed company	3,000,000.00	Non-operating income	3,000,000.00
Refund of taxes	94,423,392.64	Other income	94,423,392.64
Other research grants	<u>154,102,721.44</u>	Other income/deferred income	<u>154,102,721.44</u>

2. Return of government grants

Applicable Not applicable

85. Others

Applicable Not applicable

Expenses by nature

Unit: Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Raw materials and spare parts consumed	7,551,024,641.96	8,400,683,699.78
Subcontracting costs	2,828,926,626.66	3,005,645,098.81
Employee benefits	2,661,467,659.13	2,390,098,310.01
Depreciation and amortization expenses	334,610,751.26	346,251,391.83
Research expenses	160,247,197.61	168,708,216.84
Others	<u>2,499,426,748.16</u>	<u>1,416,312,302.29</u>
Total	<u>16,035,703,624.78</u>	<u>15,727,699,019.56</u>

Note: The labor expenses of RMB438,995,774.54 (the same period of last year: RMB418,792,248.99) under the research and development expenses have been included in the employee benefits.

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 explanations:

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

6. Others

Applicable Not applicable

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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
CRSC Research & Design Institute Group 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") note 2	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
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
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

IX. INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(1). *Composition of enterprise group* (Continued)

Explanations for the inconsistency of shareholding percentage in subsidiaries with proportion of voting rights:

Not applicable

The grounds for controlling the investees of which the Group is holding half or less than half of the voting rights, and the grounds for not controlling the investees of which the Group is holding more than half of the voting rights:

Not applicable

For the significant structured entities included in the scope of consolidation, the basis for control is:

Not applicable

Basis for determining an entity being acting as an agent or a principal:

Not applicable

Other explanations:

Note 1: All the companies above are limited liability companies.

Note 2: 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.

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IX. INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(2). Significant non-wholly owned subsidiaries

Applicable Not applicable

Unit: Yuan Currency: RMB

Name of subsidiary	Shareholding percentage of non-controlling shareholder (%)	Current profits and losses attributable to non-controlling shareholders	Current dividends declared and paid to non-controlling shareholders	Closing balance of interest of non-controlling shareholders
CRSC CASCO	49.00	213,944,130.08	-	1,142,349,942.33

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

IX. INTERESTS IN OTHER ENTITIES (Continued)

1. Interests in subsidiaries (Continued)

(3). Main financial information of significant non-wholly owned subsidiaries

✓ Applicable Not applicable

Unit: Yuan Currency: RMB

Name of subsidiary	Closing balance			Opening balance			Amount for the current period			Amount for the last period								
	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities	Revenue	Net profit	Cash flows from operating activities			
CRSC CASCO	5,662,476,751.78	1,189,562,811.11	6,872,039,562.89	4,459,666,231.02	81,026,918.95	4,540,713,149.97	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	2,229,397,454.76	436,620,673.63	149,561,239.79	360,708,060.28	360,708,060.28	1,101,673,886.17

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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 owner's interests in the subsidiary changes while control over the subsidiary remained 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

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

	Closing balance/ amount for the current period	Opening balance/ amount for the last period
Joint ventures:		
Total book value of investment	214,753,937.73	229,687,703.77
Total amount of the following items calculated on the basis of shareholding percentage		
– Net profit	8,266,233.96	21,433,178.65
– Other comprehensive income	–	–
– Total comprehensive income	8,266,233.96	21,433,178.65
Associates:		
Total book value of investment	1,255,042,023.81	1,148,536,043.29
Total amount of the following items calculated on the basis of shareholding percentage		
– Net profit	52,655,980.52	64,695,916.17
– Other comprehensive income	–	–
– Total comprehensive income	52,655,980.52	64,695,916.17

(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

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IX. INTERESTS IN OTHER ENTITIES (Continued)

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

X. RISKS RELATED TO FINANCIAL INSTRUMENTS

Applicable Not applicable

1. Category of financial instruments

Financial assets

Unit: Yuan Currency: RMB

Item	Measured at amortized cost	Measured at fair value through other comprehensive income		Total
		Standards	Designated	
Cash and bank balances	20,454,005,328.83	-	-	20,454,005,328.83
Receivables for financing	-	1,429,297,655.75	-	1,429,297,655.75
Accounts receivable	21,559,726,789.48	-	-	21,559,726,789.48
Other receivables	1,147,166,029.94	-	-	1,147,166,029.94
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	3,786,625,436.62	-	-	3,786,625,436.62
Financial assets included in other non-current assets	5,297,926,418.21	-	-	5,297,926,418.21
Total	52,518,622,186.58	1,429,297,655.75	1,124,819,159.20	55,072,739,001.53

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

1. Category of financial instruments (Continued)

Financial liabilities

Unit: Yuan Currency: RMB

Item	Measured at	Measured at fair	Total
	amortized cost	value through other comprehensive income	
Short-term borrowings	108,967,675.88	–	108,967,675.88
Bills payable	2,094,668,635.70	–	2,094,668,635.70
Accounts payable	46,878,483,593.58	–	46,878,483,593.58
Other payables	1,073,254,481.52	–	1,073,254,481.52
Employee benefits payable (cash payment)	165,214,355.95	–	165,214,355.95
Long-term borrowings	3,494,202,482.40	–	3,494,202,482.40
Financial liabilities in non-current liabilities due within one year	445,883,229.11	–	445,883,229.11
Lease liabilities	79,354,167.24	–	79,354,167.24
Long-term payables	66,302,465.53	–	66,302,465.53
Total	54,406,331,086.91	–	54,406,331,086.91

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

2. 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, interest rate risk and commodity price risk). The main financial instruments of the Group include monetary funds, equity investment, borrowings, receivables for financing and 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 developed risk management policies to identify and analyze risks faced by the Group. These risk management policies specify specific risks and cover many aspects such as market risk, credit risk and liquidity risk management. The Group periodically 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 of directors. The Risk Management Committee works closely with other business units of the Group to identify, assess and mitigate risks. The internal audit department of the Group conducts regular audits on risk management control and procedures and reports the audit results to the Group's Audit Committee.

The Group diversifies the risk of financial instruments through appropriate diversification of investments and business portfolios, and reduces the risk of concentration in any single industry, specific region or specific counterparty by formulating appropriate risk management policies.

Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation.

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 functional currency of the relevant business entity, the Group does not provide credit-based transactions unless specifically approved by the credit control department of the Group.

Since the counterparties of monetary funds and bank acceptance bills receivable are banks with good reputation and high credit ratings, these financial instruments have low credit risk.

Financial assets of the Group include monetary funds, receivables for financing, accounts receivable, other receivables, debt investments, other equity instrument investments, 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 region and industry. Customers owing accounts receivable 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.

X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

2. Risk of financial instruments (Continued)

Credit risk (Continued)

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 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.

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;

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

2. Risk of financial instruments (Continued)

Credit risk (Continued)

Definition of assets with credit impairment (Continued)

- 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.

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 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.

X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

2. Risk of financial instruments (Continued)

Credit risk (Continued)

Parameters for measuring expected credit loss (Continued)

The assessment of a significant increase in credit risk and the calculation of ECL both 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.

Please see Notes VII. 5, 8 and 10 for the risk exposure information of receivables, other receivables and contract assets.

Please see Notes VII. 5, 6, 8, 10, 12, 14, 16 and 31 for the quantitative data of credit risk exposure of the Group due to receivables, receivables for financing, other receivables, contract assets, non-current assets due within one year, debt investments, long-term receivables and other non-current assets.

Liquidity risk

The Group monitors its risk of deficiency of funds 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 of funding and flexibility through the use of several financing methods such as notes settlement and bank borrowings, as well as optimizing financing structure through the 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.

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 and lease liabilities based on the undiscounted contractual cash flows:

Unit: Yuan Currency: RMB

Item	Within 1 year	1 to 2 years	2 to 5 years	Over 5 years	Total
Short-term borrowings	108,967,675.88	-	-	-	108,967,675.88
Bills payable	2,094,668,635.70	-	-	-	2,094,668,635.70
Accounts payable	35,891,595,956.78	7,045,383,968.38	3,941,503,668.42	-	46,878,483,593.58
Other payables	2,725,282,470.85	127,664,860.68	128,850,789.82	-	2,981,798,121.35
Lease liabilities	86,798,191.75	39,415,160.99	38,548,101.14	30,723,489.59	195,484,943.47
Long-term borrowings (including maturity within 1 year)	350,689,546.40	-	2,347,212,189.72	1,146,990,292.68	3,844,892,028.80
Interest on long-term borrowings	18,906,753.14	61,910,646.01	244,407,356.44	755,409,782.85	1,080,634,538.44
Long-term payables (including maturity within 1 year)	29,028,386.73	66,302,465.53	-	-	95,330,852.26

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

2. Risk of financial instruments (Continued)

Market risk

(1) Interest rate risk

The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's borrowings and bank current deposit in large amount with floating interest rates.

The Group regularly reviews and monitors the mix of fixed and floating interest rate in order to manage its interest rate risk. Borrowings and monetary funds are stated 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.

As at 30 June 2022, floating interest rate loans and fixed interest rate loans accounted for 98% and 2% of the Group's borrowings respectively. Management would adjust the floating rate assets based on changes in the market interest rates to reduce the significant impact arising from interest rate risk.

If there was a general increase/decrease in the interest rate of borrowings with floating interest rates by 1%, with all other variables held constant, the consolidated net profits and other comprehensive income, net of tax would have decreased/increased by approximately RMB14,826,973.89 for the six months ended 30 June 2022 (2021: RMB9,576,718.41), and there is no impact on other components of the consolidated 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 30 June 2022 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 rates of demand deposit of bank 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 increased/decreased by approximately RMB7,900,249.73 for the six months ended 30 June 2022 (2021: RMB12,852,687.00), and there is no impact on other components of the consolidated 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 30 June 2022 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.

X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

2. Risk of financial instruments (Continued)

Market risk (Continued)

(2) *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 30 June 2022 and 31 December 2021 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.

Item	Increase/(decrease) in United States dollar exchange rate	Increase/(decrease) in net profit or loss	Increase/(decrease) in total shareholder's equity
Depreciation of RMB against United States dollar	5%	10,731,168.88	10,731,168.88
Appreciation of RMB against United States dollar	(5%)	<u>(10,731,168.88)</u>	<u>(10,731,168.88)</u>

Item	Increase/(decrease) in Hong Kong dollar exchange rate	Increase/(decrease) in net profit or loss	Increase/(decrease) in total shareholder's equity
Depreciation of RMB against Hong Kong dollar	5%	73,490,041.05	73,490,041.05
Appreciation of RMB against Hong Kong dollar	(5%)	<u>(73,490,041.05)</u>	<u>(73,490,041.05)</u>

The sensitivity analysis above has been determined assuming that the change in foreign exchange rates had occurred as at 30 June 2022 and 31 December 2021 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.

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X. RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

2. Risk of financial instruments (Continued)

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. For the six months ended 30 June 2022 and in 2021, no changes were made in the objectives, policies or processes for managing capital.

The Group manages its capital through gearing ratio, which is total liabilities divided by total assets. The gearing ratios of the Group as at the balance sheet date are as follows:

Item	30 June 2022	31 December 2021
Total assets	112,721,899,243.89	108,942,588,838.30
Total liabilities	67,015,746,621.30	63,571,212,916.84
Gearing ratio	<u>59.45%</u>	<u>58.35%</u>

XI. DISCLOSURE OF FAIR VALUE

1. Closing fair value of assets and liabilities measured at fair value

Applicable Not applicable

The inputs used for fair value measurement are divided into three levels:

Level 1 inputs are quoted (unadjusted) prices in active markets for identical assets or liabilities that the Company can access on the measurement date.

Level 2 inputs are directly or indirectly observable inputs of relevant assets or liabilities other than Level 1 inputs.

Level 3 inputs refer to unobservable inputs of relevant assets or liabilities.

The fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

Unit: Yuan Currency: RMB

Item	Closing fair value			Total
	Level-1 fair value measurement	Level-2 fair value measurement	Level-3 fair value measurement	
I. Continuous measurement of fair value				
Receivables for financing	-	1,429,297,655.75	-	1,429,297,655.75
Other equity instrument investments	-	-	1,124,819,159.20	1,124,819,159.20
Total assets measured at fair value on a recurring basis	-	1,429,297,655.75	1,124,819,159.20	2,554,116,814.95
II. Assets and liabilities disclosed at fair value				
Long-term receivables	-	3,786,625,436.62	-	3,786,625,436.62
Financial assets included in other non-current assets	-	5,297,926,418.21	-	5,297,926,418.21
Long-term loans	-	3,494,202,482.40	-	3,494,202,482.40
Long-term payables	-	66,302,465.53	-	66,302,465.53
Total	-	12,645,056,802.76	-	12,645,056,802.76

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XI. DISCLOSURE OF FAIR VALUE (Continued)

2. Fair value valuation

The following is a comparison of the book value and fair value of various types of financial instruments other than financial instruments with small differences between book value and fair value:

Name of Item	Book value		Fair value	
	Closing balance	Opening balance	Closing balance	Opening balance
Long-term receivables	3,786,625,436.62	3,713,734,908.20	3,833,939,344.01	3,760,138,048.00
Financial assets included in other non-current assets	5,297,926,418.21	4,715,091,932.30	5,284,232,403.59	4,702,904,421.04
Long-term loans	3,494,202,482.40	3,127,722,482.40	3,524,401,058.83	3,154,753,762.62
Long-term payables	66,302,465.53	62,593,424.21	64,806,219.53	61,180,880.05
Total	<u>12,645,056,802.76</u>	<u>11,619,142,747.11</u>	<u>12,707,379,025.96</u>	<u>11,678,977,111.71</u>

The management has assessed the cash and bank balances, accounts receivable, receivables for financing, other receivables, bills payable, 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, long-term payables, and bonds payable determined by discounting the future cash flows using rates currently available for other instruments with similar terms, credit risk and remaining maturities. As at 30 June 2022 and 31 December 2021, 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 loans was assessed to be insignificant.

For financial instruments traded in an active market, the Group determines its fair value based on its active market quotation; and for financial instruments that are not traded in an active market, the Group uses valuation techniques to determine their fair values. The valuation models used are mainly cash flow discount models and market comparable company models. The input values of valuation techniques mainly include risk-free interest rates, benchmark interest rates, exchange rates, credit spreads, liquidity premiums, EBITDA multipliers, and lack of liquidity discounts etc.

XI. DISCLOSURE OF FAIR VALUE (Continued)**2. Fair value valuation (Continued)**

The Group signed the derivative financial instrument contracts with more than one counterparties (mainly refer to financial institutions with higher credit rating). Derivative financial instruments are measured using the valuation techniques of forward pricing, swap model and present value method. The model covers multiple input values of observable market, including credit quality of counterparty, spot and forward exchange rate and interest rate curve. As at 30 June 2022, the market-to-market value of the derivative financial assets is the net value after offsetting the credit valuation of default risk attributable to derivative instrument counterparty after adjustment. The change of counterparty credit risk had no significant impact on the assessment on hedging effectiveness of the designated derivative hedging instrument in the hedging relationship and other financial instrument measured at fair value.

Other investments in equity instruments held by the Group which are measured at level 3 fair value represent the equity in unlisted companies held by the Company. As the operating environment, operating conditions and financial position of the invested entity have not changed significantly, the Company measures the investment cost as a reasonable estimate of fair value.

3. Adjustment and level transformation of fair value

As at 30 June 2022, 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.

4. Basis for determining the market value of continuous and non-continuous Level-1 fair value measurement items

Applicable Not applicable

5. Qualitative and quantitative information of valuation techniques and important parameters used in continuous and non-continuous Level-2 fair value measurement items

Applicable Not applicable

6. Qualitative and quantitative information of valuation techniques and important parameters used in continuous and non-continuous Level-3 fair value measurement items

Applicable Not applicable

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XI. DISCLOSURE OF FAIR VALUE (Continued)

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
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 RELATED PARTY TRANSACTIONS

1. Parent of the Company

Applicable Not applicable

Unit: 0' 000 Yuan Currency: RMB

Name of the parent	Place of registration	Nature of business	Registered capital	Shareholding percentage of the parent to the Company (%)	Percentage of voting right of the parent to the Company (%)
CRSC Group	Beijing	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 parent of the Company is CRSC Group

The ultimate holding company of the Company is CRSC Group

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XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

2. Subsidiaries of the Company

For details of the subsidiaries of the Company, refer to the Note

Applicable Not applicable

For details of the subsidiaries of the Company, refer to the Note IX.1.

3. Details of the joint ventures and associates of the Company

For details of significant joint ventures or associates of the Company, see the Note

Applicable Not applicable

For details of joint ventures and associates of the Company, refer to the Note VII.17.

Information for other joint ventures and associates which form balance through related party transaction during the current or previous periods

Applicable Not applicable

4. Other related parties

Applicable Not applicable

Name of other related parties

Relationship between other related parties and the Company

Zhongxin Diantong Co., Ltd. (中信電通有限公司)	Associate of the Parent
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 control of the ultimate holding company
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 control of the ultimate holding company
Tianshui Tonghao Electric Power Equipment Co., Ltd. (天水通號電力設備有限公司)	Associate of the subsidiary under control of the ultimate holding company
Beijing Erqi Communication Factory Co., Ltd. (北京二七通信工廠有限公司)	Subsidiary under control of the ultimate holding company
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 control of the ultimate holding 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 control of the ultimate holding company
Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	Subsidiary under control of the ultimate holding company

XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

4. Other related parties (Continued)

Name of other related parties	Relationship between other related parties and the Company
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 control of the ultimate holding company
CRSC Real Estate Co., Ltd. (通號置業有限公司)	Subsidiary under control of the ultimate holding company
Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司)	Minority shareholder having material influence on subsidiary of the Group
ALSTOM Transporte SA	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Transport S.A.	Related party of a minority shareholder having material influence on subsidiary of the Group
Alstom Signaling Inc.	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Aix en Provence	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM (Villeurbanne)	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Ferroviaria S.p.A	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Transport India Limited	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Transport Singapore Pte Ltd	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Transport Australia Pty. Ltd	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Hong Kong Ltd.	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Brasil Energia e transporte Ltda	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Transport Mexico, S.A. de C.V.	Related party of a minority shareholder having material influence on subsidiary of the Group
CITADIS ISRAEL LTD	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Transport Romania SA	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM Transport Spain Limited	Related party of a minority shareholder having material influence on subsidiary of the Group
ALSTOM (USA)	Related party of a minority shareholder having material influence on subsidiary of the Group

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XII · RELATED PARTIES AND RELATED PARTY 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

Related parties	Contents of related party transactions	Unit: Yuan Currency: RMB	
		Amount for the current period	Amount for the last period
SSCX	Procurement of goods	22,852,354.14	18,182,030.83
ALSTOM Transport S.A. (Note 1)	Procurement of goods	–	22,523,303.51
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	10,057,363.47	15,772,091.74
Gu' an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	Procurement of goods	19,541,501.10	29,909,949.14
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	8,487,283.27	9,751,109.81
Alstom Signaling Inc. (Note 1)	Procurement of goods	2,552,580.07	2,207,678.49
Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司) (Note 1)	Procurement of goods	409,415.27	1,487,056.47
Shanghai Xinlicheng Communication Technology Service Co., Ltd. (上海信立城通信技術服務有限公司) (Note 1)	Procurement of goods	–	2,114,912.14
Schaltbau	Procurement of goods	54,789.19	31,909.74
Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司) (Note 1)	Procurement of goods	–	–
ALSTOM (Villeurbanne)	Procurement of goods	15,543,433.40	–
Shanghai Xinlicheng Communication Technology Service Co., Ltd. (上海信立城通信技術服務有限公司) (Note 1)	Receipt of labour service	219,067.91	364,720.75
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)	Receipt of labour service	–	–
ALSTOM Transport S.A. (Note 1)	Receiving technology transfer	79,361,182.86	121,972,167.98
Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司) (Note 1)	Receiving technology transfer	–	423,969.41
ALSTOM Aix en Provence (Note 1)	Receiving technology transfer	–	2,310,188.40

XII · RELATED PARTIES AND RELATED PARTY 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

Related parties	Contents of related party transactions	Unit: Yuan Currency: RMB	
		Amount for the current period	Amount for the last period
SSCX	Sale of goods	11,243,378.15	39,238,227.85
CRSC Tianshui	Sale of goods	19,527,682.77	35,398,230.09
ALSTOM Transport S.A. (Note 1)	Sale of goods	8,268,342.50	17,257,620.00
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)	Sale of goods	21,238.94	8,172,486.17
ALSTOM Transport India Limited	Sale of goods	2,076,836.00	4,765,797.00
Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	Sale of goods	2,199,116.26	3,681,405.60
ALSTOM Transporte SA	Sale of goods	–	3,626,036.83
ALSTOM Transport Australia Pty Limited	Sale of goods	10,738,720.85	2,009,855.72
Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	Sale of goods	4,420,378.76	1,564,407.98
ALSTOM Transport Singapore Pte Ltd	Sale of goods	131,815.00	853,571.51
Alstom Investment (Shanghai) Co., Ltd. (阿爾斯通投資(上海)有限公司)	Sale of goods	–	730,000.00
Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	Sale of goods	–	78,204.52
ALSTOM Hong Kong Ltd.	Sale of goods	–	72,146.20
CRSC Group	Sale of goods	–	–
ALSTOM Ferroviaria S.p.A	Sale of goods	–	–
ALSTOM Transport Mexico, S.A. de C.V.	Sale of goods	29,120.00	–
CRSC Guizhou Real Estate Co., Ltd. (通號貴州置業有限公司)	Provision of labour service	29,814,472.23	309,665,881.20
CRSC Real Estate Co., Ltd. (通號置業有限公司)	Provision of labour service	37,664,142.08	41,040,054.72
Beijing CRSC Beifang Real Estate Co., Ltd. (北京通號北房置業有限公司)	Provision of labour service	7,294,327.73	–
CITADIS ISRAEL LTD	Sale of goods	2,126,404.67	–
China Tietong Railway	Sale of goods	5,309.73	–
Siping Pipeline	Provision of labour service	12,192,055.97	–
Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	Provision of labour service	13,077.74	–
Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd. (北京北信豐元鐵路電子設備有限公司)	Provision of labour service	471.70	–
CRSC Tianshui	Provision of labour service	38,994.34	130,043.40
CRSC Foshan Real Estate Co., Ltd. (通號佛山置業有限公司)	Provision of labour service	20,500,000.00	662,563.31
SSCX	Provision of labour service	81,276.55	1,150,392.44

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XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(1). *Related party transactions of purchasing or selling goods and rendering or receiving services* (Continued)

Explanation about connected transactions of purchasing or selling goods and rendering or receiving services

Applicable Not applicable

(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

XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

5. Related party transactions (Continued)

(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
Zuhai Huatong	Fixed assets	–	1,299,999.71
Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	Fixed assets	754,919.18	754,919.27
Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	Fixed assets	117,855.00	235,710.55
Shanghai Xinlicheng Communication Technology Service Co., Ltd. (上海信立城通信技術服務有限公司)	Fixed assets	–	31,858.41
Xi'an Schaltbau Electric Corp., Ltd. (西安沙爾特寶電氣有限公司)	Fixed assets	<u>2,433,302.75</u>	<u>–</u>

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.

Note 2: The prices of the house rental between the Group and related parties were determined by both parties through negotiation with referring to market prices.

The Company as lessee:

Applicable Not applicable

Explanation of leases with related parties

Applicable Not applicable

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XII · RELATED PARTIES AND RELATED PARTY 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: 0' 000 Yuan Currency: RMB

Item	Amount for the current period	Amount for the last period
Emolument of key management	<u>267</u>	<u>342</u>

Key management comprise executive directors, supervisors, independent non-executive directors and senior management.

(8). *Other connected transactions*

Applicable Not applicable

XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

6. Amounts due from/to related parties

(1). Receivable

✓ Applicable □ Not applicable

Unit: Yuan Currency: RMB

Item	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)	272,014,095.80	-	297,105,277.45	-
Accounts receivable	CRSC Tianshui	222,088,902.33	1,800,420.79	292,863,059.33	-
Accounts receivable	CRSC Real Estate Co., Ltd. (通號置業有限公司)	103,118,738.74	-	151,581,441.45	-
Accounts receivable	Siping Pipeline	31,693,048.00	158,465.24	29,101,565.00	-
Accounts receivable	CRSC Guizhou Real Estate Co., Ltd. (通號貴州置業有限公司)	27,328,150.07	-	21,079,606.28	-
Accounts receivable	Gu' an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	8,364,638.23	193,455.65	17,886,991.23	467,392.53
Accounts receivable	SSCX	8,176,609.24	-	15,583,230.76	5,588.28
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	757,608.84	14,481.73	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
Accounts receivable	ALSTOM Transport Mexico, S.A. de C.V.	-	-	29,136.00	1,456.80
Accounts receivable	ALSTOM Transport (S) Pte Ltd.	146,020.00	730.10	-	-
Accounts receivable	ALSTOM Transport Singapore Pte Ltd	175,684.00	878.42	-	-
Accounts receivable	ALSTOM Transport Australia Pty.Ltd	10,652,846.86	53,264.23	-	-
Accounts receivable	ALSTOM Transport S.A.	1,727,442.00	8,637.21	-	-
Prepayments	Xi' an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	1,764,771.89	-	1,613,217.82	-
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	-	26,870.64	-
Other receivables	CRSC Group	2,495,152.50	-	16,662,394.89	-
Other receivables	CRSC Real Estate Co., Ltd. (通號置業有限公司)	313,518.00	-	333,518.00	-
Other receivables	SSCX	413,377.93	-	327,224.79	-

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XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

6. Amounts due from/to related parties (Continued)

(1). Receivable (Continued)

Item	Related parties	Closing balance		Opening balance	
		Book balance	Provision for bad debt	Book balance	Provision for bad debt
Other receivables	Xi'an Weixun Monitoring Equipment Co., Ltd. (西安唯迅監控設備有限公司)	239,887.95	-	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	-
Other receivables	Beijing CRSC Construction and Development Co., Ltd. (北京通號建設開發有限公司)	-	-	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)	305,684.21	-	42,220.80	-
Other receivables	CRSC Tianshui	-	-	32,518.97	-
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)	13,360.00	-	10,000.00	-
Dividends receivable	SSCX	12,150,000.00	-	6,525,000.00	-
Dividends receivable	Schaltbau	12,500,000.00	-	-	-
Contract assets	ALSTOM Transport S.A.	2,225,641.23	-	-	-

XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

6. Amounts due from/to related parties (Continued)

(2). Payable

✓ Applicable □ Not applicable

		Unit: Yuan	Currency: RMB
Item	Related parties	Closing book balance	Opening book balance
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)	126,203,957.54	127,637,286.06
Accounts payable	Alstom Signaling Inc.	61,995,082.70	61,726,905.50
Accounts payable	ALSTOM Transport S.A.	100,746,857.05	51,350,265.10
Accounts payable	Gu' an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	37,189,558.20	46,487,403.44
Accounts payable	CRSC Smart Technology	-	12,176,481.32
Accounts payable	ALSTOM (Villeurbanne)	4,109,503.21	7,329,590.68
Accounts payable	SSCX	27,301,778.95	7,078,456.70
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)	3,216,780.89	3,401,783.59
Accounts payable	China Tietong Railway	-	811,273.00
Accounts payable	Schaltbau	353,738.17	291,826.38
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)	44,584.00	125,544.17
Accounts payable	Beijing Erqi Communication Factory Co., Ltd. (北京二七通信工廠有限公司)	64,953.41	64,953.41
Accounts payable	ALSTOM Aix en Provence	59,553.43	59,553.43

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XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

6. Amounts due from/to related parties (Continued)

(2). Payable (Continued)

✓ Applicable □ Not applicable

		Unit: Yuan	Currency: RMB
Item	Related parties	Closing book balance	Opening book balance
Notes 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
Notes payable	SSCX	-	-
Notes 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)	1,300,000.00	-
Notes payable	Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	179,000.00	-
Prepayments	ALSTOM Transport Singapore Pte Ltd	120,757.00	120,757.00
Prepayments	ALSTOM Transport Australia Pty. Ltd	35,542.00	121,415.99
Prepayments	ALSTOM Transport S.A.	2,241,900.56	4,380,561.06
Prepayments	ALSTOM Transport India Limited	11,938.55	11,938.55
Prepayments	ALSTOM Hong Kong Ltd.	240,000.00	-
Prepayments	ALSTOM Transport Mexico, S.A. de C.V.	-	29,120.00
Contract liabilities	Beijing CRSC Beifang Real Estate Co., Ltd. (北京通號北房置業有限公司)	-	7,294,327.73
Contract liabilities	ALSTOM Transport S.A.	9,209,039.60	4,380,561.06
Contract liabilities	CITADIS ISRAEL LTD	1,816,149.84	2,126,404.67

XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

6. Amounts due from/to related parties (Continued)

(2). Payable (Continued)

✓ Applicable □ Not applicable

		Unit: Yuan	Currency: RMB
Item	Related parties	Closing book balance	Opening book balance
Contract liabilities	SSCX	–	577,400.00
Contract liabilities	ALSTOM Transport (S) Pte Ltd.	–	131,815.00
Contract liabilities	ALSTOM Transport Australia Pty. Ltd	14,712,773.47	110,357.99
Contract liabilities	ALSTOM Transport Mexico, S.A. de C.V.	–	29,120.00
Contract liabilities	ALSTOM Transport India Limited	1,918,128.02	11,938.55
Contract liabilities	ALSTOM Ferroviaria S.p.A	278,099.90	–
Contract liabilities	ALSTOM Transport Singapore Pte Ltd	1,584,788.73	–
Contract liabilities	ALSTOM Transport Spain Limited	2,612,225.68	–
Other payables	CRSC Group	1,129,507,442.72	11,477,274.05
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)	192,562.97	562,248.95
Other payables	Schaltbau	64,925.15	64,925.15
Other payables	Zhuhai Huatong	–	12,257.84
Other payables	CRSC Real Estate Co., Ltd. (通號置業有限公司)	12,846.28	–
Other payables	Xi'an Tongxin Railway Equipment Manufacturing Co., Ltd. (西安同鑫鐵路器材製造有限責任公司)	300,000.00	–
Other payables	Zhongxin Diantong Co., Ltd. (中信電通有限公司)	40,000.00	–
Other payables	Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd. (北京北信豐元鐵路電子設備有限公司)	20,000.00	–

Note: As of 30 June 2022, the Group's receivables from and payables to related parties were interest-free, unsecured and have no fixed repayment period.

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XII · RELATED PARTIES AND RELATED PARTY 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:

Unit: Yuan Currency: RMB

Item	30 June 2022	31 December 2021
Sale of goods to related parties		
ALSTOM Transport S.A.	2,773,836.20	53,042,498.28
ALSTOM Transport Australia Pty. Ltd	85,807,094.55	45,637,583.60
ALSTOM Transport India Limited	13,131,062.93	10,513,661.00
SSCX	6,957,505.35	10,279,709.91
ALSTOM Transport Romania SA	2,773,836.20	3,186,589.00
ALSTOM Transport Spain Limited	14,252,230.22	929,453.25
ALSTOM HONG KONG LTD.	1,049,056.60	240,000.00
ALSTOM Transport Singapore Pte Ltd	6,774,119.03	211,542.00
Subtotal	133,518,741.08	124,041,037.04

Unit: Yuan Currency: RMB

Item	30 June 2022	31 December 2021
Providing labour service for related parties		
ALSTOM Transport S.A.	298,259,215.97	293,211,498.21
SSCX	8,843,442.10	11,852,852.10
ALSTOM (USA)	27,557,843.53	7,504,122.24
Gu'an Beixin Railway Signal Co., Ltd. (固安北信鐵路信號有限公司)	—	1,189,881.76
Chipsea Prioritizing	—	662,843.30
Beijing Beixin Fengyuan Railway Electronic Equipment Co., Ltd. (北京北信豐元鐵路電子設備有限公司)	—	247,471.21
Subtotal	334,660,501.60	314,668,668.82

XII · RELATED PARTIES AND RELATED PARTY TRANSACTIONS (Continued)

7. Commitment of related parties (Continued)

Unit: Yuan Currency: RMB

Item	30 June 2022	31 December 2021
Purchasing goods from/receiving technology transfer services from related parties		
Siping Pipeline	205,361,702.63	205,361,702.63
CRSC Tianshui	3,822,087.50	4,885,996.00
Subtotal	<u>209,183,790.13</u>	<u>210,247,698.63</u>

8. Others

Applicable Not applicable

XIII. SHARE-BASED PAYMENT

1. Overview of share-based payment

Applicable Not applicable

2. Information about equity-settled share-based payment

Applicable Not applicable

3. Information about cash-settled share-based payment

Applicable Not applicable

4. Information about modification and termination of share-based payment

Applicable Not applicable

5. Others

Applicable Not applicable

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XIV. COMMITMENTS AND CONTINGENCIES

1. Significant commitments

Applicable Not applicable

Significant external commitments, nature and amount existing as at the balance sheet date

	Closing balance	Opening balance
Contracted, but not provided for		
Capital commitment	5,350,000.00	3,560,378.62
Investment commitment	<u>506,850,000.00</u>	<u>697,320,480.00</u>
Total	<u>512,200,000.00</u>	<u>700,880,858.62</u>

2. Contingencies

(1). Important contingencies existing as at the balance sheet date

Applicable Not applicable

(2). The Company has no discloseable important contingencies, and shall also give an explanation:

Applicable Not applicable

3. Others

Applicable Not applicable

XV. EVENTS AFTER THE BALANCE SHEET DATE

1. Important non-adjusting matters

Applicable Not applicable

2. Information about profit distribution

Applicable Not applicable

3. Sales return

Applicable Not applicable

4. Explanation about other events after the balance sheet date

Applicable Not applicable

On 20 July 2022, the Company has entered into a Joint Venture Agreement with CRSC Group, its parent in relation to the establishment of a joint venture to establish a financial company that engages in financial services. For further details of establishment of the joint venture, please refer to the announcement of the Company dated 20 July 2022.

XVI. OTHER IMPORTANT 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

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XVI. OTHER IMPORTANT EVENTS (Continued)

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

6. Segment information

(1). *Basis for determining and accounting policies of reporting segments*

Applicable Not applicable

For management purposes, the Group is divided into business units based on products and services. The Group has the following 3 reporting segments:

- (1) The rail transportation control system segment mainly provides specialized “three-in-one” services of design and integration, equipment manufacturing and system implementation services for rail transportation control systems;
- (2) Construction contracting segment mainly includes contracting of municipal engineering and other engineering construction services;
- (3) Other segments mainly engage in trading etc.

Management monitors the operating results of the Group’s operating segments separately for the purpose of making decisions about resources allocation and performance assessment. Segment performance is evaluated based on reporting segment profit. 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 rendering of services to third parties.

XVI. OTHER IMPORTANT EVENTS (Continued)

6. Segment information (Continued)

(2). Financial information of reporting segment

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Rail transportation control system	Construction Contracting	Others	Adjustments and eliminations	Total
Revenue from external transactions	13,863,975,446.96	4,488,978,810.16	30,408,180.63	-	18,383,362,437.75
Revenue from inter-segment transactions	19,552,223.33	7,093,028.31	12,459,195.02	-39,104,446.66	-
Sub-total	13,883,527,670.29	4,496,071,838.47	42,867,375.65	-39,104,446.66	18,383,362,437.75
Investment income from associates and joint ventures	45,765,198.00	14,892,726.10	-	-	60,657,924.10
Losses from impairment of credit Assets impairment losses	111,511,660.58	-6,706,799.44	-18,932.62	-	104,785,928.52
Depreciation and amortization expenses	6,316,428.45	-1,734,817.48	-	-	4,581,610.97
Total profit (loss)	247,561,373.55	10,790,661.91	76,878.74	-	258,428,914.20
Income tax expenses	-	-	-	-	2,669,859,528.45
Net profit (loss)	-	-	-	-	-477,268,739.30
Total assets	-	-	-	-	2,192,590,789.15
Total liabilities	75,720,660,689.62	36,531,342,337.80	294,265,950.19	-	112,546,268,977.61
Other disclosures:					
Long-term equity investments in associates and joint ventures	38,101,704,236.51	28,675,224,773.60	238,817,611.19	-	67,015,746,621.30
Capital expenditures (Note)	1,312,684,362.27	157,111,599.27	-	-	1,469,795,961.54
	565,620,227.90	8,787,392.38	11,274,271.55	-	585,681,891.83

(3). If the Company has no reporting segment or cannot disclose the total assets and total liabilities of each reporting segment, the reasons shall be stated

Applicable Not applicable

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XVI. OTHER IMPORTANT EVENTS (Continued)

6. Segment information (Continued)

(4). Other explanations

✓ Applicable Not applicable

(a) Revenue from external customers

Item	Amount incurred during the period	Amount incurred during the previous period
Mainland China	17,949,387,934.79	17,438,651,105.39
Other countries or regions	433,974,502.96	426,096,183.91
Total	<u>18,383,362,437.75</u>	<u>17,864,747,289.30</u>

Revenue from external customers is based on the locations of the customers.

(b) Total non-current assets

Item	Closing balance	Opening balance
Mainland China	<u>12,571,960,525.34</u>	<u>15,176,623,882.00</u>

Non-current assets are analyzed by geographic locations where the assets (excluding financial assets and deferred tax assets) are located.

Key customer information

For the six months ended 30 June 2022, the revenue without single customer of the Group reached or exceeded 10% of the Group's revenue.

XVI. OTHER IMPORTANT EVENTS (Continued)

7. Other important transactions and events that have impact on investors' decision-making

Applicable Not applicable

8. Others

Applicable Not applicable

XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY

1. Accounts receivable

(1). Disclosure by aging

Applicable Not applicable

Unit: Yuan Currency: RMB

Aging	Closing book balance	Opening book balance
Within 1 year		
Including: sub-items within 1 year		
Subtotal within 1 year	1,062,124,722.19	1,395,399,544.13
1 to 2 years	417,424,766.29	293,247,471.58
2 to 3 years	101,469,033.00	158,428,972.60
More than 3 years	269,279,031.57	194,805,412.11
Subtotal	1,850,297,553.05	2,041,881,400.42
Less: Provision for impairment	116,524,093.02	92,216,389.35
Total	1,733,773,460.03	1,949,665,011.07

NOTES TO FINANCIAL STATEMENTS

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

1. Accounts receivable (Continued)

(2). Disclosure by classification with the method of provision for bad debt

✓ Applicable Not applicable

Unit: Yuan Currency: RMB

Category	Closing balance					Opening balance				
	Gross carrying amount		Provision for bad debt			Gross carrying amount		Provision for bad debt		
	Amount	Proportion (%)	Amount	Provision withdrawal proportion (%)	Book value	Amount	Proportion (%)	Amount	Provision withdrawal proportion (%)	Book value
Single provision for bad debt	662,654,917.91	35.81	9,184,367.84	1.39	653,470,550.07	452,462,918.94	22.16	4,470,744.79	0.99	447,992,174.15
Including: Provision withdrawn for bad debt on a combination basis	1,187,642,635.14	64.19	107,339,725.18	9.04	1,080,302,909.96	1,589,418,481.48	77.84	87,745,644.56	5.52	1,501,672,836.92
Including: Total	<u>1,850,297,553.05</u>	<u>/</u>	<u>116,524,093.02</u>	<u>/</u>	<u>1,733,773,460.03</u>	<u>2,041,881,400.42</u>	<u>/</u>	<u>92,216,389.35</u>	<u>/</u>	<u>1,949,665,011.07</u>

Single provision for bad debt:

✓ Applicable Not applicable

XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

1. Accounts receivable (Continued)

(2). Disclosure by classification with the method of provision for bad debt (Continued)

Unit: Yuan Currency: RMB

Name	Gross carrying amount	Provision for bad debt	Closing balance Provision withdrawal proportion (%)	Reason for provision
Accounts receivable of single provision for bad debt	662,654,917.91	9,184,367.84	1.39	
Total	<u>662,654,917.91</u>	<u>9,184,367.84</u>	<u>1.39</u>	/

Descriptions of single provision for bad debt:

Applicable Not applicable

Note: The Group shall make provision for part of bad debts based on its aging and business conditions with other companies.

Provision withdrawn for bad debt on a combination basis:

Applicable Not applicable

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

1. Accounts receivable (Continued)

(2). Disclosure by classification with the method of provision for bad debt (Continued)

Items under combination-based withdrawal: aging group

Unit: Yuan Currency: RMB

Name	Closing balance		Provision withdrawal proportion(%)
	Accounts receivable	Provision for bad debt	
Within 1 year	552,978,860.58	2,764,894.30	0.50
1 to 2 years	343,841,624.49	17,192,081.22	5.00
2 to 3 years	73,270,580.45	7,327,058.05	10.00
Over 3 years	217,551,569.62	80,055,691.61	36.80
Total	<u>1,187,642,635.14</u>	<u>107,339,725.18</u>	<u>9.04</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

XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

1. Accounts receivable (Continued)

(3). Provision for bad debts

Applicable Not applicable

Unit: Yuan Currency: RMB

Category	Opening balance	Increase/decrease during the period			Closing balance
		Provision	Recovery or reversal	Write-off or cancellation	
Accounts receivable	92,216,389.35	24,307,703.67	-	-	116,524,093.02
Total	92,216,389.35	24,307,703.67	-	-	116,524,093.02

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

(5). Top five debtors with the largest closing balance of accounts receivable

Applicable Not applicable

Unit: Yuan Currency: RMB

Name of entity	Gross Carrying amount	Provision for bad debt	Percentage of total accounts receivable (%)
Aggregate closing balance of the top five accounts receivable	298,925,350.57	6,245,041.60	16.16

(6). Accounts receivable derecognized due to the transfer of financial assets

Applicable Not applicable

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

1. Accounts receivable (Continued)

(7). Amount of assets or liabilities resulting from accounts receivable transfer and continuing involvement

Applicable Not applicable

Other explanations:

Applicable Not applicable

2. Other receivables

Item

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Closing balance	Opening balance
Dividends receivable	2,093,973,530.31	356,533,862.95
Other receivables	6,729,957,547.65	6,212,600,336.97
Total	8,823,931,077.96	6,569,134,199.92

Other explanations:

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 explanations:

Applicable Not applicable

XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

2. Other receivables (Continued)

Dividends receivable

(1). *Dividends receivable*

Applicable Not applicable

Unit: Yuan Currency: RMB

Items (or invested entities)	Closing balance	Opening balance
CRSC Wanquan	3,616,930.31	3,616,930.31
CRSC Construction	206,526,000.00	126,564,000.00
Zhengzhou Zhongyuan	215,944,807.43	190,593,000.00
CRSC Electrification Bureau	1,726,892.57	4,185,000.00
Innovation Investment	31,572,000.00	31,574,932.64
CRSC International Holdings	6,414,000.00	—
Beijing Tendering	4,848,000.00	—
CRSCD	704,280,000.00	—
CRSC Cables	26,892,000.00	—
CRSCE	42,432,000.00	—
CRSCS	91,692,000.00	—
CRSCC	68,130,000.00	—
Urban Rail Transit	35,010,000.00	—
CRSC Changsha Railway	1,630,000.00	—
CRSC Xi'an Industry Group	303,696,000.00	—
CRSC Tengda	18,694,800.00	—
CRSC Huatai	7,781,400.00	—
CRSC CASCO	316,922,200.00	—
CRSC Jiangsu Smart	6,164,500.00	—
Total	2,093,973,530.31	356,533,862.95

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

2. Other receivables (Continued)

Dividends receivable (Continued)

(2). *Significant dividends receivable with an age over 1 year*

Applicable Not applicable

(3). *Provision for bad debts*

Applicable Not applicable

Other explanations:

Applicable Not applicable

Other receivables

(1). *Disclosure by aging*

Applicable Not applicable

Unit: Yuan Currency: RMB

Aging	Closing book balance	Opening book balance
Within 1 year	—	—
Including: sub-items within 1 year	—	—
Subtotal within 1 year	5,588,742,775.74	5,433,394,585.46
1 to 2 years	691,134,277.08	516,879,862.53
2 to 3 years	223,529,047.69	3,927,858.85
More than 3 years	227,137,912.41	258,983,746.15
Less: Provision for impairment	586,465.27	585,716.02
Total	<u>6,729,957,547.65</u>	<u>6,212,600,336.97</u>

XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(2). *Classification by nature of accounts*

Applicable Not applicable

Unit: Yuan Currency: RMB

Nature of accounts	Closing book balance	Opening book balance
Loans from subsidiaries	4,479,843,130.00	4,560,843,130.00
Advances	2,202,032,898.85	1,564,390,541.16
Others	48,667,984.07	87,952,381.83
Less: Provision for bad debts of other receivables	586,465.27	585,716.02
Total	<u>6,729,957,547.65</u>	<u>6,212,600,336.97</u>

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(3). *Provision for bad debt*

Applicable Not applicable

Unit: Yuan Currency: RMB

Provision for bad debt	Stage 1	Stage 2	Stage 3	Total
	12-month ECL	Lifetime ECL (non-credit impaired)	Lifetime ECL (credit-impaired)	
Amounts due as at 1 January 2022	422,922.69	162,793.33	–	585,716.02
Amounts due for the period as at 1 January 2022	–	–	–	–
– Transferred to stage 2	–	–	–	–
– Transferred to stage 3	–	–	–	–
– Reversed to stage 2	–	–	–	–
– Reversed to stage 1	–	–	–	–
Provision for the period	749.25	–	–	749.25
Reversal for the period	–	–	–	–
Write-off for the period	–	–	–	–
Cancellation for the period	–	–	–	–
Other changes	–	–	–	–
Amounts due as at 30 June 2022	<u>423,671.94</u>	<u>162,793.33</u>	<u>–</u>	<u>586,465.27</u>

The significant changes in gross carrying amount of other receivables for which loss provision has changed in the period are as follows:

Applicable Not applicable

XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(3). *Provision for bad debt* (Continued)

The significant changes in the gross carrying amount of other receivables that affected the changes in loss provisions in the current period are as follows:

Balance of carrying amount	Stage 1	Stage 2	Stage 3	Total
	12-month ECL	Lifetime ECL (non-credit impaired)	Lifetime ECL (credit-impaired)	
Closing balance of last year	6,212,916,115.67	269,937.32	-	6,213,186,052.99
Closing balance of last year for the period	-	-	-	-
- Transferred to stage 2	-	-	-	-
- Transferred to stage 3	-	-	-	-
- Reversed to stage 2	-	-	-	-
- Reversed to stage 1	-	-	-	-
Increase for the period	5,588,742,775.74	-	-	5,588,742,775.74
Derecognized for the period	-5,071,384,815.81	-	-	-5,071,384,815.81
Other changes	-	-	-	-
Closing balance	<u>6,730,274,075.60</u>	<u>269,937.32</u>	<u>-</u>	<u>6,730,544,012.92</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

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30 June 2022
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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(4). *Provision for bad debt*

Applicable Not applicable

Unit: Yuan Currency: RMB

Category	Increase/decrease during the period					Closing balance
	Opening balance	Provision	Recovery or reversal	Write-off or cancellation	Other changes	
Changes in bad debts of other receivables	<u>585,716.02</u>	<u>749.25</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>586,465.27</u>
Total	<u>585,716.02</u>	<u>749.25</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>586,465.27</u>

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

Explanation on the write-off of other receivables:

Applicable Not applicable

XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

2. Other receivables (Continued)

Other receivables (Continued)

(6). *Top five debtors with the largest closing balance of other receivables*

Applicable Not applicable

Unit: Yuan Currency: RMB

Name of entity	Nature of receivable	Closing balance	Aging	Percentage of total closing balance of other receivables (%)	Closing balance of provision for bad debt
Aggregation of the top five borrowers with the largest closing balance of other receivables	-	42,010,500.80	-	0.62	166,424.95
Total	/	<u>42,010,500.80</u>	/	<u>0.62</u>	<u>166,424.95</u>

(7). *Receivables involving government subsidies*

Applicable Not applicable

(8). *Other receivables derecognized due to the transfer of financial assets*

Applicable Not applicable

(9). *Amount of assets or liabilities resulting from transfer of other receivables and continuing involvement*

Applicable Not applicable

Other explanations:

Applicable Not applicable

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

3. Long-term equity 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
Investment in subsidiaries	16,421,066,112.61	-	16,421,066,112.61	16,333,066,112.61	-	16,333,066,112.61
Investments in associates and joint ventures	898,368,092.43	-	898,368,092.43	864,288,516.03	-	864,288,516.03
Total	<u>17,319,434,205.04</u>	<u>-</u>	<u>17,319,434,205.04</u>	<u>17,197,354,628.64</u>	<u>-</u>	<u>17,197,354,628.64</u>

XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

3. Long-term equity investment (Continued)

(1) Investment in subsidiaries

✓ Applicable □ Not applicable

Unit: Yuan Currency: RMB

Investee	Opening balance	Increase during the period	Decrease during the period	Closing balance	Cash dividend declared and distributed during the year	Provision for impairment during the period	Closing balance of provision for impairment
CRSCS	1,635,118,995.36	-	-	1,635,118,995.36	91,692,000.00	-	-
CRSCD	2,183,153,452.31	-	-	2,183,153,452.31	704,280,000.00	-	-
CRSCC	370,790,731.45	-	-	370,790,731.45	68,130,000.00	-	-
Urban Rail Transit	100,000,000.00	-	-	100,000,000.00	35,010,000.00	-	-
CRSC International Holdings	463,000,000.00	-	-	463,000,000.00	6,414,000.00	-	-
Innovation Investment	2,901,431,060.71	-	-	2,901,431,060.71	-	-	-
CRSCE	1,090,447,494.77	-	-	1,090,447,494.77	42,432,000.00	-	-
CRSC Cables	389,223,087.50	-	-	389,223,087.50	26,892,000.00	-	-
CRSC Changsha Railway	1,454,470,000.00	-	-	1,454,470,000.00	1,630,000.00	-	-
CRSC CASCO	731,460,709.51	-	-	731,460,709.51	316,922,200.00	-	-
CRSC Beijing Industry Group	50,000,000.00	-	-	50,000,000.00	-	-	-
CRSC Xi'an Industry Group	2,161,476,363.60	-	-	2,161,476,363.60	303,696,000.00	-	-
Zhengzhou Zhongyuan	325,000,000.00	-	-	325,000,000.00	38,551,500.00	-	-
CRSC Electrification Bureau	-	-	-	-	850,200.00	-	-
CRSC Construction	1,278,913,017.40	-	-	1,278,913,017.40	79,962,000.00	-	-
CRSC International	2,581,200.00	-	-	2,581,200.00	-	-	-
CRSC Tengda	405,000,000.00	-	-	405,000,000.00	18,694,800.00	-	-
CRSC Huatai	522,000,000.00	-	-	522,000,000.00	7,781,400.00	-	-
CRSC Jiangsu Smart	264,000,000.00	88,000,000.00	-	352,000,000.00	6,164,500.00	-	-
Beijing Tendering	5,000,000.00	-	-	5,000,000.00	4,848,000.00	-	-
Total	16,333,066,112.61	88,000,000.00	-	16,421,066,112.61	1,753,950,600.00	-	-

NOTES TO FINANCIAL STATEMENTS

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

3. Long-term equity investment (Continued)

(2) Investments in associates and joint ventures

Applicable Not applicable

Unit: Yuan Currency: RMB

Investee	Increase/decrease during the period										
	Opening balance	Increase in investment	Decrease in investment	Investment gains/losses confirmed under equity method	Other comprehensive income adjustment	Other equity changes	Declared and paid cash dividends or profits	Provision for impairment	Others	Closing balance	Closing provision for impairment
I. Joint venture	-	-	-	-	-	-	-	-	-	-	-
Wenzhou-Hangzhou High-Speed Railway	76,503,772.49	-	-	-	-	-	-	-	-	76,503,772.49	-
Subtotal	76,503,772.49	-	-	-	-	-	-	-	-	76,503,772.49	-
II. Associates	-	-	-	-	-	-	-	-	-	-	-
CRSC Tianshui	206,313,477.06	-	-	23,210,508.78	-	-	-	-	-	229,523,985.83	-
Guangdong Ultrast Financial Leasing	344,091,086.74	-	-	10,869,067.62	-	-	-	-	-	354,960,154.37	-
CSCEC Foshan	12,616,233.38	-	-	-	-	-	-	-	-	12,616,233.38	-
Siping Pipeline	224,763,946.36	-	-	-	-	-	-	-	-	224,763,946.36	-
Subtotal	787,784,743.54	-	-	34,079,576.40	-	-	-	-	-	821,864,319.94	-
Total	864,288,516.03	-	-	34,079,576.40	-	-	-	-	-	898,368,092.43	-

Other explanations:

Applicable Not applicable

NOTES TO FINANCIAL STATEMENTS

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (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	1,602,937,077.38	1,408,622,584.16	3,016,674,043.43	2,819,169,471.98
Other operations	77,932,554.52	16,509,972.13	73,896,116.41	21,137,556.30
Total	1,680,869,631.90	1,425,132,556.29	3,090,570,159.84	2,840,307,028.28

Revenue is presented as follows:

Unit: Yuan Currency: RMB

	Amount for the current period	Amount for the last period
System implementation integration	600,978,385.55	1,136,014,730.94
Design and integration	972,094,661.61	1,837,755,476.06
Construction contracting	29,864,030.22	43,132,568.59
Others	77,932,554.52	73,667,384.25
Total	1,680,869,631.90	3,090,570,159.84

Cost of sales is listed as follows:

Unit: Yuan Currency: RMB

	Amount for the current period	Amount for the last period
System implementation integration	530,665,710.57	1,068,163,198.44
Design and integration	850,348,579.83	1,711,644,526.34
Construction contracting	27,608,293.76	39,601,915.05
Others	16,509,972.13	20,897,388.45
Total	1,425,132,556.29	2,840,307,028.28

NOTES TO FINANCIAL STATEMENTS

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XVII. NOTES TO MAIN FINANCIAL STATEMENT ITEMS OF THE PARENT COMPANY (Continued)

4. Revenue and costs of sales (Continued)

(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

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	1,737,439,667.36	1,466,194,090.00
Income from long-term equity investments under the equity method	34,079,576.40	9,927,843.51
Investment income from capital borrowings (note)	112,762,803.89	122,635,564.94
Total	<u>1,884,282,047.65</u>	<u>1,598,757,498.45</u>

Other explanations:

Note: The investment income from borrowings is the interest charged by the Company for providing capital for subsidiaries.

6. Others

Applicable Not applicable

XVIII. SUPPLEMENTARY INFORMATION

1. Breakdown of current non-recurring profit or loss

Applicable Not applicable

Unit: Yuan Currency: RMB

Item	Amount	Note
Gains or loss from disposal of non-current assets	26,780,716.67	
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)	38,086,062.14	
Gain or loss on debt restructuring	11,320,931.24	
Reversal of the impairment provision for receivables and contract assets which are tested individually for impairment	-	
Other non-operating income and expenses apart from the aforesaid items	6,971,852.69	
Sub-total	83,159,562.74	
Less: effect of income tax	15,798,209.50	
Effect of minority interest (after tax)	<u>14,591,542.49</u>	
Total	<u>52,769,810.75</u>	

Reasons shall be given for non-recurring profit or loss items defined by the Company according to definitions under the Explanatory Announcement No.1 on Information Disclosure by Companies Offering Securities to the Public – Non-recurring Profits or Losses and for non-recurring profit or loss items listed in the Explanatory Announcement No.1 on Information Disclosure by Companies Offering Securities to the Public – Non-recurring Profits or Losses but defined by the Company as recurring profit or loss.

Applicable Not applicable

NOTES TO FINANCIAL STATEMENTS

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XVIII.SUPPLEMENTARY INFORMATION (Continued)

2. Return on net assets and earnings per share

Applicable Not applicable

	Weighted average return on net assets (%)	Earnings per share	
		Basic earnings per share	Diluted earnings per share
Profit for Reporting Period			
Net profits attributable to ordinary shareholders of the Company	4.25	0.18	0.18
Net profits attributable to ordinary shareholders of the Company after deducting non-recurring gains and losses	4.13	0.18	0.18

Earnings per share

	For the six months ended 30 June 2022 RMB/share	For the six months ended 30 June 2021 RMB/share
Basic earnings per share		
Continuous operation	0.18	0.16
Diluted earnings per share		
Continuous operation	0.18	0.16

The basic earnings per share is calculated by dividing the current net profit attributable to the ordinary shareholders of the Company by the weighted average number of outstanding ordinary shares.

The numerator of diluted earnings per share are determined on the basis of the current net profit attributable to the ordinary shareholders of the Company after adjusting the following factors: (1) interest on diluted potential ordinary shares recognized as expenses in the current period; (2) the income or expenses that will be generated during the conversion of diluted potential ordinary shares; and (3) the income tax impact related to the above adjustments.

The denominator of diluted earnings per share is equal to the sum of the following two items: (1) the weighted average of the issued ordinary shares of the parent in the basic earnings per share; and (2) the weighted average number of ordinary shares increased on the assumption that dilutive potential ordinary shares are converted into ordinary shares.

When calculating the weighted average of the number of ordinary shares increased by the conversion of diluted potential ordinary shares into issued ordinary shares, the diluted potential ordinary shares issued in the previous period are assumed to be converted at the beginning of the current period; and diluted potential ordinary shares issued in the current period are assumed to be converted on the issue date.

XVIII. SUPPLEMENTARY INFORMATION (Continued)

2. Return on net assets and earnings per share (Continued)

The basic earnings per share and diluted earnings per share are calculated as follows:

Unit: Yuan Currency: RMB

	For the six months ended 30 June 2022	For the six months ended 30 June 2021
Income	—	—
Current net profits attributable to the ordinary shareholders of the Company	—	—
Continuous operation	1,934,084,073.92	1,840,504,747.38
Less: dividend distribution with respect to other equity instruments in the period	—	94,842,222.22
Current net profits attributable to ordinary shareholders of the Company after adjustment	1,934,084,073.92	1,745,662,525.16
Attributable to:		
Continuous operation	1,934,084,073.92	1,745,662,525.16
Weighted average number of ordinary shares issued by the Company	10,589,819,000.00	10,589,819,000.00
Basic earnings per share (RMB/share)	0.18	0.16

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: 29 August 2022

Information on amendment

Applicable Not applicable

Attachment: Breakdown of guarantees provided by the Company and its subsidiaries to its subsidiaries

Guarantor	Relationship between the listed company and guarantor	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Beijing Railway Signal Co., Ltd.	Wholly-owned subsidiary	10,000,000.00	16 April 2021	16 April 2021	30 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Beijing Modern Communication Engineering Consulting Co., Ltd.	Wholly-owned subsidiary	1,700,100.00	15 January 2021	15 January 2021	31 December 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Beijing Modern Communication Engineering Consulting Co., Ltd.	Wholly-owned subsidiary	138,675.00	21 April 2021	21 April 2021	28 April 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Beijing Modern Communication Engineering Consulting Co., Ltd.	Wholly-owned subsidiary	800,000.00	3 September 2018	3 September 2018	30 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC (Changsha) Rail Transit Control Technology Company Limited	Wholly-owned subsidiary	18,676,122.28	2 June 2021	2 June 2021	14 June 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC International Holdings Company Limited (通號國際控股有限公司)	Wholly-owned subsidiary	600,000,000.00	1 December 2019	1 December 2019	28 February 2025	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC International Holdings Company Limited (通號國際控股有限公司)	Wholly-owned subsidiary	65,190,000.00	17 July 2018	17 July 2018	18 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Urban Rail Transit Technology Co., Ltd. (通號市軌 轨道交通技术有限公司)	Wholly-owned subsidiary	58,066,888.80	22 November 2018	22 November 2018	10 February 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Urban Rail Transit Technology Co., Ltd. (通號市軌 轨道交通技术有限公司)	Wholly-owned subsidiary	136,715,297.10	24 April 2020	24 April 2020	31 December 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	CRSC Urban Rail Transit Technology Co., Ltd. (通號城市軌道交通技術有限公司)	Wholly-owned subsidiary	30,863,325.00	23 April 2020	23 April 2020	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Urban Rail Transit Technology Co., Ltd. (通號城市軌道交通技術有限公司)	Wholly-owned subsidiary	45,394.78	30 November 2020	30 November 2020	12 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Urban Rail Transit Technology Co., Ltd. (通號城市軌道交通技術有限公司)	Wholly-owned subsidiary	8,000,000.00	17 December 2021	17 December 2021	17 January 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	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)	Wholly-owned subsidiary	2,000,000,000.00	8 May 2022	8 May 2022	7 May 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	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)	Wholly-owned subsidiary	700,000,000.00	23 February 2022	23 February 2022	14 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	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)	Wholly-owned subsidiary	150,000,000.00	31 August 2021	31 August 2021	6 January 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Innovation Zhejiang Construction Investment Ltd. (通號浙江建設投資有限公司)	Wholly-owned subsidiary	52,500,000.00	4 March 2021	4 March 2021	30 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Innovation Zhejiang Construction Investment Ltd. (通號浙江建設投資有限公司)	Wholly-owned subsidiary	10,500,000.00	22 June 2021	22 June 2021	25 May 2023	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	CRSC Innovation Zhejiang Construction Investment Ltd. (通號浙江建設投資有限公司)	Wholly-owned subsidiary	450,000,000.00	8 July 2021	8 July 2021	8 July 2026	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Innovation Zhejiang Construction Investment Ltd. (通號浙江建設投資有限公司)	Wholly-owned subsidiary	50,000,000.00	29 June 2021	29 June 2021	28 June 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	50,000,000.00	1 January 2022	1 January 2022	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	15,257,937.90	17 April 2020	17 April 2020	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	223,060.00	14 November 2019	14 November 2019	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	100,000,000.00	1 January 2022	1 January 2022	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	50,000,000.00	25 June 2020	25 June 2020	24 June 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	3,888,769.67	12 December 2019	12 December 2019	31 December 2025	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	100,000,000.00	22 October 2021	22 October 2021	13 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	136,940.00	14 November 2019	14 November 2019	31 December 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	1,999,916.00	15 September 2017	15 September 2017	30 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Company Ltd. (通號通信信息集團有限公司)	Wholly-owned subsidiary	44,960.00	13 February 2018	13 February 2018	31 January 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Shanghai Company Ltd.	Wholly-owned subsidiary	878,594.96	2 March 2020	2 March 2020	30 September 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Shanghai Company Ltd.	Wholly-owned subsidiary	1,444,500.00	25 July 2019	25 July 2019	1 October 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Shanghai Company Ltd.	Wholly-owned subsidiary	722,250.00	25 July 2019	25 July 2019	1 October 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Shanghai Company Ltd.	Wholly-owned subsidiary	337,500.00	25 July 2019	25 July 2019	1 October 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Shanghai Company Ltd.	Wholly-owned subsidiary	792,540.00	21 May 2019	21 May 2019	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Shanghai Company Ltd.	Wholly-owned subsidiary	823,500.00	23 October 2017	23 October 2017	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Communication & Information Group Shanghai Company Ltd.	Wholly-owned subsidiary	268,200.00	25 May 2018	25 May 2018	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Cables Company Ltd. (通號電纜集團有限公司)	Wholly-owned subsidiary	150,000.00	31 March 2021	31 March 2021	31 March 2022	Guarantee with joint liabilities	Yes	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	CRSC Cables Company Ltd. (通號電線集團有限公司)	Wholly-owned subsidiary	10 January 2020	10 January 2020	31 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CRSC Cables Company Ltd. (通號電線集團有限公司)	Wholly-owned subsidiary	15 April 2022	15 April 2022	1 April 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	6 December 2019	6 December 2019	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	24 September 2020	24 September 2020	24 March 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	9 November 2020	9 November 2020	9 November 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	11 January 2021	11 January 2021	11 January 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	5 February 2021	5 February 2021	5 February 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	14 April 2021	14 April 2021	14 April 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	15 May 2021	15 May 2021	15 May 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	13 July 2021	13 July 2021	13 July 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	3,624,241.45	13 July 2021	13 July 2021	13 July 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	2,784,289.28	23 September 2021	23 September 2021	23 September 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	4,712,989.00	24 September 2021	24 September 2021	31 March 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	818,072.90	11 October 2021	11 October 2021	11 October 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	496,170.85	14 October 2021	14 October 2021	14 October 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	529,482.12	14 October 2021	14 October 2021	14 October 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	2,395,823.00	22 October 2021	22 October 2021	22 October 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	8,799,791.27	19 October 2021	19 October 2021	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	4,675,760.00	24 September 2021	24 September 2021	30 October 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	120,000.00	7 January 2022	7 January 2022	7 May 2022	Guarantee with joint liabilities	Yes	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	80,000.00	7 January 2022	7 January 2022	7 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	10,000.00	11 January 2022	11 January 2022	11 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	50,000.00	11 January 2022	11 January 2022	11 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	220,000.00	11 January 2022	11 January 2022	11 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	80,000.00	12 January 2022	12 January 2022	12 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	20,000.00	20 January 2022	20 January 2022	20 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	15,000.00	20 January 2022	20 January 2022	20 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	100,000.00	20 January 2022	20 January 2022	20 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	170,000.00	19 January 2022	19 January 2022	19 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	785,726.26	5 January 2022	5 January 2022	5 January 2027	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	60,000.00	10 February 2022	10 February 2022	10 June 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	120,000.00	11 February 2022	11 February 2022	11 June 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Jiaozuo Railway Cable Co., Ltd.	Wholly-owned subsidiary	50,000,000.00	30 December 2021	30 December 2021	30 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	239,000.01	8 March 2021	8 March 2021	26 February 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	825,242.20	25 October 2021	25 October 2021	23 October 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	10,175,998.82	26 October 2021	26 October 2021	26 October 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	282,800.00	16 November 2021	16 November 2021	11 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	165,000.00	14 December 2021	14 December 2021	17 October 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	4,632,319.67	25 January 2022	25 January 2022	5 January 2025	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	127,628.87	25 January 2022	25 January 2022	5 January 2025	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	182,948.36	25 February 2022	25 February 2022	4 January 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	157,000.01	1 March 2022	1 March 2022	17 February 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	20,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	110,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	30,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	50,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	800,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	800,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	130,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	30,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	40,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	100,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	40,000.00	22 March 2022	22 March 2022	22 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	500,000.00	28 March 2022	28 March 2022	31 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	600,000.00	28 March 2022	28 March 2022	31 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	320,000.00	31 March 2022	31 March 2022	12 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	800,000.00	31 March 2022	31 March 2022	12 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	200,000.00	31 March 2022	31 March 2022	12 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	800,000.00	31 March 2022	31 March 2022	12 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	40,000.00	15 April 2022	15 April 2022	26 August 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	12,000.00	15 April 2022	15 April 2022	26 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	100,000.00	15 April 2022	15 April 2022	26 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	150,000.00	15 April 2022	15 April 2022	26 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	1,689,157.98	15 April 2022	15 April 2022	22 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	566,052.66	25 April 2022	25 April 2022	22 March 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	300,000.00	30 April 2022	30 April 2022	17 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	800,000.00	30 April 2022	30 April 2022	17 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	86,100.00	30 April 2022	30 April 2022	25 April 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	1,680,909.60	30 April 2022	30 April 2022	27 April 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	555,155.76	15 June 2022	15 June 2022	18 September 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Transhui Railway Cable Co., Ltd.	Wholly-owned subsidiary	317,830.85	15 June 2022	15 June 2022	18 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Transhui Railway Cable Co., Ltd.	Wholly-owned subsidiary	50,000.00	15 June 2022	15 June 2022	30 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Transhui Railway Cable Co., Ltd.	Wholly-owned subsidiary	800,000.00	15 June 2022	15 June 2022	30 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	37,400.00	1 April 2020	1 April 2020	16 January 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	889,262.31	8 March 2021	8 March 2021	31 January 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	3,000,000.00	20 March 2020	20 March 2020	6 March 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	230,998.37	7 April 2021	7 April 2021	21 March 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	43,094.82	7 April 2021	7 April 2021	22 March 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	60,021.35	7 April 2021	7 April 2021	10 April 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	34,513.56	1 July 2020	1 July 2020	26 June 2022	Guarantee with joint liabilities	Yes	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	158,133.76	20 August 2020	20 August 2020	31 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	288,100.00	20 January 2021	20 January 2021	1 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	44,886.00	8 March 2021	8 March 2021	30 June 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	9,985.40	8 March 2021	8 March 2021	30 June 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	68,967.00	19 July 2021	19 July 2021	17 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	385,359.90	28 July 2021	28 July 2021	10 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	12,317.00	10 August 2021	10 August 2021	26 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	65,989.74	10 August 2021	10 August 2021	26 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	1,040,001.00	9 August 2021	9 August 2021	20 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	766,537.00	9 August 2021	9 August 2021	20 July 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	6,130.40	17 August 2021	17 August 2021	15 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	1,607.78	17 August 2021	17 August 2021	15 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	477,416.07	19 October 2021	19 October 2021	30 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	15,151.94	19 October 2021	19 October 2021	30 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	13,400.00	4 November 2021	4 November 2021	30 November 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	46,500.00	4 November 2021	4 November 2021	30 November 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	178,400.00	18 November 2021	18 November 2021	28 October 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	359,347.40	26 November 2021	26 November 2021	1 November 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	336,071.63	10 December 2021	10 December 2021	29 November 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	54,299.55	28 December 2021	28 December 2021	12 December 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount of guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	806,079.80	7 March 2022	7 March 2022	16 February 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	73,735.55	24 March 2022	24 March 2022	15 March 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	2,086,682.60	24 March 2022	24 March 2022	15 March 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	78,191.71	24 March 2022	24 March 2022	15 March 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	37,742.55	29 March 2022	29 March 2022	20 March 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	143,060.50	29 March 2022	29 March 2022	20 March 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	37,742.55	29 March 2022	29 March 2022	20 March 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	143,060.50	29 March 2022	29 March 2022	20 March 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	86,209.06	11 April 2022	11 April 2022	31 March 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	33,600.00	11 April 2022	11 April 2022	31 December 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between the listed company and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	979,965.40	13 April 2022	13 April 2022	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	17,493.25	13 April 2022	13 April 2022	25 March 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	71,367.00	13 April 2022	13 April 2022	31 May 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	58,238.80	16 June 2022	16 June 2022	24 June 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Xi'an Railway Signal Co., Ltd.	Wholly-owned subsidiary	50,000,000.00	30 September 2020	30 September 2020	30 September 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	354,335.62	15 January 2020	15 January 2020	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	208,000.00	27 April 2020	27 April 2020	30 March 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	80,000.00	27 April 2020	27 April 2020	30 March 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	62,320.00	27 April 2020	27 April 2020	15 February 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	38,249.00	15 May 2020	15 May 2020	31 January 2022	Guarantee with joint liabilities	Yes	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	45,942.00	29 May 2020	29 May 2020	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	594,000.00	30 June 2020	30 June 2020	30 June 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	189,642.20	15 July 2020	15 July 2020	30 June 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	489,862.40	29 July 2020	29 July 2020	7 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	173,440.08	18 August 2020	18 August 2020	29 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	158,000.00	27 October 2020	27 October 2020	30 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	187,245.00	2 November 2020	2 November 2020	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	59,325.00	24 November 2020	24 November 2020	30 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	45,878.00	24 November 2020	24 November 2020	30 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	328,000.00	30 December 2020	30 December 2020	31 December 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between the listed company and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	412,210.00	16 March 2021	16 March 2021	30 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	457,637.66	28 June 2021	28 June 2021	30 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	54,990.00	28 June 2021	28 June 2021	30 June 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	10,000.00	8 July 2021	8 July 2021	30 May 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	2,325.00	13 July 2021	13 July 2021	30 June 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	219,419.40	14 September 2021	14 September 2021	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	65,970.00	14 September 2021	14 September 2021	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	24,800.00	14 September 2021	14 September 2021	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	9,323.56	27 September 2021	27 September 2021	1 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	12,000.00	22 October 2021	22 October 2021	27 April 2022	Guarantee with joint liabilities	Yes	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	2,500.00	22 October 2021	22 October 2021	27 April 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	32,000.00	26 October 2021	26 October 2021	30 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	1,552.00	26 October 2021	26 October 2021	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	745,882.80	26 October 2021	26 October 2021	30 December 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	29,342.50	2 November 2021	2 November 2021	30 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	12,000.00	2 November 2021	2 November 2021	31 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	12,000.00	2 November 2021	2 November 2021	31 May 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	12,000.00	23 November 2021	23 November 2021	2 June 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	12,000.00	23 November 2021	23 November 2021	2 June 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	395,213.32	23 November 2021	23 November 2021	30 December 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between the listed company and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	12,000.00	26 November 2021	26 November 2021	15 June 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	12,000.00	26 November 2021	26 November 2021	15 June 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	6,800.00	26 November 2021	26 November 2021	30 June 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	31,160.00	30 November 2021	30 November 2021	15 February 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	38,002.90	10 December 2021	10 December 2021	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	15,980.00	17 December 2021	17 December 2021	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	102,599.98	22 December 2021	22 December 2021	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	5,846.60	5 January 2022	5 January 2022	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	534,692.49	5 January 2022	5 January 2022	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	6,800.00	14 January 2022	14 January 2022	30 July 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	66,800.00	14 January 2022	14 January 2022	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	140,000.00	19 January 2022	19 January 2022	30 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	44,500.00	19 January 2022	19 January 2022	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	38,736.00	18 February 2022	18 February 2022	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	286,264.00	18 February 2022	18 February 2022	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	20,203.56	1 March 2022	1 March 2022	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	1,505,402.10	1 March 2022	1 March 2022	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	41,000.00	1 April 2022	1 April 2022	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	587,013.30	1 April 2022	1 April 2022	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	15,929.21	7 May 2022	7 May 2022	30 August 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	21,692.28	7 May 2022	7 May 2022	31 December 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Tianjin Railway Signal Co., Ltd.	Wholly-owned subsidiary	50,000,000.00	15 August 2019	15 August 2019	15 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Chengdu Railway Communication Equipment Co., Ltd.	Wholly-owned subsidiary	198,538.00	7 November 2019	7 November 2019	1 February 2022	Guarantee with joint liabilities	Yes	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Chengdu Railway Communication Equipment Co., Ltd.	Wholly-owned subsidiary	344,981.25	6 July 2021	6 July 2021	6 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Chengdu Railway Communication Equipment Co., Ltd.	Wholly-owned subsidiary	603,168.75	6 July 2021	6 July 2021	6 July 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	Chengdu Railway Communication Equipment Co., Ltd.	Wholly-owned subsidiary	109,256.00	28 September 2021	28 September 2021	16 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	155,385,619.00	5 June 2020	5 June 2020	15 June 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	3,645,706.00	27 September 2020	27 September 2020	31 December 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	2,859,515.07	20 October 2020	20 October 2020	14 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	800,000.00	28 April 2021	28 April 2021	31 July 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	21,000,000.00	20 May 2021	20 May 2021	30 June 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	910,000.00	16 July 2021	16 July 2021	19 November 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	800,000.00	6 August 2021	6 August 2021	31 July 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	3,427,150.00	28 October 2021	28 October 2021	30 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	1,035,055.00	28 October 2021	28 October 2021	30 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	800,000.00	22 November 2021	22 November 2021	19 October 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	800,000.00	22 November 2021	22 November 2021	19 October 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	800,000.00	30 November 2021	30 November 2021	30 September 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	800,000.00	30 November 2021	30 November 2021	22 August 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	1,577,057.80	29 November 2021	29 November 2021	22 September 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	1,737,244.81	29 November 2021	29 November 2021	2 October 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	123,499,336.02	24 July 2021	24 July 2021	9 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Construction Engineering Co., Ltd.	Wholly-owned subsidiary	68,605,346.34	11 January 2022	11 January 2022	31 December 2024	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Information Technology Co., Ltd.	Wholly-owned subsidiary	1,127,220.42	15 October 2019	15 October 2019	30 June 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Bureau Group Information Technology Co., Ltd.	Wholly-owned subsidiary	1,099,000.00	22 December 2016	22 December 2016	31 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Group Ltd.	Wholly-owned subsidiary	180,000,000.00	13 August 2021	13 August 2021	6 January 2023	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Group Electromechanical Technology Co., Ltd. (通號工程局集團電氣技術有限公司)	Wholly-owned subsidiary	726,305.50	29 April 2020	29 April 2020	15 November 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Group Electromechanical Technology Co., Ltd. (通號工程局集團電氣技術有限公司)	Wholly-owned subsidiary	161,117.80	10 June 2020	10 June 2020	10 December 2022	Guarantee with joint liabilities	No	No	0	No
China Railway Signal & Communication Corporation Limited	head office	CFSC Engineering Group Electromechanical Technology Co., Ltd. (通號工程局集團電氣技術有限公司)	Wholly-owned subsidiary	296,800.00	13 July 2020	13 July 2020	12 July 2024	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
CRSC First Construction Co., Ltd. (中铁建设集团第一工程有限公司)	Wholly-owned subsidiary	Ybin Tongtao Hongshun Project Management Co., Ltd. (因曼建设天津泰日管理有限责任公司)	Wholly-owned subsidiary	30 May 2018	30 May 2018	30 May 2030	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	30 November 2020	30 November 2020	30 July 2023	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	2 April 2019	2 April 2019	31 March 2023	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	14 August 2018	14 August 2018	31 March 2023	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	29 December 2018	29 December 2018	30 July 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	29 January 2019	29 January 2019	24 July 2024	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	19 April 2019	19 April 2019	27 June 2023	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	14 January 2020	14 January 2020	30 December 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	23 June 2020	23 June 2020	30 April 2025	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	23 June 2020	23 June 2020	30 April 2025	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	29 July 2020	29 July 2020	30 January 2026	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	10 November 2020	10 November 2020	29 June 2024	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	5 January 2021	5 January 2021	30 September 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	29 July 2020	29 July 2020	30 January 2026	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	29 April 2021	29 April 2021	30 August 2025	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	19 October 2021	19 October 2021	31 March 2024	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	14 January 2022	14 January 2022	30 June 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	11 April 2022	11 April 2022	19 November 2028	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	8 June 2022	8 June 2022	30 December 2025	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	5 June 2014	5 June 2014	30 June 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	27 September 2020	27 September 2020	31 March 2022	Guarantee with joint liabilities	Yes	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	27 September 2020	27 September 2020	31 March 2022	Guarantee with joint liabilities	Yes	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	28 January 2019	28 January 2019	31 January 2022	Guarantee with joint liabilities	Yes	No	0	No
CRSC Research & Design Institute Group Co., Ltd.	Wholly-owned subsidiary	Beijing Xiandai Signal & Communication Engineering Consultant Ltd.	Wholly-owned subsidiary	16 September 2020	16 September 2020	5 May 2022	Guarantee with joint liabilities	Yes	No	0	No
CRSC Communication & Information Group Company Ltd. (建通信息集团股份有限公司)	Wholly-owned subsidiary	CRSC Communication & Information Group Shanghai Company Ltd.	Wholly-owned subsidiary	22 December 2021	22 December 2021	21 December 2024	Guarantee with joint liabilities	No	No	0	No
Zhengzhou Zhongyuan Railway Engineering Co., Ltd. (郑州中原铁路工程有限责任公司)	Holding subsidiary	Zhengzhou Railway Engineering Company Ltd. (郑州铁路工程有限责任公司)	Wholly-owned subsidiary	14 October 2021	14 October 2021	25 September 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (建通电缆有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	25 April 2021	25 April 2021	30 March 2024	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (建通电缆有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	28 April 2021	28 April 2021	1 February 2023	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (建通电缆有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	17 March 2022	17 March 2022	17 July 2022	Guarantee with joint liabilities	No	No	0	No

Guarantor	Relationship between guarantor and the listed company	Secured party	Relationship between secured party and the listed company	Amount guaranteed	Date of guarantee (Date of agreement signed)	Starting date of guarantee	Ending date of guarantee	Type of guarantee	Whether the guarantee has been duly performed or not	Whether the guarantee is past due or not	Amount guaranteed past due	Whether counter-guarantee existed or not
CRSC Cables Company Ltd. (遠訊電纜集團有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	145,051.78	18 March 2022	18 March 2022	4 January 2023	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (遠訊電纜集團有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	650,000.00	25 May 2022	25 May 2022	30 September 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (遠訊電纜集團有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	110,000.00	25 May 2022	25 May 2022	30 September 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (遠訊電纜集團有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	20,000.00	25 May 2022	25 May 2022	30 September 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (遠訊電纜集團有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	160,000.00	14 June 2022	14 June 2022	14 October 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (遠訊電纜集團有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	45,000.00	16 June 2022	16 June 2022	21 October 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (遠訊電纜集團有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	360,000.00	25 June 2022	25 June 2022	29 October 2022	Guarantee with joint liabilities	No	No	0	No
CRSC Cables Company Ltd. (遠訊電纜集團有限公司)	Wholly-owned subsidiary	Tianshui Railway Cable Co., Ltd.	Wholly-owned subsidiary	200,000.00	25 June 2022	25 June 2022	30 December 2022	Guarantee with joint liabilities	No	No	0	No

Total guarantee to subsidiaries incurred during the Reporting Period 2,953,409,734.36

Total balance of guarantee to subsidiaries as at the end of the Reporting Period (B) 5,810,741,932.49

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*China Railway Signal & Communication Corporation Limited**
中國鐵路通信信號股份有限公司