



# 中國中鐵股份有限公司 CHINA RAILWAY GROUP LIMITED

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

Stock Code : 390

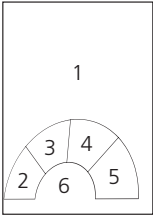
2022

ANNUAL  
REPORT

15 YEARS LISTED ANNIVERSARY







**Cover Legend**

1. Dongchuan Yeniu Wind Farm Phase I 48MW Project
2. Mudanjiang-Jiamusi Passenger Dedicated Line
3. Beijing-Shanghai High-speed Railway
4. Kongzhai Reservoir, Qiandongnanzhou, Guizhou
5. Jingdong Interchange Bridge, Sanming City, Fujian Province
6. Long and Deep Span Super Bridge, Beijing-Shenyang Passenger Dedicated Line

Agute Bridge, Yuxi-Chuxiong Expressway, Yunnan



No.4 Beam Field,  
Jakarta-Bandung  
High-Speed Railway



Yibin-Yiliang Expressway



Xiaolangdi South  
Bank Irrigation Area

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Lancang River Bridge,  
Dali-Ruili Railway



Xixiang-Zhenba Expressway



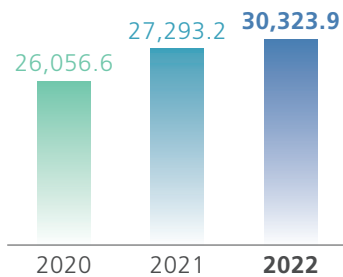
Zaizhang Reservoir

# SNAPSHOT OF ANNUAL REPORT



## New contracts

(RMB100 million)



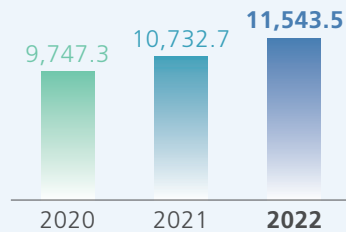
Year-on-year increase

**11.1%** ↑



## Total revenue

(RMB100 million)



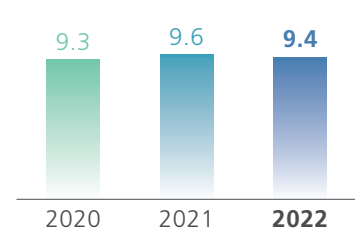
Year-on-year increase

**7.6%** ↑



## Gross profit margin

%



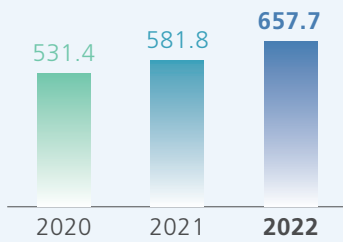
Year-on-year decrease  
percentage point ↓

**0.2**



## EBITDA

(RMB100 million)



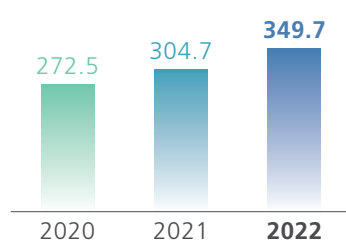
Year-on-year increase

**13.0%** ↑



## Net profit

(RMB100 million)



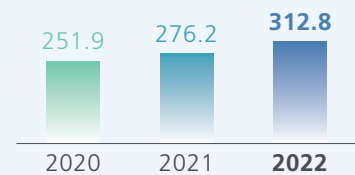
Year-on-year increase

**14.8%** ↑



## Profit attributable to owners of the company

(RMB100 million)



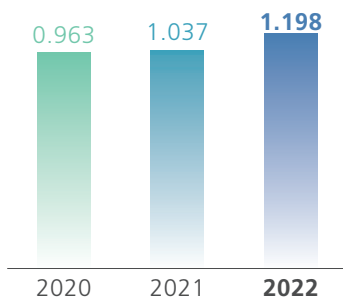
Year-on-year increase

**13.2%** ↑



## Basic earnings per share

(RMB/share)



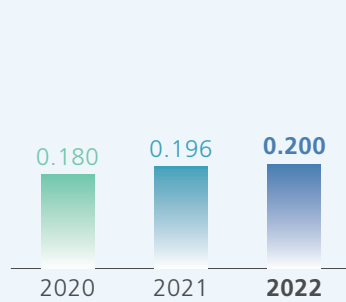
Year-on-year increase

**15.5%** ↑



## Dividend per share (tax inclusive)

RMB



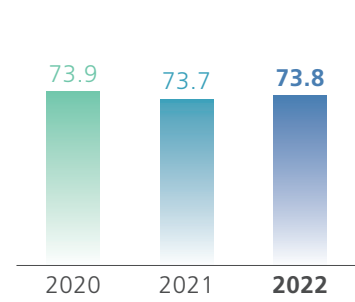
Year-on-year increase

**2.0%** ↑



## Gearing ratio

%



Increase by **0.1** percent  
point ↑ from the beginning of  
the year



## COMPANY PROFILE

The Company was established as a joint stock company with limited liability in the People's Republic of China (the "PRC") under the Company Law of the PRC on 12 September 2007. The A shares and H shares issued by the Company were listed on the Shanghai Stock Exchange and the main board of The Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange") on 3 December 2007 and 7 December 2007 respectively.

We are one of the largest multi-functional integrated construction group in the PRC and Asia in terms of the total revenue of the engineering contract, and rank 34th on the 2022 Fortune Global 500 list. We offer a full range of construction-related services, including infrastructure construction, survey, design and consulting services and engineering equipment and component manufacturing, and also expand to property development and other businesses such as mining.

We have outstanding advantages in the construction of infrastructure facilities such as railways, highways, municipal works and urban rails. In particular, we hold leading positions in the design and construction of bridges, tunnels and electrified railways, and the design and manufacturing of bridge steel structures and turnouts in the PRC, which has achieved advanced international standards. While we operate in every province across the PRC, we have also explored extensive global markets.

Adhering to the motto of "strive to challenge limits and achieve excellence", the Company is committed to continuous development of the Company to create a brighter and better future.



# FINANCIAL SUMMARY

## Summary of consolidated income statement

	For the year ended 31 December					Change
	2022	2021	2020	2019	2018	2022 vs 2021
	<i>RMB million</i>					<i>(%)</i>
<b>Revenue</b>						
Infrastructure Construction	<b>1,019,730</b>	953,038	876,310	762,084	646,914	7.0
Survey, Design and Consulting Services	<b>19,795</b>	18,607	17,321	17,031	15,095	6.4
Engineering Equipment and Component Manufacturing	<b>38,863</b>	33,176	29,793	24,322	20,787	17.1
Property Development	<b>54,082</b>	51,300	49,763	43,662	43,991	5.4
Other Businesses	<b>111,538</b>	101,942	74,183	70,402	67,730	9.4
Inter-segment Eliminations and Adjustments	<b>(89,659)</b>	(84,791)	(72,638)	(66,658)	(54,134)	
<b>Total</b>	<b>1,154,349</b>	1,073,272	974,732	850,843	740,383	7.6
<b>Gross Profit</b>	<b>108,890</b>	103,386	90,189	79,864	71,658	5.3
<b>Profit before Tax</b>	<b>44,692</b>	39,636	35,612	33,187	24,945	12.8
<b>Profit for the Year</b>	<b>34,972</b>	30,470	27,250	25,379	17,436	14.8
<b>Profit for the Year attributable to Owners of the Company</b>	<b>31,276</b>	27,618	25,188	23,678	17,198	13.2
<b>Basic and Diluted Earnings per Share (RMB)</b>	<b>1.198</b>	1.037	0.963	0.950	0.718	15.5

## FINANCIAL SUMMARY

## Summary of Consolidated Balance Sheet

	2022	As at 31 December				Change
		2021	2020	2019	2018	2022 vs 2021 (%)
		<i>RMB million</i>				
<b>Assets</b>						
Current Assets	<b>898,778</b>	801,012	742,107	709,770	652,040	12.2
Non-current Assets	<b>714,241</b>	560,568	457,870	346,271	290,473	27.4
<b>Total Assets</b>	<b>1,613,019</b>	1,361,580	1,199,977	1,056,041	942,513	18.5
<b>Liabilities</b>						
Current Liabilities	<b>873,375</b>	787,860	705,145	676,034	622,475	10.9
Non-current Liabilities	<b>316,734</b>	215,526	181,786	134,679	98,057	47.0
<b>Total Liabilities</b>	<b>1,190,109</b>	1,003,386	886,931	810,713	720,532	18.6
<b>Total Equity</b>	<b>422,910</b>	358,194	313,046	245,328	221,981	18.1
<b>Total Equity and Liabilities</b>	<b>1,613,019</b>	1,361,580	1,199,977	1,056,041	942,513	18.5

# CHAIRMAN'S REPORT



## CHEN Yun

Chairman, Executive Director and Secretary to the CPC Committee



Starlight guides those on the right journey, and it is the dedication and determination that inspires people the most. In 2022, China Railway, under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, earnestly studied and implemented the spirit of the Party's 20th National Congress. With the goal of building China Railway into a world-class enterprise, we balanced the qualitative and quantitative growth, pursued development while ensuring safety, seized opportunities, reformed and innovated, worked hard and overcame difficulties. Consequently, new achievements were made in promoting high-quality corporate development, with all economic indicators reaching new historical highs and contributing to the drive and strength of China Railway for the Chinese path to modernization.

**Over the past year, China Railway strived for great success.** Keeping in mind the "two big pictures", we continued to consolidate the advantages of our core business. The total amount of new contracts signed in the year reached RMB3 trillion for the first time. The market share in the railway sector ranked first in China, the market share in urban rail, road, long-span bridges, long tunnels and electrification ranked high, and the market share in full-section shield ranked first in China for 11 consecutive years and first in the world for six years. We made outstanding achievements in overseas market development, the business areas in the "second curve", such as water conservancy and hydropower, clean energy, ecological protection, urban operations, and airport and runway, accelerated momentum building, with efficient advancement in construction and production, and steady economic returns. General Secretary Xi Jinping inspected the Erqi Factory Training Base for the ice and snow sports, a key project of the Beijing Winter Olympics designed by China Railway, and personally observed the test run of the Jakarta-Bandung High Speed Railway during the G20 Summit, demonstrating the power of "Constructed by China" to the world. We deeply advanced stability on the six fronts and security in the six areas to help keep the overall



## CHAIRMAN'S REPORT



The PPP Project of the Construction of Water Purification Facilities and Wetland Park in Changdi Road of Haikou City

economic performance stable, relocated multiple subordinate companies to Xiong'an New Area in the first relocation by an industrial cluster of the centrally state-owned enterprise, hired more than 21,000 fresh college graduates, participated in pandemic prevention and control, and earthquake and flood relief, which shows both our loyalty and courage. Bearing in mind the country's most fundamental interests, we made every effort to secure a decisive victory in the three-year undertaking to reform state-owned enterprises, with continuously improved governance system, and more mature and established modern corporate governance suitable for state-owned enterprises with Chinese characteristics. We intensified industrial transformation and upgrading, pushed ahead with the reform of the "three systems" by resolutely overcoming challenges, introduced restricted share incentives for key personnel for the first time, and improved the market-based operation mechanism. The Company was rated as A for nine consecutive years in the annual operational performance assessment of state-owned enterprises, and A for five consecutive years in the operating results during the tenure.

**Over the past year, China Railway forged ahead.** We focused on efficiency improvement and value creation, adhered to the principle of "ensuring the successful completion of each project down to every last detail", deployed and implemented the three-year action plan for project management efficiency improvement, built a large business management system and indicator assessment system with "cash flow, net profit, operating income" as the focus. We acted to increase income and reduce expenditure, solidly performed "double collections", "pressure reduction" and "loss management", continuously strengthened rigid budget management, reduced the scale of sustainable debts in an orderly manner, and effectively controlled the scale of financing and guarantee. We strengthened risk prevention and control and compliance management, deeply promoted the transformation of a qualitatively safe enterprise to "synergy of management and supervision", intensified the application of audit results to promote

## CHAIRMAN'S REPORT

management improvement, advocated the rule of law in China Railway to form a “four-pronged” supervision pattern, and construct a safety barrier for the high-quality development of the Company in all aspects. We actively practiced the “three transformations” to build the core strength of intelligent manufacturing in China, upheld the principle of application-oriented research and collaborative innovation, vigorously carried out cutting-edge original technology research, and accelerated practical and pursuant technology research. We set up a professional R&D center for intelligent construction and “double carbon”, increased the construction of “First-class Engineering Bureau”, optimized the evaluation standard of “Top 20 Engineering Companies of Grade 3”, clearly established the orientation of “development priority and quality first”, and continuously enhanced the endogenous momentum to promote the high-quality development of the Company. The Company was awarded the title of Excellent Performance Enterprise and Enterprise with Outstanding Contribution to Scientific and Technological Innovation, and selected as a model state-owned enterprise for governance.

**Over the past year, China Railway vigorously leaped forward.** Bearing in mind the instructions of General Secretary Xi Jinping, we strengthened the Party's leadership and construction in all aspects to ensure the high-quality corporate development as guided by high-quality Party building. We successfully completed the test run of the world's first permanent magnet maglev rail transportation project “Red Rail”, the world's first pile-beam integrated bridge erecting machine we developed was included in the “Top Ten Tools with Great Significance Developed by Central State-owned Enterprises”, and we developed China's first motorized hard rock tunnel boring machine (TBM) and the country's first magnetic levitation air track vehicle, amongst others. Zangmu Yarlung Zangbo River Double-track Bridge on the Lalin Section of the Sichuan-Tibet Railway and the V-shaped giant columns of the Huangmugang Transportation Hub won the highest award at the International Bridge Conference and ITA Tunnelling and Underground Space Awards. Thirty-nine projects were selected among “China's Top 100 Buildings in the New Era 2022”. China Railway brand won the “China Brand Festival Award” and was named the “National Business Card of the World”. We moved up to 34th place in the latest Fortune Global 500 list and ranked 2nd among the top 250 global contractors by Engineering News-Record (“ENR”).



## CHAIRMAN'S REPORT

We will continue to strive for the future and reboost with a consolidated effort. The year 2023 is the opening year for the full implementation of the spirit of the 20th Party Congress, and it is also a critical year for the implementation of the 14th Five-year Plan strategy. Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics in the New Era, we will anchor on the primary task of high-quality development, set the development goals of "three increases, two controls and four upgrades" according to the assessment index system of "one profit and five ratios" by the State-owned Assets Supervision and Administration Commission of the State Council in consideration of the situation of China Railway, focus on improving efficiency and value creation, accelerate the construction towards a world-class enterprise, accumulate strength in terms of management, reform, technology, talent and Party building in all aspects, build a modernized industrial system, prevent and resolve major risks, achieve effective improvement in quality and reasonable growth in quantity, continuously improve our core competitiveness, and strengthen our core functions, so as to play a leading role in promoting the overall improvement in economic performance, and contribute the wisdom and power of China Railway to make a positive start to building a modernized socialist country in all aspects.

Here, I would like to express my sincere appreciation to the shareholders who have supported the CREC's reform and all walks of life who have shown care to the Company's development, as well as all the staff who have a shared future with the Company!

**Chen Yun**  
*Chairman*

Beijing, China  
March 30, 2023

# CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

## I. Changes in Share Capital

### 1. Changes in shares capital

#### (1) Changes in shares

Unit: Shares

	Before the change		Increase/decrease in the change (+,-)					After the change	
	Number	Percentage (%)	Issuance of new shares	Bonus shares	Reserve converted to shares	Other	Sub-total	Number	Percentage (%)
I. Shares with selling restrictions	0	0	182,646,400	0	0	-1,379,700	181,266,700	181,266,700	0.73
1. Shares held by the State	0	0	0	0	0	0	0	0	0
2. Shares held by the State-owned legal person	0	0	0	0	0	0	0	0	0
3. Shares held by other domestic shareholders	0	0	182,646,400	0	0	-1,379,700	181,266,700	181,266,700	0.73
Including: Shares held by domestic non-State-owned legal person	0	0	0	0	0	0	0	0	0
Shares held by domestic natural person	0	0	182,646,400	0	0	-1,379,700	181,266,700	181,266,700	0.73
4. Shares held by foreign shareholders	0	0	0	0	0	0	0	0	0
Including: Shares held by foreign legal person	0	0	0	0	0	0	0	0	0
Shares held by foreign natural person	0	0	0	0	0	0	0	0	0
II. Tradable shares without selling restrictions	24,570,929,283	100	0	0	0	0	0	24,570,929,283	99.27
1. RMB-denominated ordinary shares	20,363,539,283	82.88	0	0	0	0	0	20,363,539,283	82.27
2. Domestically-listed foreign shares	0		0	0	0	0	0	0	0
3. Overseas listed foreign shares	4,207,390,000	17.12	0	0	0	0	0	4,207,390,000	17.00
4. Other	0	0	0	0	0	0	0	0	0
III. Total number of shares	24,570,929,283	100	182,646,400	0	0	-1,379,700	181,266,700	24,752,195,983	100



## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

### (2) Explanation on changes in shares

On 23 February 2022, the Company completed the first grant of the 2021 Restricted Share Incentive Scheme (the "Incentive Scheme"), with 170,724,400 restricted shares registered for the first grant, and the total share capital of the Company increased from 24,570,929,283 shares to 24,741,653,683 shares.

On 30 November 2022, the Company completed the grant of the reserved portion of the Incentive Scheme, with 11,922,000 restricted shares in the reserve portion registered for grant, and the total share capital of the Company increased from 24,741,653,683 shares to 24,753,575,683 shares.

On 28 December 2022, as among the participants in the first grant under the Incentive Scheme of the Company, 2 participants were transferred out and did not work as the previous position in the Company due to organisational arrangements, 3 participants were unqualified for the incentive scheme due to incompetence to the position, unqualification in performance appraisal, negligence, violation etc. In accordance with the Incentive Scheme and relevant laws and regulations, the Company repurchased and cancelled the above 5 participants of all the Restricted Shares (1,379,700 Restricted Shares in total) which were granted but not yet unlocked. The total share capital of the Company was reduced from 24,753,575,683 shares to 24,752,195,983 shares.

### (3) Impacts of changes in share on the financial indicators of earnings per share, net assets per share for the most recent year and the most recent period

Unit: Yuan Currency: RMB

Financial indicator	Whole year of 2022		Fourth Quarter of 2022	
	Taking into account the Restricted Shares	Without taking into account the Restricted Shares	Taking into account the Restricted Shares	Without taking into account the Restricted Shares
Earnings per share	1.198	1.204	0.327	0.333
Net assets per share	10.33	10.40	0.34	0.34

Note 1: When calculating earnings per share, the Restricted Shares that have not yet met the unlocking conditions are deducted from the weighted average number of ordinary shares issued by the Company.

Note 2: According to relevant accounting standards, when calculating earnings per share, the net profit attributable to shareholders of a listed company should deduct dividends or interest on preferred shares, perpetual bonds and other equity instruments as well as the impact of Restricted Share.

Note 3: When calculating net assets per share, the net assets attributable to shareholders of listed companies shall deduct the impact of preferred shares, perpetual bonds and other equity instruments.

### (4) Other contents that the Company deems necessary or required by the securities regulatory authority to be disclosed

Not applicable

## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

### 2. Changes in Shares with Selling Restrictions

Unit: Shares

Category of grantees	Number of shares with selling restrictions at the beginning of the year	Number of shares released from selling restrictions during the year	Number of shares with selling restrictions granted during the reporting period	Number of shares with selling restrictions at the end of the year	Date of grant	Price of grant (RMB)	Closing price immediately prior to the date of grant (RMB)	Reasons for selling restrictions	Date of releasing selling restrictions
692 incentive participants (employees) (excluding 5 participants whose restricted shares have been repurchased and cancelled)	0	0	169,344,700	169,344,700	17 January 2022	3.55RMB/share	5.94RMB/share	Restricted Share Incentive Scheme	24 months, 36 months, 48 months
50 incentive participants (employees)	0	0	11,922,000	11,922,000	2 November 2022	3.68RMB/share	5.06RMB/share	Restricted Share Incentive Scheme	24 months, 36 months, 48 months

Shares held by five incentive participants were repurchased and cancelled. The repurchase price of the restricted shares repurchased from 3 participants was RMB3.354 per share. The repurchase price of the restricted shares repurchased from 2 participants was RMB3.354 per share, plus interests calculated according to the benchmark deposit interest rate published by the People's Bank of China for the same period.

Category of grantees	Number of shares with selling restrictions at the beginning of the year	Number of shares released from selling restrictions during the year	Number of shares with selling restrictions granted during the reporting period	Number of shares with selling restrictions repurchased during the year	Date of grant	Price of grant (RMB)	Closing price immediately prior to the date of grant (RMB)	Reasons for selling restrictions	Date of releasing selling restrictions	Date of repurchase for cancellation
5 incentive participants (employees)	0	0	1,379,700	1,379,700	17 January 2022	3.55RMB/share	5.94RMB/share	Restricted Share Incentive Scheme	24 months, 36 months, 48 months	28 December 2022

As at the respective dates of grants of restricted shares, the weighted average closing price immediately before the dates on which the restricted shares were granted during the year ended 31 December 2022 is RMB5.88/share. The total number of granted restricted shares represents 0.88% of the weighted average number of A shares of the Company in issue during the reporting period.



## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

### Details of shares granted to senior management during the reporting period

Unit: share

Name	Title	Number of shares with selling restrictions held at the beginning of the year	Number of shares with selling restrictions granted during the reporting period	Price of grant of shares with selling restrictions (RMB)	Unlocked shares	Locked shares	Number of shares with selling restrictions held at the end of the year	Market price at the end of the reporting period (RMB)
KONG Dun	Vice President, Chief Engineer	0	400,000	3.55 RMB/share	0	400,000	400,000	2,224,000
MA Jiangqian	Vice President	0	400,000	3.55 RMB/share	0	400,000	400,000	2,224,000
LI Xincheng	Vice President	0	400,000	3.55 RMB/share	0	400,000	400,000	2,224,000
HE Wen	Secretary to the Board	0	400,000	3.55 RMB/share	0	400,000	400,000	2,224,000
ZHAO Bin	Chief Economist	0	223,200	3.55 RMB/share	0	223,200	223,200	1,240,992
GENG Shubiao	Assistant to President	0	223,200	3.55 RMB/share	0	223,200	223,200	1,240,992
Total	/	0	2,046,400	/	0	2,046,400	2,046,400	/

## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

### II. Issuance and Listing of Securities

#### 1. Issuance of securities as at the reporting period

Not applicable

#### 2. Changes in respect of the total number of shares and the shareholder structure of the Company and changes in respect of the asset and liability structure of the Company

*Unit: Million; Currency: RMB*

Financial Indicator	Taking into account the restricted shares	Without taking into account the restricted shares
Total Assets	1,613,019	1,612,407
Total Liabilities	1,190,109	1,189,502
Owners' Equity	422,910	422,905
Total Liabilities to Total Assets Ratio (%)	73.78	73.77

#### 3. Existing internal employee shares

Not applicable

### III. Information of Shareholders and Ultimate Controller

#### 1. Number of Shareholders

Total number of shareholders of ordinary shares as at the end of the reporting period	501,128
Total number of shareholders of ordinary shares at the end of the month preceding the date of the annual report	495,843
Total number of shareholders of preference shares with reinstated voting rights as at the end of the reporting period	0
Total number of shareholders of preference shares with reinstated voting rights at the end of the month preceding the date of annual report	0

## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

### 2. Shareholdings of the Top Ten Shareholders and Top Ten Shareholders of Tradable Shares (or Shareholders without Selling Restrictions) as at the End of the Reporting Period

Unit: Shares

#### Shareholdings of the top ten shareholders

No.	Name of shareholder	Increase/ decrease during the reporting report	Total number of shares held at the end of the period	Shareholding percentage (%)	Number of shares with selling restriction	Number of pledged or frozen shares Conditions of shares	Number	Nature of shareholder
1	CREC (Note 1)	24,355,500	11,623,119,890	46.96	0	Nil	0	State-owned legal person
2	HKSCC Nominees Limited (Note 2)	430,292	4,009,592,922	16.20	0	Nil	0	Other
3	China Securities Finance Corporation Limited	0	619,264,325	2.50	0	Nil	0	State-owned legal person
4	Hong Kong Securities Clearing Company Limited	192,878,843	548,029,771	2.21	0	Nil	0	Other
5	China Reform Holdings Corporation Ltd.	0	387,050,131	1.56	0	Nil	0	State-owned legal person
6	Central Huijin Asset Management Ltd.	0	230,435,700	0.93	0	Nil	0	State-owned legal person
7	China Great Wall Asset Management Co., Ltd	-195,388,472	176,804,035	0.71	0	Nil	0	State-owned legal person
8	China Orient Asset Management Co., Ltd.	-51,551,620	171,720,124	0.69	0	Nil	0	State-owned legal person
9	Boshi Fund – Agricultural Bank of China – Boshi China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other
10	Yifangda Fund – Agricultural Bank of China – Yifangda China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other
10	Dacheng Fund – Agricultural Bank of China – Dacheng China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other
10	Jiashi Fund – Agricultural Bank of China – Jiashi China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other



## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

No.	Name of shareholder	Increase/ decrease during the reporting report	Total number of shares held at the end of the period	Shareholding percentage (%)	Number of shares with selling restriction	Number of pledged or frozen shares Conditions of shares	Number	Nature of shareholder
10	Guangfa Fund – Agricultural Bank of China – Guangfa China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other
10	Central European Fund – Agricultural Bank of China – Central European China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other
10	Huaxia Fund – Agricultural Bank of China – Huaxia China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other
10	Yinhua Fund – Agricultural Bank of China – Yinhua China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other
10	Southern Fund – Agricultural Bank of China – Southern China Securities Financial Asset Management Plan	0	131,135,600	0.53	0	Nil	0	Other

Statement on the related relations and concerted actions between the shareholders above

CREC, the largest shareholder, does not have related relations or acting-in-concert relationship with the other above shareholders. The Company is not aware of any related relationships or acting-in-concert relationship among the other above shareholders.

## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

### Shareholdings of the top ten shareholders without selling restrictions

No.	Name of shareholder	Number of shares held without selling restrictions	Type and number of shares	
			Type	Number
1	CREC (Note 1)	11,458,725,890	RMB-denominated ordinary shares	11,458,725,890
		164,394,000	Overseas listed foreign shares	164,394,000
2	HKSCC Nominees Limited (Note 2)	4,009,592,922	Overseas listed foreign shares	4,009,592,922
3	China Securities Finance Corporation Limited	619,264,325	RMB-denominated ordinary shares	619,264,325
4	Hong Kong Securities Clearing Company Limited	548,029,771	RMB-denominated ordinary shares	548,029,771
5	China Reform Holdings Corporation Ltd.	387,050,131	RMB-denominated ordinary shares	387,050,131
6	Central Huijin Asset Management Ltd.	230,435,700	RMB-denominated ordinary shares	230,435,700
7	China Great Wall Asset Management Co., Ltd.	176,804,035	RMB-denominated ordinary shares	176,804,035
8	China Orient Asset Management Co., Ltd.	171,720,124	RMB-denominated ordinary shares	171,720,124
9	Boshi Fund – Agricultural Bank of China – Boshi China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600
10	Yifangda Fund – Agricultural Bank of China – Yifangda China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600
10	Dacheng Fund – Agricultural Bank of China – Dacheng China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600
10	Jiashi Fund – Agricultural Bank of China – Jiashi China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600
10	Guangfa Fund – Agricultural Bank of China – Guangfa China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600
10	Central European Fund – Agricultural Bank of China – Central European China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600

## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

No.	Name of shareholder	Number of shares held without selling restrictions	Type and number of shares	
			Type	Number
10	Huaxia Fund – Agricultural Bank of China – Huaxia China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600
10	Yinhua Fund – Agricultural Bank of China – Yinhua China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600
10	Southern Fund – Agricultural Bank of China – Southern China Securities Financial Asset Management Plan	131,135,600	RMB-denominated ordinary shares	131,135,600
	Statement on the special account for repurchase of the top ten shareholders			Nil
	Statement on entrustment of voting right, voting right by proxy and abstaining from voting of the shareholders above			Nil
	Statement on the related relations and concerted actions between the shareholders above		CREC, the largest shareholder, does not have related relations or acting-in-concert relationship with the other above shareholders. The Company is not aware of any related relationships or acting-in-concert relationship among the other above shareholders.	
	Statement on shareholders of preference shares with reinstated voting rights and the number of shares held			Nil

*Note 1: During the period from 31 March 2022 and 30 September 2022, CREC acquired additional 24,355,500 A shares of the Company through the trading system on Shanghai Stock Exchange. Following the increase in shareholding, CREC held 11,623,119,890 shares of the Company (including 11,458,725,890 A shares and 164,394,000 H shares).*

*Note 2: H shares held by HKSCC Nominees Limited are held on behalf of its various clients, and the number of H shares held by CREC is already deducted.*

*Note 3: A shares held by Hong Kong Securities Clearing Company Limited are held on behalf of its various clients.*

*Note 4: The data shown in the table is based on the register of members of the Company as at 31 December 2022.*



## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

### 3. Shareholdings of top ten shareholders of shares with selling restrictions and terms of selling restrictions

Not applicable

### 4. Strategic Investors or General Legal Persons Becoming the Top Ten Shareholders by Placing New Shares

Not applicable

## IV. Information on Controlling Shareholder and Ultimate Controller

### 1. Details of Controlling Shareholder

#### (1) Legal person

Name of controlling shareholder	China Railway Engineering Group Company Limited
Legal representative	CHEN Yun
Date of establishment	7 March 1990
Principal business	Construction works, related engineering technological research, survey, design, services, manufacturing of specialized equipment and development and operation of real estates.
Details of controlling interests and investments in other domestic and overseas-listed companies during the reporting period	Nil
Other information	Nil

#### (2) Natural person

Not applicable

#### (3) Special explanation that the Company does not have any controlling shareholder

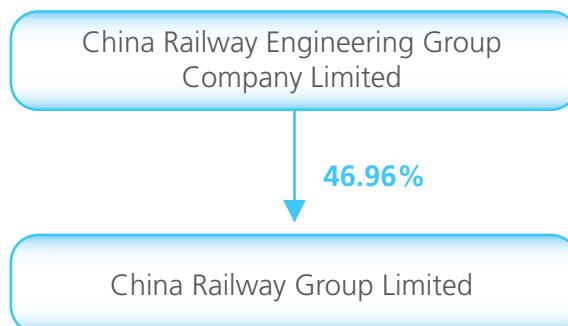
Not applicable

#### (4) Details of changes of the controlling shareholder during the reporting period

Not applicable

## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

- (5) The diagram of the interests and controlling relationships between the Company and the controlling shareholder



### 2. Details of Ultimate Controller

(1) **Legal person**

Ultimate controller of the Company – State-owned Assets Supervision and Administration Commission of the State Council (“**SASAC**”), which is the ministry level institution directly under the State Council, and was set up in accordance with the institutional reform plan of the State Council and the Notice of the State Council on Establishment of Institutions passed at the First Session of the 10th National People’s Congress. The SASAC is authorised by the State Council to perform its duties as an investor on behalf of the State. The scope of supervision of the SASAC extends to the state-owned assets of central government owned enterprises (excluding financial enterprises). Currently, the State-owned Assets Supervision and Administration Commission holds 90% equity interests in CREC and National Social Security Fund holds 10% equity interests in CREC.

(2) **Natural person**

Not applicable

(3) **Special explanation that the Company does not have any controlling shareholder**

Not applicable

(4) **Details of changes of the controlling shareholder during the reporting period**

Not applicable

## CHANGES IN SHARE CAPITAL AND INFORMATION ON SHAREHOLDERS

- (5) The diagram of the interests and controlling relationships between the Company and the ultimate controller



- (6) Ultimate controller control the Company through trust or other asset management methods  
Not applicable

### V. The Company's Controlling Shareholder or the Largest Shareholder and the Party Acting in Concert thereof holding Cumulative Pledged Shares accounting for over 80% of the Company's Shares

Not applicable

### VI. Other Legal Person Shareholders with Shareholding of over 10%

As of the end of the reporting period, except for HKSCC Nominees Limited, the Company has no other legal person shareholders with shareholding over 10%.

### VII. Information on the Restrictions on Reduction of Shareholdings

Not applicable

### VIII. Details of Repurchase of Shares during the Reporting Period

The details are set out in the "Purchase, Sale or Redemption of the Company's Listed Securities" on page 81 of this annual report.



# BUSINESS OVERVIEW

The Group is one of the largest multi-functional integrated construction groups in the world, which enables us to offer a full range of construction and industrial products and related services to our customers. The Group holds an industrial leading position in fields such as engineering construction, design consulting, and equipment manufacturing. The Group also diversifies its business and expands its value-added services by exploiting into other businesses such as featured real estate, financial and merchandise trading, resource utilization, asset operation and construction technology innovation and application. After years of practice and development, the Group's businesses have established a close upstream-downstream relationship among themselves, and have gradually formed a vertically integrated construction industry chain with outstanding principal business supplemented by diversified relevant business horizontally.

## I. Industry Development Overview

### (1) Infrastructure construction business

#### (1) Domestically

In 2022, the CPC Central Committee and the State Council made decisive decisions and plans, and promptly rolled out a package of policies and follow-up measures to stabilize the economy. In particular, efforts were put on infrastructure development, which played a positive role in expanding effective investment, stabilizing the overall economy, and promoting high-quality economic development. Throughout the year, traditional infrastructure sectors, such as railways, highways, urban rails, water conservancy and underground space development enjoyed a steady growth momentum, and the market for the construction of new types of infrastructure developed rapidly. According to the data released by the National Bureau of Statistics, in 2022, the fixed assets investments nationwide amounted to RMB57.2 trillion, representing a year-on-year increase of 5.1%, 2.1 percentage points higher than the growth rate of GDP. The growth rate of infrastructure investment increased rapidly from 0.4% in 2021 to 9.4% in 2022. The added value of the construction industry increased by 4.1% year on year, accounting for 6.9% of GDP, which fully embodies the position of the construction industry as a pillar industry in the national economy. In 2022, China's investments in fixed assets in transportation exceeded RMB3.8 trillion, an increase of more than 6% year on year. In terms of railways, in 2022, China's investments in fixed assets of railways amounted to RMB710.9 billion, decreased 5.1% year on year. New lines of 4,100 kilometres were put into operation, including 2,082 kilometres of high-speed railways. The length of railways in operation nationwide reached over 155,000 kilometres (among which, the length of high-speed railways reached 42,000 kilometres) as of the end of 2022. In terms of highways, in 2022, China's investments in highway construction amounted to RMB2.9 trillion, increased 9.7% year on year, including RMB1.47 trillion in expressways, increased 6.6% year on year. In terms of water conservancy construction, in 2022, China's investments in water conservancy construction amounted to RMB1,089.3 billion, an increase of 43.8% over 2021. The number of new water conservancy projects and the scale of investment saw a record high. In terms of urban rail transit, 25 new lines with a total length of 1,085.17 kilometres were put into operation, including 803.12 kilometres of subways (74.01%) and 212.39 kilometres of urban rapid rail lines (19.57%).

Infrastructure construction is an important starting point for stabilizing investment, and PPP has increasingly become an important driving force for infrastructure investment. PPP has played an important role in stimulating the vitality of private investment and facilitating the implementation of major national strategies. As of 31 December 2022, there were 14,038 projects in database in the PPP of the Ministry of Finance, with a total investment of RMB20.92 trillion, including 10,346 projects in the management library with an investment of RMB16.62 trillion; 3,692 projects on

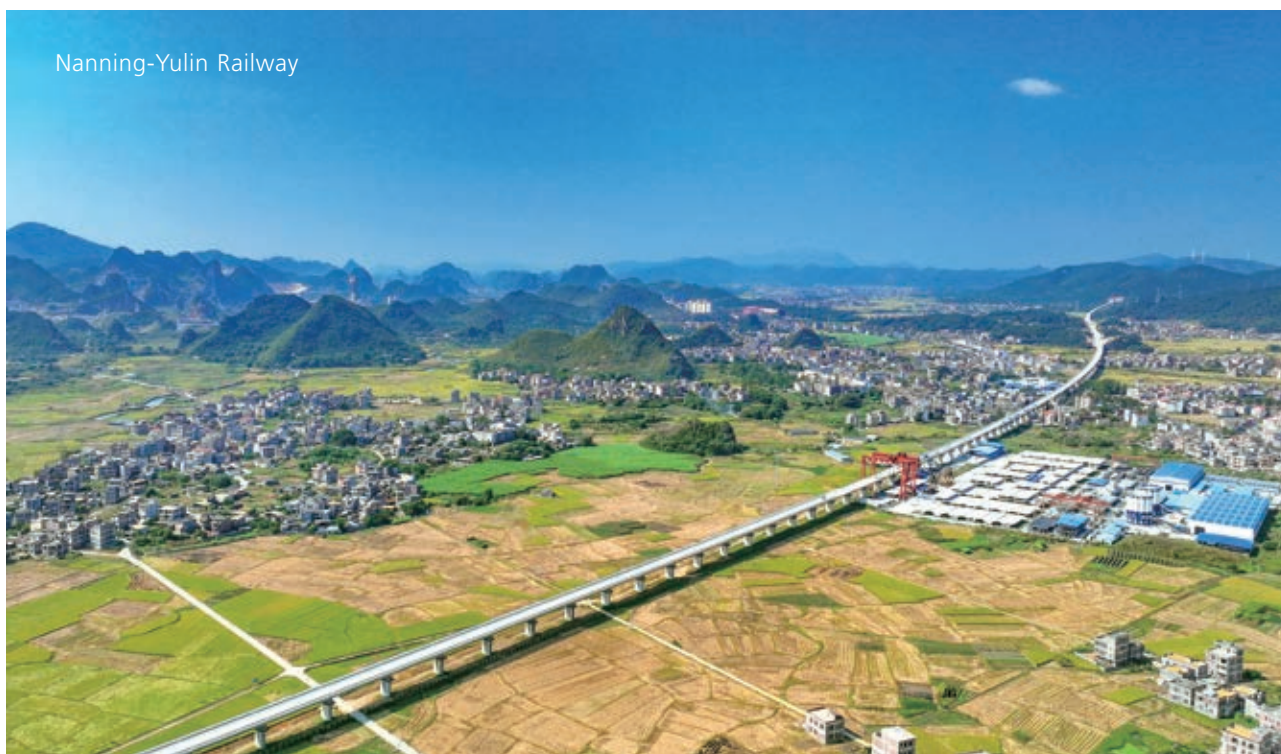
## BUSINESS OVERVIEW

the reserve list, with an investment of RMB4.30 trillion. In order to further revitalize stock assets and expand effective investment, National Development and Reform Commission, China Securities Regulatory Commission and many local governments have actively introduced policies to promote the implementation of REITs since 2022, encourage the revitalization of stock assets in key areas, regions and enterprises, and promote the healthy development of REITs in the infrastructure sector.

### (2) International

2022 saw the complex once-in-a-century changes and geopolitical conflicts, rising risk of stagflation in the world economy, and significant increase in factors of instability and uncertainty. China's overseas contracted engineering projects and labor service cooperation industries faced a more complex and severe external environment. China continued to actively promote high-quality Belt and Road cooperation, and its investment cooperation with countries along the Belt and Road remained active. According to the statistics issued by the Ministry of Commerce, in 2022, China's overseas contracted engineering projects achieved a turnover of RMB1,042.49 billion, a year-on-year increase of 4.3% (equivalent to USD154.99 billion, basically the same as last year), and newly signed contracts amounted to RMB1,702.17 billion, a year-on-year increase of 2.1% (equivalent to USD253.07 billion, a decrease of 2.1%). Among them, Chinese enterprises signed 5,514 new contracts for overseas contracted engineering projects in countries along the "Belt and Road", with value of RMB871.84 billion, a year-on-year increase of 0.8% (equivalent to USD129.62 billion, a decrease of 3.3%), accounting for 51.2% of amount of the contract value of China's new contracts for overseas contracted engineering projects in the same period. The turnover achieved RMB571.31 billion, a year-on-year decrease of 1.3% (equivalent to USD84.94 billion, a decrease of 5.3%). In view of the cooperation development trend, investment cooperation with countries along the Belt and Road is still an important component in promoting the steady development of China's overseas contracted engineering projects in the future.

Nanning-Yulin Railway



## BUSINESS OVERVIEW

### 2. Survey, design and consulting services business

In 2022, the overall size of the engineering survey and design industry continued to rise, with significant differences among different segments. In particular, the overall performance of transport design enterprises is better than the industry average owing to the benefit from “actively expanding effective investment, moderately advancing infrastructure investment”; the overall performance of construction design enterprises is not satisfactory owing to the continuous impact from the upstream real estate market. In April 2022, the China Engineering & Consulting Association published the Guiding Opinions on the Informationization of the Engineering Survey and Design Industry in the 14th Five-Year Plan Period, which puts forward the development requirements and transformation ideas for corporate digitalization. In May, the Ministry of Housing and Urban-Rural Development issued the 14th Five-Year Plan for Engineering Survey and Design Industry Development, which further points out the industrial development direction. In the future, with the change of demand scenes, the engineering construction industry will face the comprehensive synergy and integration of space, industry and data. The engineering survey and design enterprises will deepen the digital transformation strategy at four levels of “strategy, tactic, execution and organization, promote the innovation of business model and profit model with engineering technology as the core, explore the differentiated development path, and realize sustainable growth.

### 3. Engineering equipment and component manufacturing business

In 2022, the pace of high-end, smart and green development of China’s manufacturing sector was accelerated, structural adjustment, transformation and upgrading was further advanced, the industrial economy stabilized and improved, the industry’s support and contribution to the national economy further increased, and industrial development became more resilient. The value added of industrial enterprises above designated business scale recorded a year-on-year increase of 3.6%, in which the added value of equipment manufacturing industry increased by 5.6% year on year, manufacturing investment grew by 9.1% year on year, 4.0 percentage points higher than China’s fixed asset investments. With the issuance of the 14th Five-Year Plan for Modern Comprehensive Transportation Network Development, the 14th Five-Year Plan for Construction Industry Development, Opinions on Financial Support for the Work of Carbon Neutrality and Carbon Peaking, Notice on Supporting the Making Up of Shortcomings and Reinforcing of Advantages of National Integrated Freight Hub, the 14th Five-Year Plan for New Urbanization Implementation, among others, China will increase funding for weak points in the equipment industry, help the manufacturing industry break through the bottleneck of industrial development, promote the equipment digitalization, foster new modalities and models of business, which creates favorable conditions for the development of the equipment industry. Guided and driven by the national “double carbon” policy, the application of steel structure and other energy saving and environmental friendly materials has become an important lever to promote the green and industrial development of construction and achieve the transformation and upgrading of traditional industries. The proportion of steel structure buildings and steel structure bridges in China continues to increase, and the bridge steel structure business is still in a period of golden development. The market pattern of tunnel boring machine was further changed, and scope of application continuously expanded from subway construction at the early stage to subway, municipal works, water conservancy, pumped storage, railway, mine construction, etc., and the application of tunnel boring machine in emerging business segments have been continuously increased.

## BUSINESS OVERVIEW

### 4. Property development business

In 2022, the national regulatory authorities issued a number of favorable policies to support consumer demands and corporate demands, and increasingly intensified them, and allowed local governments to tailor their specific policies. In 2022, more than 300 provinces and cities (counties) issued nearly 1,000 policies, reached peak in recent years, with further increased policy intensity, optimized demand-side policies, and the housing mortgage interest rate in many places reached a historic low. According to the data released by the National Bureau of Statistics, in 2022, the property development investments nationwide amounted to RMB13,289.5 billion, representing a year-on-year decline of 10.0%. The investments in residential housing amounted to RMB10,064.6 billion, representing a year-on-year decline of 9.5%; office building investments amounted to RMB529.1 billion, representing a year-on-year decline of 11.4%; the investments in commercial housing amounted to RMB1,064.7 billion, representing a year-on-year decline of 14.4%. The area of commodity housing available for sale at the end of the year was 563.66 million square meters, representing a year-on-year increase of 53.43 million square meters, including 269.47 million square meters of commercial housing available for sale, representing a year-on-year increase of 41.86 million square meters. It is expected that in 2023, the central government will continue to adhere to the keynote of “houses are for living in and not for speculation”, and there is room for further optimization of policies at both ends of supply and demand.

### 5. Other businesses

#### Mining business

In 2022, affected by multiple factors such as the tightening of global liquidity, slowing demand, geopolitical conflicts, and restructuring of industrial chains, the downward pressure on the global economy increased, and consequently the prices of non-ferrous metals showed significant fluctuations at high levels throughout the year. Regarding copper products, the global copper mine operations were generally stable in 2022 with a slight decrease in production growth rate. With the exception of individual copper mines being affected by strikes, blockades and other factors, most mines operated stably. According to the data provided by Wind, the LME copper closing price was USD8,374/ton at the end of the year, a 13.8% decrease from the beginning of the year, with an average price of approximately USD8,790/ton for the year. Regarding molybdenum products, global molybdenum production in 2022 was relatively stable with no new molybdenum mining capacity added. Due to factors such as reduced overseas copper ore production and declining molybdenum grades, molybdenum concentrate production was slightly lower than the previous year. From the perspective of supply and demand, molybdenum demand rebounded in 2022, leading to a shift from surplus to shortage in supply. As a result, molybdenum prices continued to rise, especially since the fourth quarter of 2022, with a year-end closing price of RMB4,290/ton and an average price of approximately RMB2,806/ton for the year for molybdenum concentrate (40%-50%), according to data provided by Antaike. With the recovery of the domestic economy and the implementation of a series of policies to stabilize growth, such as expanding domestic demand and stabilizing the real estate market, the conversion of consumption momentum from old to new and the rapid development of new fields have increased the demand for copper, cobalt, molybdenum, lithium and other non-ferrous metals, providing stable support for their prices.

## BUSINESS OVERVIEW

### Financial business

In 2022, faced with a complex and ever-changing international landscape and the arduous task of domestic reform and development, China increased efforts for the implementation of a stable monetary policy, utilizing the guiding function of structural monetary policy tools. The scale of monetary credit and social financing grew reasonably, with continuous optimization of credit structures and a stable yet descending comprehensive financing cost. This effectively supported the stabilization of macroeconomic situation and the overall smooth operation of the financial market. 2022 is the first year of formal implementation of the new regulations on capital management in the trust industry after the transition period ended. Following the industry transformation, a series of institutional reforms were enacted immediately. The China Banking and Insurance Regulatory Commission (“**CBIRC**”) issued the Administrative Measures for the Assurance Funds and Liquidity Mutual Assistance Funds for the Trust Industry (Draft for Comment) in February, Notice Regarding Trust Companies’ Work on Financial Stability Security Fund, Trust Industry Stability Fund, and Trust Industry Fund Raising in June, and the Notice Regarding the Regulation of Trust Company Trust Business Classification (Draft for Comment) in December, which will have a profound impact on the trust industry. It is expected that as the economy recovers and the real estate market rebounds, the scale of industry trust assets will show a steady upward trend. In terms of the industry of financial companies, the revised Measures for the Administration of Financial Companies of Enterprise Groups by CBIRC came into effect, which further standardizes and improves the industry through measures such as “extending upward supervision, shrinking business scope, and clarifying regulatory indicators”. In terms of fund industry, the Asset Management Association of China issued a number of normative documents such as Public Disclosure of Private Fund Filing Cases in order to further improve the system of private fund registration and filing rules, optimize management of private fund registration and filing and self regulation, and guide the high-quality development of the private fund industry.



## BUSINESS OVERVIEW

### II. Business Development Overview

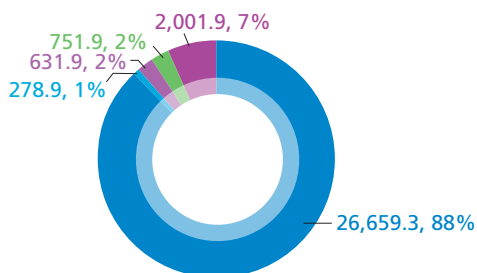
**Shouldered the mission with determination and played the pillar role to the most extent.** The Group actively served the national strategies, fully implemented the important deployment of the CPC Central Committee, the State Council and SASAC on growth stabilization, adhered to the principles of fast starting, early involvement and a good start, and made comprehensive efforts to improve our business. While constantly consolidating our core advantages, we actively explored the “second curve” market such as urban renewal, water conservancy and hydropower, environmental protection, and clean energy, accelerated contract conversion, made every effort to stabilize and increase production, and ensure that we can effectively play our pillar role and become a reliable “anchor” in stabilizing the overall economy. Iconic domestic projects we participated in this year, such as Beijing Fengtai Station, Zhengzhou-Chongqing High-speed Railway, Hangzhou-Taizhou High-speed Railway, Shenzhen Metro “two lines and three hubs”, and Yuchu Expressway, were completed and put into use. Overseas key projects such as the Padma Bridge in Bangladesh and the 10th of Ramadan Railway were successfully completed, showcasing the power of “Constructed in China” to the world.

**Successfully completed the reform with remarkable results in quality and efficiency improvement.**

The Group has fully implemented the Three-year Action of State-owned Enterprise Reform and completed a total of 221 tasks in 31 reform aspects in six major reform areas. The Group has obtained A-level in the assessment, and has been evaluated as a “State-owned Enterprise Corporate Governance Demonstration Enterprise”. The Group improved “1+5+N” governance Institutional system, comprehensively implemented the tenure system of managers and contract management, improved the market-oriented employment mechanism, broadened medium and long-term incentive channels, completed the first batch of restricted share incentive scheme covering 747 core backbone personnel, and implemented bonus incentives for key core positions in 13 technology-based enterprises. The Group continued to consolidate the foundation of safety, quality and environmental protection, solidly carried out “8+4” comprehensive governance, carried out in-depth “compliance management strengthening year” activities, continuously improved the operation management and control mechanism of investment and financing projects, and comprehensively strengthened the prevention and control of systemic risks. The Group fully implemented big business management, building a big business management system, strengthening the operation and development, improving and quality and efficiency of project performance, closing and settlement and other links, and continuously injecting new and stronger momentum into “benefit improvement and value creation” to effectively promote the Company to build a new development pattern and effectively enhance the core competitiveness.

**New Contracts by Business Segment in 2022**

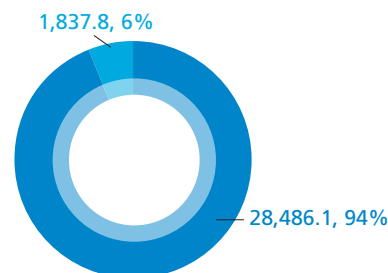
Unit: RMB 100 million



- Infrastructure construction
- Survey, design and consulting services
- Engineering equipment and component manufacturing
- Property development
- Others

**New Contracts by Geographical Location in 2022**

Unit: RMB 100 million



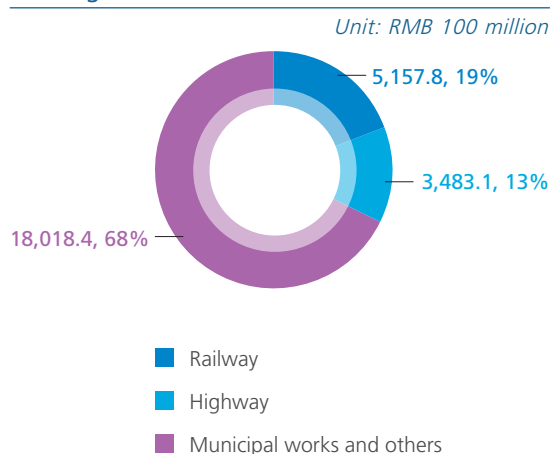
- Domestic
- Overseas

## BUSINESS OVERVIEW

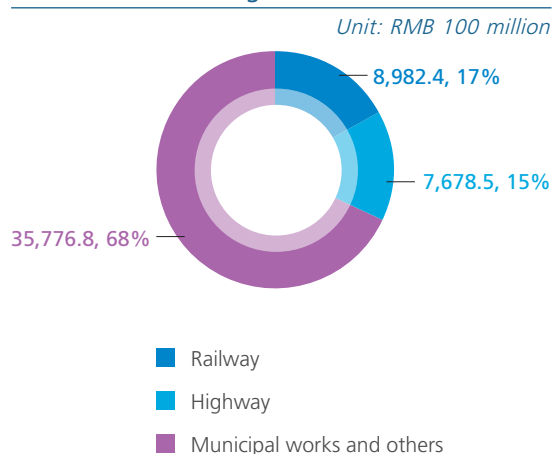
**Fruitful scientific and technological innovation to signal the brand strength of China Railway.** The Group actively implemented the important instructions of “Three Transformations”, gave full play to the leading role of the three national laboratories in innovation, deployed the innovation chain in line with the industrial chain and worked on the industrial chain with the innovation chain, and made every effort to promote the scientific and technological innovation in the “14th Five-Year Plan” period; pre-emptively engaged in the “new track” of intelligent construction, and built a new brand of “Digital Intelligence China Railway”; implemented the “Double Carbon” target guideline to formulate the carbon peaking action plan of China Railway, and strove to be the industry’s benchmark for green development; carried out the second practical technology innovation competition, and innovation achievements won 6 patent awards; overcame the world’s most difficult problems such as the key technology for designing road-rail bridges in complicated sea area. 44 achievements we developed, such as “key technology research of railroad large-span mid-bearing concrete-filled steel tube arch bridge”, reached the international leading level, and 110 achievements, such as “key technology of construction for implanted rock-socketed pile foundation of offshore wind farm under adverse sea conditions and complex geological conditions”, reached the international advanced level. Our three subsidiaries, namely China Railway Major Bridge Engineering, China Railway Electrification Engineering and CREG, were selected into the list of the first 200 model enterprises by the SASAC of the State Council.

**Implemented the Belt and Road towards in-depth and practical cooperation with shared use and benefits.** Faced with a complex international environment, the Group overcame many challenges, vigorously expanded markets, pushed forward project fulfillment, firmly followed the path of specialized, branded, and localized development, and continuously promoted the growth and improvement of overseas business; adhered to the overseas “dual optimization” strategy, continually deepened the overseas operation system reform featuring “one body, two wings, N drives”, systematically outlined the “market map by country”, improved the market system, strengthened the efforts for key countries, key areas, and key projects along the “Belt and Road”, deepened cooperation on traditional infrastructure projects, pushed forward key projects for infrastructure interconnectivity within neighboring countries, and continuously enhanced the capability of providing solutions and products; along with the completion of landmark projects such as the Laos-China Railway, the 10th of Ramadan Light Rail Transit AB Section, and the Padma Bridge in Bangladesh under the “Belt and Road”, the test run of the Jakarta-Bandung High-Speed Railway, and the successful contracting of projects such as Stockholm Metro and Bangladesh National Digital Unicom, China Railway is contributing its strength to continuously driving pragmatic cooperation and improving the level of interconnectivity, and promoting regional coordinated development. During the Reporting Period, the operation of primary business of the Group are described as follows.

**New Contracts by Infrastructure Construction Sub-segment**



**Contract Backlog by Infrastructure Construction Sub-segment**



## BUSINESS OVERVIEW

### 1. New contracts and contract backlog

In 2022, the amount of new contracts of the Group was RMB3,032.39 billion, representing a year-on-year increase of 11.1%. In 2022, the amount of new contracts in the domestic business amounted to RMB2,848.61 billion, representing a year-on-year increase of 10.5%; the amount of new contracts in the overseas business amounted to RMB183.78 billion, representing a year-on-year increase of 21.1%. In 2022, the Group concentrated on water conservancy and hydropower, ecological environmental protection, and clean energy as the “second curve” business to expand the market scale and gain competitive advantages. During the Reporting Period, the amount of new contracts of the second curve business reached RMB301.892 billion, representing a year-on-year increase of 81.18%. As of the end of the Reporting Period, the amount of the Group’s contract backlog was RMB4,931.10 billion, representing an increase of 8.5% from the end of 2021. The amount of new contracts by business segment is set out as below:

Unit: 100 million Currency: RMB

Business type		Amount of New Contracts		Year-on-year increase/decrease
		2022	2021	
Infrastructure Construction		<b>26,659.3</b>	24,166.8	10.3%
Including	Railway	<b>5,157.8</b>	4,335.7	19.0%
	Highway	<b>3,483.1</b>	2,952.6	18.0%
	Municipal works and other	<b>18,018.4</b>	16,878.5	6.8%
Survey, Design and Consulting Services		<b>278.9</b>	205.5	35.7%
Industrial Equipment and Component Manufacturing		<b>631.9</b>	612.8	3.1%
Property Development		<b>751.9</b>	580.3	29.6%
Other Businesses		<b>2,001.9</b>	1,727.8	15.9%
<b>Total</b>		<b>30,323.9</b>	27,293.2	11.1%

## BUSINESS OVERVIEW

### 2. Developments of the principal business activities

#### (1) Infrastructure construction business

Infrastructure construction is the core of China Railway, the foundation for consolidating the leading position of China Railway in the construction industry and enhancing brand strength, an important pillar for improving the market influence, and a key field for improving the economic benefits and promoting the high-quality development of the Company. The engineering construction business of the Group involves railway, highway, municipal works, housing construction, urban rail transit, water conservancy and hydropower, port channel, airport wharf and other engineering fields, covering more than 90 countries and regions in the world. The Company has special-grade qualification for general contracting of construction of railways, highways, municipal public engineering, building engineering, etc. Infrastructure investment business is an extension of the core business industry chain of traditional infrastructure construction. The infrastructure investment business of the Group sticks to the principle of centering on the main business, serving the main business, driving the main business and promoting the main business, adheres to the investment philosophy of “multiple sectors benefit from the operation of one sector”, constantly innovates the investment and construction mode in railway, highway, urban rail transit, underground pipe gallery and other infrastructure fields, forms a more mature industrial chain, and promotes the Group to continuously maintain the advantages of construction contracting in the field of engineering construction.

The Group has always been a leader in China’s infrastructure construction industry and one of the largest construction contractors in the world. As of the end of the reporting period, the Group has 18 general contracting projects for railway construction at special grade, accounting for over 50% of the total number of general contracting projects for railway construction at special grade in China; 32 general contracting projects for highway construction at special grade; and 19 general contracting projects for engineering construction at special grade, 9 general contracting projects for municipal public engineering at special grade and 1 general contracting projects for port and waterway construction at special grade. The Group is the largest construction group in the fields of railway infrastructure and urban rail transit infrastructure in China. It has the only National Engineering Research Center of High Speed Railway Construction Technology, National Key Laboratory of Bridge Structural Stability and Safety and National Key Laboratory of Shield Tunneling and Drilling Technology in China, representing the most advanced technological level in terms of railway, bridges, tunnels and rail transit construction in China. At the same time, the Company is one of the major infrastructure construction forces in the construction of the Belt and Road Initiative. It is the main contractor of the representative projects along the “Belt and Road” including China-Laos Railway, the Indonesian Jakarta-Bandung High – speed Railway, the Budapest-Belgrade Railway and the Padma Bridge in Bangladesh.

During the reporting period, the amount of the Group’s new contracts of infrastructure construction business was RMB2,665.93 billion, representing a year-on-year increase of 10.3%. As of the end of the reporting period, the amount of the Group’s contract backlog of infrastructure construction business was RMB4,443.77 billion, representing a year-on-year increase of 5.5%. From a business segment perspective:(1)In respect of railway construction business, benefiting from the increase in the size of tendering for large and medium-sized railway market, the amount of new contracts in the Company’s railway business maintained a steady growth In 2022, the amount of new contracts in the railway business amounted to RMB515.78 billion, representing a year-on-year increase of 19.0%; the amount of contract backlog amounted to RMB761.2 billion, representing a year-on-year

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increase of 5.0%. (2) In respect of the highway construction business, the growth of investments in fixed assets of highways nationwide was accelerated, the amount of new contracts in the Group's highway business in the year amounted to RMB348.31 billion, representing a year-on-year increase of 18.0%; the amount of contract backlog amounted to RMB650.71 billion, representing a year-on-year decrease of 5.9%. (3) In respect of municipal works and other businesses, the Group continued to focus on urban integrated development and strengthened traditional businesses such as municipal construction and real estate to maintain competitive advantages. The results of operations in fields such as water conservancy and hydropower, ports and waterways, and airport engineering were significant, contributing more significantly to the total amount of new contracts. In 2022, the amount of new contracts in the municipal works and other business amounted to RMB1,801.84 billion, representing a year-on-year increase of 6.8%; the amount of contract backlog amounted to RMB3,031.86 billion, representing a year-on-year increase of 8.5%. Among them, the amount of new contracts in municipal works business was RMB314.96 billion, representing a year-on-year decrease of 24.3%; the amount of new contracts in housing construction was RMB841.82 billion, representing a year-on-year increase of 6.2%; the amount of new contracts in urban rail transit business was RMB117.74 billion, representing a year-on-year decrease of 21.1%. (4) In terms of the second curve, during the reporting period, the Group achieved remarkable results. The amount of new contracts in "second curve" business was RMB301.892 billion, accounting for 11.3% of the total amount of new contracts in infrastructure construction business, representing a year-on-year increase of 81.18%. Among them, the amount of new contracts in the water conservancy and hydropower sector was RMB98.557 billion, representing a year-on-year increase of 223.29%; the amount of new contracts in the ecological environmental protection sector was RMB75.223 billion, and those in the clean energy sector was more than RMB40 billion.

### (2) Survey, Design and Consulting Services Business

Survey, design and consulting is the core of China Railway, an important engine for leading the upgrading of technology and industry of China Railway and driving the development of other businesses, an important basis for enhancing the brand influence of China Railway, and an important support for promoting industrial coordination and improving the innovation ability of the whole industrial chain. Our survey, design and consulting business covers the whole process of capital construction services such as research, planning, consulting, cost, survey and design, supervision, general engineering contracting, and product industrialization, mainly involving industries such as railways, urban rail transit, highways, municipal works, housing construction, water conservancy and hydropower, water transport survey and design. The Group constantly expands into new industries and new fields such as modern tramcars, medium and low speed maglev, smart transportation, civil airports, ports and wharfs, power, energy conservation and environmental protection. The basic operation mode is to obtain survey and design orders through market competition at home and abroad, and complete the tasks such as survey and design and relevant services of engineering projects as agreed in the contract. At the same time, the Group constantly innovates the operation mode of design consulting business, makes full use of the advantages of urban transport infrastructure planning, strives to obtain design projects and general contracting projects, and promotes the development of the entire industrial chain. As a backbone enterprise in China's survey, design and consulting industry, the Group has played an important leading role in the field of engineering construction, especially in assisting in the formulation of construction codes and quality acceptance standards of the railway industry. The Group has won 154 National Excellent Engineering Survey and Design Awards, 101 National Excellent Engineering Consulting Achievement Awards, and 34 International Engineering Consulting (FIDIC) and Engineering Design Awards. In ENR's 2022 ranking of the world's 150 largest design companies, the Group ranked 15th.



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In 2022, the Group fully leveraged the professional advantages and leading role of each enterprise in the design sector, rationally deploy and manage production factors, continuously strengthened the design and planning advantages in areas such as highway, water conservancy and hydropower, water resources development and utilization, aquatic ecosystems of rivers or basins, and water environment governance. The Group's new contracts for survey, design and consulting services amounted to RMB27.89 billion, representing a year-on-year increase of 35.7%. As of the end of the reporting period, the value of the Group's contract backlog of survey, design and consulting services business was RMB53.39 billion, representing a year-on-year increase of 7.2%.

### (3) Engineering Equipment and Component Manufacturing Business

Engineering equipment and component manufacturing is the core segment of China Railway, an important carrier for practicing the "three transformations" and promoting the high-end brand of China Railway, an important force to boost the transformation and upgrading of the Company, and an important support for making up the shortcomings and reinforcing the advantages as well as improving the core competitiveness. The Group's engineering equipment and component manufacturing business mainly serves the infrastructure construction at home and abroad, and its products cover turnouts, tunnel construction equipment, bridge construction steel structure, engineering construction machinery, fabricated building components and rail transit electrification equipment, etc. The basic operation mode is mainly to obtain orders through market competition at home and abroad, and provide relevant products and services with guaranteed quality and quantity on schedule according to the contract. In terms of turnout products, the Group has the core competitive advantages of the whole industry chain from design, research and development to manufacturing, and has the annual production capacity of 20,000 turnouts of various types. The products are widely used in railways, subways, tramcars and other fields. In terms of tunnel construction equipment and services, the Group provides relevant products and supporting services covering various series of tunnel boring machines such as the composite shield machine, hard rock TBM and supporting equipment, and tunnel construction machinery, and has established the whole industrial chain layout of design, R&D, manufacturing and supporting services of spare parts and supporting equipment. In terms of steel structure manufacturing and installation, the manufacturing and installation business of the Group's bridge steel structure mainly focuses on manufacturing and installing various large-scale bridge steel structures, which has obvious advantages in the steel structure market of bridges crossing rivers. The bridge steel structures and steel-pylons manufactured have reached the international advanced standard. In terms of construction machinery, the Group is a large-sized scientific and technological enterprise specialized in manufacturing and R&D of special construction machinery for railways, highways, urban rail transits, etc. in China and even in the world. Its products include railway construction equipment such as the rail laying machine, bridge erecting machine, and girder carrier, and other large-scale engineering machinery such as the lifting machinery. In terms of electrification equipment for railways and urban rail transits, the Group's rail transit electrification equipment mainly includes complete set of catenary equipment for the regular railway, acceleration railway, and high-speed railway, and complete set of power supply equipment of all power supply forms of urban rail transit. Among them, the catenary equipment for railway passenger lines and high-speed railways are at the international advanced level. In terms of prefabricated buildings, the Group is a supplier with rich product structures and a complete set of solutions for prefabricated buildings in the domestic prefabricated building component industry, devoting itself to creating a high-tech and innovative prefabricated building business platform.

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The Group has a leading position in the field of high-end equipment manufacturing related to transportation infrastructure such as railways, highways, urban rail transit and underground engineering in the country and even the world. It has outstanding competitiveness in scientific and technological innovation strength, core technology advantages, production and manufacturing level, brand awareness and other aspects. The Group is the world's largest shield/TBM R&D manufacturer in terms of sales volume, the world's largest steel structure manufacturer of turnouts and bridges, the largest railway construction equipment manufacturer in China, and the world's leading manufacturer of infrastructure construction service equipment. For the domestic market, the Group maintained an approximate market share of 64% in the high-speed turnout market that requires high technical content (speed over 250km/h), a market share of 46% in the regular turnout market, a market share of 56% in the heavy-haul turnout market, a market share of 70% in the turnout market of urban rail transit, a market share of more than 60% in the large steel structure bridge market, a market share of more than 60% in the catenary components market of high-speed railway, and a market share of approximate 50% in the power supply product market of urban rail transit. CRHIC (stock code: 600528.SH), a controlling subsidiary of the Group, has the most complete products in the field of railway infrastructure equipment in our country and is the only industrial enterprise in A share main board market that mainly engages in high-end equipment for rail transit and underground excavation. CRHEEC (stock code: 688285.SH) is an important supplier engaging in the R&D, production and system integration of domestic electrified catenary components and power supply equipment for urban rail transit. CRPCC (stock code: 300374.SZ) is a supplier with rich product structures and integration service capability of prefabricated buildings in the domestic prefabricated building component industry, able to provide a complete set of solutions for prefabricated buildings.

As a leading manufacturer of high-end equipment for engineering construction, the Group develops and manufactures tunnel boring machines, special equipment for tunnel mechanization, engineering construction machinery, turnouts, steel bridges, etc. with abundant and stable market demand. In 2022, the amount of new contracts for the industrial equipment and component manufacturing business of the Group was RMB63.19 billion, representing a year-on-year increase of 3.1%, of which the amount of new contracts of domestic business was RMB62.38 billion and that of new contracts of overseas business was RMB810 million. As of the end of the reporting period, the amount of the Group's contract backlog of industrial equipment and component manufacturing business was RMB130.63 billion, representing a year-on-year increase of 33.8%.

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### (4) Property development business

Property development business is the development priority of China Railway, and an important carrier for diversified brands of China Railway. The Company is transforming to “real estate + infrastructure” and “real estate + industry” relying on its main business advantages with a view to becoming an outstanding urban comprehensive development operator. The Group accelerated the transition from traditional commercial property development to a comprehensive development model that integrates multiple modes, industries, and functions. The Group gives full play to the advantages of industrial chain integration, innovate business models, and form China Railway characteristics in terms of land acquisition, industrial chain coordination, products and services. The Group’s featured real estate business includes primary land development and secondary real estate development. The operation mode of primary land development refers to that the local government or its authorized department and platform company entrust the Company to legally expropriate the land in a certain area, construct urban infrastructures and social public facilities according to the planning requirements by means of competition, so as to make the land within the area meet the specified supply conditions, and the government or its authorized department obtains the land transfer income by transferring the land with compensation, and pays the Company’s investment and income according to the agreement. The secondary development is to obtain the authorization of real estate development through market competition at home and abroad and sell or lease the newly built commercial housing.

In 2022, the Group’s real estate development business conformed to the national policy guidance, adhered to the new development concept, gave play to the advantages of industrial chain integration to meet the market demand. The Group focused on urban clusters and metropolitan areas, sought for projects and development around the main business of infrastructure construction, steadily expanded to the fields of culture, tourism, health care, TOD, convention and exhibition, accelerated the transformation from traditional commercial real estate development to the comprehensive multi-industry and multi-function development mode, so as to continuously enhance the core competitiveness of China Railway’s featured real estate development. The Group performed in-depth study and analysis of the real estate market environment in the regions and cities where it has presence, continuously optimized the map of real estate investment projects, prudently selected investment projects and increased the proportion of investment in first-tier cities and second-tier core cities as appropriate. In the face of the downward pressure of the overall market, The Group further strengthened the construction of the risk prevention and control system of the real estate sector, attached great importance to the project destocking, and collection of project sales arrears, and strengthened the revitalization of stock assets. Upholding the principles of sales-based production and revenue-based expenditure, the Group strove to ensure the safety of cash flow of real estate business, and promote the steady and healthy development, transformation and upgrading of real estate business. During the reporting period, the amount of new contracts in the Group’s real estate business was RMB75.19 billion, representing a year-on-year increase of 29.6%, sales area was approximately 5.41 million square meters and the newly acquired land reserve of the Group was 1.3061 million square meters. At the end of the reporting period, the Group held 20.24 million square meters of land to be developed and 30.51 million square meters of planned construction area to be developed in Beijing, Shanghai, Guangzhou, Shenzhen, Tianjin, Hangzhou and other cities.

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### (5) Other businesses

#### Mining business

The Group's mining resource business is mainly based on the management and development of mining entities. Currently, it wholly owns, controls or holds shares to invest in construction of 5 modern mines at home and abroad, including Luming Molybdenum Mine, Heilongjiang, Luishia Copper-Cobalt Mine, Comagnie Minière de Luisha S.A.S, Congo, MKM Copper-Cobalt Mine, SICOMINES Copper-Cobalt Mine, and Wulan Lead and Zinc Mine, Mongolia, all of which are in good conditions. However, currently the world is still facing uncertainties of market supply and demand, international economy and politics. The Company will strengthen business risk control and management improvement of overseas mineral resources business to ensure safe production and stable income of mines in production. The main mineral products produced and sold by the Company include concentrate of varieties involving copper, cobalt, molybdenum, lead, zinc and others, copper cathode and cobalt hydroxide. Currently, the retained reserves of copper, cobalt and molybdenum are in the leading position in the same industry in China, and the mines' production capacity for copper and molybdenum has been at the forefront in the same industry in China.

In 2022, the Group's overall development and sales of mineral resources remained stable. The Group produced 302,900 tons of copper (year-on-year increase of 25%), 5,200 tons of cobalt (year-on-year increase of 60%), 15,000 tons of molybdenum (year-on-year flat), 9,500 tons of lead (year-on-year decrease of 13%), 23,600 tons of zinc (year-on-year increase of 10%), 44.7 tons of silver (year-on-year increase of 16%).

Mining Resource Project Table									
No.	Project name	Type	Mining business			Planned total investment (RMB100 million)	Accumulated investment of the project (RMB100 million)	Production quantity in the reporting period (10,000 tons)	Project progress
			Grade	Resource/Reserve (10,000 tons)	Equity ratio (%)				
1	Luming Molybdenum Mine, Yichun City of Heilongjiang	Molybdenum	0.09%	64.18	83%	60.17	60.26	1.50	In normal production
		Copper	/	/	0.10				
2	SICOMINES Copper-Cobalt Mine	Copper	3.13%	722.07	41.72%	45.86	30.92	25.26	In normal production
		Cobalt	0.25%	57.21	0.32				
3	Luishia Copper-Cobalt Mine	Copper	2.24%	47.00	72%	21.38	21.60	3.17	In normal production
		Cobalt	0.06%	1.35	0.11				
4	MKM Copper-Cobalt Mine	Copper	2.08%	3.10	80.2%	11.95	12.35	1.76	In normal production
		Cobalt	0.21%	0.32	0.09				
5	Wulan Lead and Zinc Mine, Xinxin Company	Lead	1.15%	17.94	100%	15.4	15.4	0.95	In normal production
		Zinc	2.81%	44.03	2.36				
		Silver	54.62g/t	0.09	0.005				

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Mining Resource Project Table									
No.	Project name	Type	Mining business			Planned total investment (RMB100 million)	Accumulated investment of the project (RMB100 million)	Production quantity in the reporting period (10,000 tons)	Project progress
			Grade	Resource/ Reserve (10,000 tons)	Equity ratio (%)				
6	Muhaer Lead and Zinc Mine, Xinxin Company	Lead	0.63%	4.11	100%				Not yet exploited
		Zinc	2.37%	15.47					
		Silver	118.17g/t	0.08					
7	Wurile Ovoo and Zhanggai Tolgoi Mine, Xinxin Company	Gold	3g/t	0.0003	100%				Not yet exploited
8	Silver-Lead-Zinc polymetallic Mine, Chafu, Xianglong Mineral Co., Ltd.	Lead	7.00%	8.97	100%	3.3			Ceased production
		Zinc	5.09%	6.52					
		Silver	200.51g/t	0.03					

### Financial business

When carrying out financial business, the Group has strictly implemented the state regulatory policies and adhered to the overall guidelines of integration of industry and finance. Centering on the target of serving internal financial needs, promoting the development of principal construction business and creating value and adhering to the principle of giving priority to benefits in the allocation of financial resources, the Group's financial business segment has effectively promoted the flow of financial resources to efficient assets, while firmly holding the bottom line of avoiding financial risks. The Group holds the financial licenses for trust, finance company, and public fund, and is approved to engage in such financial businesses such as assets management, private equity fund, insurance brokerage, finance lease, and commercial factoring, which are the financial businesses that SASAC allows to be conducted in a prudent and regulated manner. The Group has built a multi-level, wide-covered and differentiated "finance, quasi-finance" institutional service system represented by China Railway Trust Co., Ltd., China Railway Finance Co., Ltd., and China Railway Capital Co., Ltd. The three companies actively explore new ways for integrating industry and finance to serve internal financial needs. China Railway Trust Co., Ltd. has enhanced the initiative of serving principal businesses through the service trust, project equity investment, asset securitization and the "three-in – one" mode of industry, finance and investment. It has established a regular risk monitoring, early warning and quick response mechanism for counterparties and projects. China Railway Finance Co., Ltd. is responsible for strengthening internal capital concentration, establishing capital pool and controlling financing scale. It has played an important role in reducing financing costs, "deleveraging and controlling liabilities" by utilizing its own financial resources and talent resources and giving full play to the advantages of the platform of financial integration. China Railway Capital Co., Ltd. has developed diversified businesses such as industrial fund, asset securitization, supply chain finance, commercial factoring, financial leasing, insurance brokerage, innovative venture and international investment and financing, and enhanced the efforts for obtaining equity financing for investment projects.



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### *Merchandise trading business*

The merchandise trading business of the Group represents the trading business carried out by the trading enterprises at all levels of the Group relying on the demand advantage, product advantage and resource channel advantage formed by centralized purchase and supply based on the main businesses of the whole Group. It mainly serves the internal trading demand of the Group and provides external services in an appropriate manner. China Railway Material Trade Co., Ltd, a wholly-owned subsidiary of the Company, which is responsible for sales of mineral products in the resource sector, has established a national-wide operation and service network, and maintained good cooperative relationship with domestic large-scale production enterprises of steel, cement, petrochemical, components for communications engineering, signal engineering, electrical engineering and electrification engineering, building decoration materials and other products. It carries out centralized procurement and supply of major materials at the Group level, and supplies materials to other domestic construction enterprises, significantly improving the Group's resources acquisition ability, supply security, procurement and bargaining power. During the price rising period of commodity prices, it provided reliable material supply guarantee for the Group's production and operation and helped the Group effectively address the price fluctuation risks by making appropriate reserve and locking price in good time.

### *Infrastructure asset operation*

The business scope of infrastructure assets of the Group mainly covers operation, maintenance and management of infrastructure investment projects and asset operation, covering three modes of operation, namely, independent operation, joint operation and entrusted operation. At present, the Group operates such infrastructure projects as rail transit, expressway, water and environmental protection, municipal roads, industrial parks, underground pipe corridors, etc., with the operation period ranging from 8 to 40 years. As the infrastructure investment projects undertaken by the Group have been successively completed and entered into the operation period, the Group's infrastructure operation revenue and profit generally show a rising trend. As of the end of the Reporting Period, the Group had 51 projects under operation.

## III. Scientific Research Investment and Technological Achievements

As one of the country's first "innovation-oriented enterprises" awarded by the Ministry of Science and Technology, the SASAC and the All-China Federation of Trade Unions, the Group has 3 national laboratories (the National Engineering Laboratory of High Speed Railway Construction Technology, National Key Laboratory of Tunnel Boring Machine and Intelligent Operation and Maintenance, and National Key Laboratory of Bridge Structural Stability and Safety), 10 postdoctoral workstations, 1 national local joint research center (national and local joint engineering research center for the research and application of digital rail transit technologies), 49 provincial and ministerial research and development centers (laboratories), 18 nationally recognized enterprise technology centers, and 137 enterprise technical centers recognized at the ministerial or provincial level. It has also set up 22 professional R&D centers and invested in the national technology innovation center for the Sichuan-Tibet railway.

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In 2022, the Group made scientific and technological breakthroughs in major projects, and implemented research projects focusing on Sichuan-Tibet railway construction technology, high-speed railway construction technology, bridge construction technology, tunnel and underground project construction technology, communications engineering, signal engineering, electrical engineering and electrification engineering technology, construction equipment and industrial product manufacturing technology, building technology, smart manufacturing and information technology, energy conservation and emissions reduction technology, and other key areas. In response to the actual needs for production and operation, the Group conducted technical research based on key difficult engineering projects, such as the Dianzhong Water Diversion Project, Chengdu-Chongqing Middle Line High-speed Railway, Zhoushan West Dongmen Road-Railway Bridge, and Chongqi Yangtze River Bridge, with focus on bridge survey and design theories and methods, new bridge structures and materials, and bridge intelligent construction technologies and equipment, complete technologies for fast construction of the hard rock large-span underground chambers, development of through-type synchronous power supply devices, intelligent assessment and performance improvement of serviceability of high-speed railway ballastless track-bridge structure system, and new components, materials, and industrial software for industrial manufacturing. We also carried out research based on highland engineering projects such as the Daduhe Bridge, the construction technologies of roadbeds under complex environment and disaster prevention, key technologies for railway suspension bridges spanning plateau canyons for a kilometer or above, drilling and blasting construction technology for high-altitude and deep-buried complex geological and environmental tunnels. During the Reporting Period, the Group won 15 Zhan Tianyou Civil Engineering Prizes, 19 China Construction Engineering Luban Prizes, 54 National Quality Engineering Awards (of which 4 projects were awarded the National Quality Engineering Gold Award); 525 scientific and technological advancement awards at the provincial and ministerial level; 9,256 authorized patents, including 1,875 invention patents and 201 overseas PCT patents; and 794 provincial and ministerial engineering methods. The two patents applied by the subordinate enterprises, namely "Steel Pipe Concrete Rotary Hinging Device, Rotating System and Method Determining Rotating System Parameters" and "Track Layer Automatically Changing Span in Advancing Process and Usage", won the silver medal of the 23rd China Patent Award. Four patents, namely "Capping Construction Method for Hollow Pier", "Parallel Construction Method of Bridge Deep Water Foundation Bored Pile and Cofferdam", "A Cantilever Assembly Construction Method for Multi-main Truss Steel Truss Structure" and "Automatic Welding Device and Automatic Welding Method for Steel Main Beam Assemblies of Large Composite Beams", won China Excellent Patent Awards.

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### IV. Establishment and Implementation of Safety and Quality System

The Group has multiple special grade, comprehensive, and grade A qualifications, and is one of the enterprises with various qualifications of the highest grade, fullest range and largest number. As of the end of the Reporting Period, the Company had a total of 2,685 construction enterprise qualifications, including 79 special grade general contracting qualifications and 305 first grade qualifications. In terms of engineering design and survey, we have 264 engineering design qualifications, including 4 comprehensive engineering design qualifications; we have 67 engineering survey qualifications, including 7 comprehensive engineering survey qualifications.

In terms of the establishment of the system, the Company has set up the Production Safety (Quality) Committee, which is responsible for all aspects of the production safety of the Group. The Committee has 2 directors, who are the secretary of the party committee, chairman, and president of the Company, respectively, 1 deputy director, who is the vice president in charge of safety and quality, and members including other leadership team and senior management, and heads of relevant departments of the headquarters of the Company. Tier 2 and tier 3 companies have production safety supervision and management departments, and construction and investment enterprises have full-time safety directors.

In terms of the improvement of systems, In 2022, the Company issued the Implementation Plan of China Railway for Improving the Safety and Quality Control System, which purports to build a work mechanism of "horizontal cooperation and collaboration, vertical effective connection" among production key departments and form a "big safety" production pattern. The Company established a comprehensive "1+9+N" system, formulated the Measures of China Railway for the Management of Safety, Quality and Environmental Protection, a programmatic document guiding the overall work, revised the regulations on emergency management of work safety and emergency plans, issued the guidelines on preventing and reducing natural disasters, and published the Ten Stringent Rules for Public Security and Rigid Standards so as to promote the engineering quality improvement and the implementation of the "double carbon" program, revised the regulations of China Railway on excellence creation.

In terms of monitoring the implementation of the system, the Company established a safety, quality and environmental protection inspection team, three stationed inspection groups and a number of control and inspection teams, and set up the Tibet Team of China Railway No.2 Engineering of National Tunnel Emergency Rescue, showing a change from single safety management system to synergistic multiple systems, and from result orientation to process orientation, and constituting a systematic, three-dimensional and normalized pre-control mechanism that integrates inspection, assistance and guidance. The Company organized special inspections for the resumption of work and production, screening of potential safety risks, safety inspections of self-built housing, inspections of workplace safety, and inspections of fire prevention and disaster prevention. We organized examinations for all employees to know and understand the Production Safety Law, production safety management system and requirements, and assigned specialists to conduct on-site examinations for the leaders, senior management and all employees of 18 engineering bureaus, which effectively improved the knowledge and ability of all employees on production safety.

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### V. Implementation of Environmental Protection Measures

The details are set out in the “Environmental Information” of “Environmental and Social Responsibility” on pages 329 to 332 of this annual report.

### VI. Compliance with Laws and Regulations

As a company dually listed on Shanghai Stock Exchange and the main board of the Hong Kong Stock Exchange, during the reporting period, the Group strictly complied with laws and regulations including the Company Law, the Securities Law, the Code of Corporate Governance for Listed Companies, and the various rules of the Shanghai Stock Exchange and the Hong Kong Stock Exchange, continuously enhanced the corporate governance structure and brought forth new ideas to the operational mechanism of corporate governance, thereby continuously enhancing the rationality and effectiveness of corporate governance. During the reporting period, there was no material breach of laws and regulations by the Group.

### VII. Maintenance of Relationship with Stakeholders

The Group always maintains a cooperation relationship of harmony, mutual trust and mutual benefit with its stakeholders, insists on putting itself in the shoes of the stakeholders to consider issues and proactively responds to the important issues of the stakeholders’ concern. The Group has in place a smooth, standardized and distinctive communication system with the stakeholders, and strives to achieve mutual, harmonious and win-win development with the stakeholders.

### VIII. Outlook

Facing the challenging international environment and the arduous tasks of domestic reform, development, and stability, the Central Economic Work Conference emphasized the necessity to “more effectively coordinate the improvement in quality and the reasonable increase in quantity, uphold the principle of quality first, and quantitative increase giving rise to a qualitative change.” This highlights the determination and confidence of the Central Committee of CPC and the State Council to grasp big economic picture and accelerate the economic recovery in the first year after the Party’s 20th National Congress. The infrastructure investment, as the main force of stabilizing the economy by “counter-cycle adjustment + cross-cycle adjustment”, is expected to play a more dominant role as an engine in stabilizing growth. **First, from the perspective of planning and development opportunities.** The successive release of a series of important planning documents including the 14th Five-Year Plan for the Development of Modern Integrated Transportation System, the 14th Five-year Plan for the Development of Construction Industry, Guideline To Accelerate Construction of Urban and Rural Environmental Infrastructure, 14th Five-Year Plan on Modern Energy System Planning, Work Plan on Solidly Promoting the Implementation of Major Transportation Projects under the 14th Five-Year Plan, New Urbanization Implementation Plan during the 14th Five-Year Plan Period, and the 14th Five-Year Plan National Urban Infrastructure Construction, and the thorough implementation of regional major strategies and regional coordinated development strategies including the coordinated development of the Beijing-Tianjin-Hebei region, the development of the Yangtze River Economic Belt, the construction of Guangdong-Hong Kong-Macao Greater Bay Area, the integrated development of the Yangtze River Delta, and the ecological protection and high-quality development of the Yellow River basin have laid a solid foundation for the steady and sound development of the infrastructure industry in the future. According to the plan, by 2025, China’s operation

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mileage of railway, highway and urban rail transit is expected to reach 165,000 kilometers, 5.5 million kilometers and 10,000 kilometers, respectively, and more than 95 percent of cities with a population of over 500,000 will be covered with the high-speed railway network with the trains running at 250 kilometers and above per hour. By 2035, the total length of the national integrated three-dimensional transportation network is estimated to achieve approximately 700,000 kilometers (excluding the length of overseas sections of international land routes, air and sea routes and mail routes), including about 200,000 kilometers of railways, 460,000 kilometers of roads, and 25,000 kilometers of high-grade navigation route. A modern urban infrastructure system that is systematic, sound, efficient, smart, green, safe and reliable will be established. Construction will be made in a way of green transformation. Its overall quality, operation efficiency, and service and management level is expected to be on par with international advanced levels.

**From the perspective of changes in policy orientation.** While the construction of major projects was accelerated, various policy supports also continued to inject impetus. The 11th meeting of the Central Committee for Financial and Economic Affairs on April 26, 2022 calls for “all out” infrastructure push. Strengthening infrastructure construction in an all-round way is of great strategic significance to ensuring national security as well as playing the pillar role in economic development. At the end of July 2022, The General Office of the State Council set up a coordination mechanism for promoting effective investment in major projects, and coordinated the implementation of investment policies such as policy-oriented development financial instruments. The Central Economic Work Conference held at the end of 2022 stressed lifting overall social investment through government investment and policies, speeding up the implementation of the “14th Five-Year Plan” major projects, and strengthening the inter-regional infrastructure connectivity. It is also noted that policy-based finance should increase financing support for major projects in line with national development plans and industrial policies, and encourage and attract more private capital to participate in the construction of major national projects and projects to make up for shortcomings. The Outline of the Strategic Plan for Expanding Domestic Demand (2022-2035), issued by The State Council at the end of 2022, sets out the requirements in terms of promoting consumption in an all-round way, accelerating the improvement and upgrading of consumption, optimizing investment structure, expanding investment space, promoting coordinated development between urban and rural areas and between regions, unleashing the potential of domestic demand, improving the quality of supply, and driving effective sanctification of demand. A study by the National Development and Reform Commission shows that China’s per capita infrastructure capital stock is only 20% to 30% of that of developed countries. China’s traditional infrastructure construction demands are still huge. The layout of new infrastructure is accelerated, investment in industrial transformation and upgrading is increased, and there are still many weak points in people’s livelihood, which will give rise to more investment demand.

**From the perspective of degree of financial support.** China is giving top priority to stabilizing growth. Fiscal policy will be more effective and fiscal expansion will be further intensified. With the comprehensive use of deficit, special bonds, discount interest and other tools, fiscal funds for infrastructure construction will maintain a steady growth. In particular, further expansion of the areas of investment and scope of capitalization of the special-purpose bonds will leverage more incremental funds. Monetary policy will be targeted and effective, with the focus on supporting infrastructure and major projects. Credit conditions are expected to be further eased, market-based interest rates will continue to fall, and the scale of new policy-based development financial instruments will continue without abating. According to the reports of 31 provinces on the execution of budgets for 2022 and on the draft budgets for 2023, new special-purpose bonds for 2023 approved by the Ministry of Finance ahead of time were RMB2.19 trillion, an increase of 50% as compared with the RMB1.46 trillion in the previous year. This is the first time that the new special-purpose bonds approved ahead of time exceeded RMB2 trillion. At the same time, the number of areas in which special-purpose bonds can be invested increased from the original nine to 11 (adding two areas, i.e. new energy projects and new infrastructure), and the number of areas that can be used as project capital increased from



## BUSINESS OVERVIEW

the original 10 to 13 (adding three areas, i.e. new energy projects, coal reserve facilities and national industrial parks' infrastructure). **From the perspective of industry innovation and upgrading.** During the 14th Five-Year Plan period, investment in traditional infrastructure will continue to remain high. Major projects such as Plateau Railway, Chengdu-Chongqing Middle Line High-speed Railway, and South-north Water Diversion will kick off one after another. the "New Infrastructure" is about to start. There is vast potential for the development of smart cities, smart transportation and smart energy. Industry innovation requires more technological empowerment. The construction industry will gradually shift from being driven by investment and labor and other factors to by innovation. The integration of the construction industry with advanced manufacturing, information technology and energy-saving technology will be further enhanced, and the upgrading of industrialization, digitization and intelligence will accelerate, leading to higher quality development of the construction industry towards content-intensive integration.

During the "14th Five-Year Plan period", China Railway will focus on its historical mission and main responsibilities and business, take promoting high-quality development as the theme, promote transformation and upgrading as the main task, follow the "six must-haves" as the strategic guidance, promote the implementation of the "123456" development strategy, and adhere to the economic line of "two transformations" (i.e. transformation from debt-driven development to accumulation and innovation-driven development, transformation from traditional production and operation to asset management and capital operation). It is committed to becoming an enterprise with five characteristics in the new era: a national pillar with strong sense of responsibility, a pioneer with leading infrastructure, a leader in the industrial chain focusing on green development, a transnational company with brand influence and a modern enterprise with social respect. China Railway will continue to enhance its capacities of competitiveness, innovation, control, influence and risk resistance, and initially build itself into a world-class comprehensive construction industry group with global core competitiveness.

During the "14th Five-Year Plan" period, China Railway will focus on improving its primacy ratio in the industry, in China, and in the world, and on enhancing the synergy among various businesses in the industry chain, the value chain, the supply chain and the innovation chain. It is committed to strengthening the three core businesses of design consulting, engineering construction and equipment manufacturing to catch up with the world-class level; optimizing the two key businesses of characteristic real estate and asset operation to build a first-class brand in China; specializing the two major supporting businesses of resources utilization and financial and merchandise trading to build a first-class platform in the industry; and expanding relevant emerging businesses to open up the second curve, so as to comprehensively enhance its core competitiveness, and lay a solid foundation for its transformation and upgrading.

## BUSINESS OVERVIEW

### IX. Operating Plan

In 2023, the Group will fully implement the spirit of the Party's 20th National Congress and the Central Economic Work Conference, deeply implementing the requirements of the meeting of central enterprise leaders, adhering to the general concept of seeking progress while maintaining stability, fully, accurately, and comprehensively implementing the new development concept, serving to build a new development pattern, and anchoring the primary task of high-quality development. The Group focuses on the primary task of high-quality development, comprehensively strengthen the guiding role of the 14th Five-Year Plan, deeply implement the "123456" development strategy, intensify marketing management, and provide practically a strong support for stable growth. It will also strengthen its physical fitness and efficiency, improve the enterprise economic benefits, intensify efforts to push for reform, boost the corporate vitality; strengthen innovation-driven development and stimulate high-quality development engines; strengthen overseas management and enhance international competitive strength. At the same time, the Group will further implement the decisions and arrangements of the Party Central Committee and the State Council on improving the quality of listed companies and the relevant work requirements of the SASAC, and promote quality improvement and valuation recovery from multiple dimensions such as management philosophy, value creation, value transmission, and value realization.

In 2023, the Group proposes the development goal of "three increases, two controls and four upgrades" according to the assessment index system of "one profit and five ratios" by the State-owned Assets Supervision and Administration Commission in consideration of the reality of the Group. The "three increases" means increase in the amount of new contracts, operating income and gross profit; "two controls" means no year-on-year increase in gearing ratio and a decrease in the percentage of "two funds" in the operating income; "four upgrades" means improvement in net return on assets, gross labor productivity and operating cash ratio, and increase in investment in research and development. On the basis of ensuring the fulfillment of the above indexes, the Group also needs to further continuously optimize the structure by breaking down the indexes such as net return on assets, amount of new contracts, and "two funds". It is necessary to identify weak points in business development and asset quality and focus on optimizing them. At the same time, attention should be paid to marginal improvement, and efforts should be made to consolidate the trend of improving the quality of economic operation, and drive gradual improvement in quality through continuous accumulation of increments.

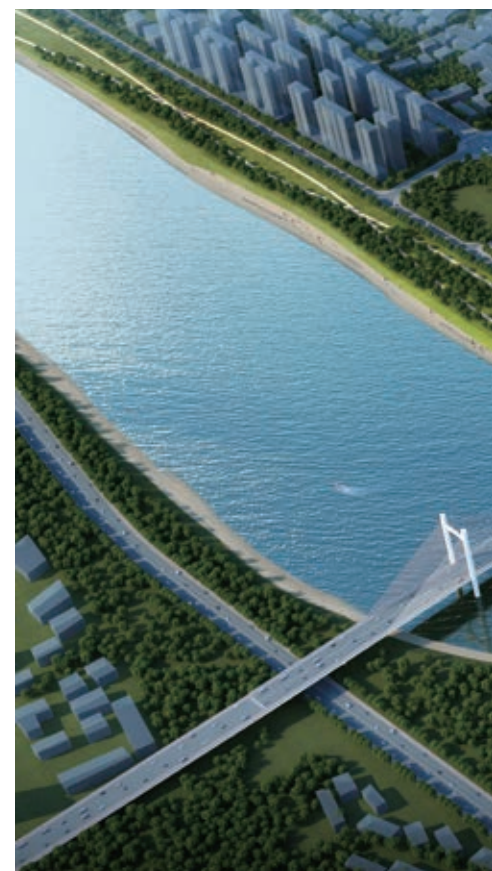
In 2023, the Group plans to achieve total revenue of approximately RMB1.2 trillion, costs of operation (including interest expense) of approximately RMB1,078.5 billion, four expenses of approximately RMB66.5 billion. It is estimated that the new contracts to be entered into will amount to approximately RMB3.2 trillion. The Group will promptly adjust its operation plan to suit market conditions and to reflect the actual implementation of the plan.

# MANAGEMENT DISCUSSION AND ANALYSIS



## CHEN Wenjian

Executive Director, President and Deputy Secretary to the CPC Committee



## I. Financial Performance Overview

The Group's principal business activities are infrastructure construction, survey, design and consulting services, engineering equipment and component manufacturing, property development and other businesses.

In the year of 2022, the Group achieved revenue of RMB1,154.349 billion, representing a year-on-year increase of 7.6%. Profit for the year increased by 14.8% year-on-year to RMB34.972 billion while profit for the year attributable to owners of the Company increased by 13.2% year-on-year to RMB31.276 billion.

A comparison of the financial results for 2022 and 2021 is set forth below.

## II. Consolidated Results of Operations

### Revenue

In 2022, the Group's revenue increased year-on-year by 7.6% to RMB1,154.349 billion. It was mainly due to the increase in revenue from the Group's infrastructure construction business. Among which, revenue from overseas was RMB58.437 billion, representing a year-on-year increase of 6.7%.

### Cost of sales and services and gross profit

The Group's cost of sales and services primarily includes cost of raw materials and consumables, subcontracting cost, equipment usage cost (consisting of maintenance, rental and fuel), employee compensation and benefits



## MANAGEMENT DISCUSSION AND ANALYSIS



Shanty Town Renovation Project of Chengdong, Ziyang District, Yiyang City

and depreciation and amortization expenses. In 2022, the Group's cost of sales and services recorded a year-on-year increase of 7.8% to RMB1,045.459 billion while gross profit of the Group increased year-on-year by 5.3% to RMB108.890 billion. The overall gross profit margin for 2022 was 9.4%, which is basically the same as 9.6% for 2021.

### Other income

The Group's other income primarily consists of dividend income, subsidies from government and compensation and claims. In 2022, the Group's other income was RMB2.623 billion, decreased by 4.1% from RMB2.736 billion of last year. Such decrease of other income was primarily due to the decrease in compensation and claims.

### Other expenses

The Group's other expenses primarily includes lawsuit expenditure and others. In 2022, other expenses decreased by 45.4% from RMB1.982 billion of last year to RMB1.082 billion.

### Net impairment losses on financial assets and contract assets

The Group's net impairment losses on financial assets and contract assets mainly includes impairment losses on trade and other receivables, other financial assets at amortised cost and contract assets. In 2022, the Group's net impairment losses on financial assets and contract assets decreased year-on-year by 39.0% to RMB3.343 billion, mainly attributable to the decrease in impairment losses on trade and other receivables.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Other gains/(losses), net

The Group's other gains and losses mainly include gains and losses on disposal or write-off of financial assets or liabilities, joint ventures, associates and subsidiaries, foreign exchange gains or losses, impairment losses on property, plant and equipment and other assets and changes in the fair value of financial assets or liabilities through profit and loss. The Group's other gains recorded RMB615 million in 2022, mainly comprised of exchange gains of RMB566 million and deemed disposal gains of interest in associates of RMB483 million.

### Losses from derecognition of financial assets at amortised cost

The Group's losses from derecognition of financial assets at amortised cost mainly include the losses arising on derecognition of trade receivables which were transferred in accordance with asset-backed notes ("ABN") and asset-backed securities ("ABS") issuance, and non-recourse factoring agreements. In 2022, the Group's losses from derecognition of financial assets at amortised cost was RMB4.520 billion, representing a decrease of 1.6% from last year. In 2022, the Group transferred trade receivables of RMB68.033 billion and RMB16.908 billion under the issuance of ABN and ABS, and non-recourse factoring agreements, respectively (2021: RMB85.945 billion and RMB14.971 billion, respectively).

### Selling and marketing expenses

The Group's selling and marketing expenses primarily consist of employee compensation and benefits, distribution and logistic costs and advertising costs. In 2022, the Group's selling and marketing expenses amounted to RMB6.328 billion, representing a year-on-year increase of 6.4%. Such increase was mainly due to the increase in sales agency fee of the real estate business as well as the increased investment in sales and marketing for strengthening business development effort. The selling and marketing expenses as a percentage of the total revenue for 2022 was 0.5%, representing a year-on-year decrease of 0.1 percentage point.

### Administrative expenses

The Group's administrative expenses mainly consist of employee compensation and benefits and depreciation and amortization of its assets related to administration. In 2022, the Group's administrative expenses was RMB26.413 billion, representing a year-on-year increase of 3.8%. Such increase was mainly due to the increase in staff salary brought by the expansion of business scale, the increase of business activities and the improvement of efficiency. Administrative expenses as a percentage of revenue for 2022 was 2.3%, representing a year-on-year decrease of 0.2 percentage point.

### Research and development expenditures

In 2022, the Group's research and development expenditures increased by 12.1% from RMB24.756 billion of last year to RMB27.742 billion, mainly due to the Group's continuous advancement on scientific research and technological innovation and further increase input in research and development.

### Finance costs, net

In 2022, the Group's net finance costs (finance costs less finance income) was RMB1.305 billion, representing a decrease of 13.6% from last year. It was mainly due to the increase in investment and financial income from the growth in scale of infrastructure construction investment projects under financial asset mode. Secondly, there was a continuous decrease in average financing cost attributable to the continuous strengthened fund control and reasonable replacement of borrowings with higher interest rates.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Profit before income tax

As a result of the foregoing factors, the profit before income tax for 2022 increased by RMB5.056 billion or 12.8% to RMB44.692 billion from RMB39.636 billion for 2021.

### Income tax expense

In 2022, the Group's income tax expense increased year-on-year by 6.0% to RMB9.720 billion. By excluding the impact of land appreciation tax, the effective income tax rate of the Group decreased by 1.0 percentage point from 18.0% for 2021 to 17.0% for 2022.

### Profit for the year attributable to owners of the Company

In 2022, profit for the year attributable to owners of the Company increased by 13.2% to RMB31.276 billion from RMB27.618 billion for 2021.

## III. Segment Results

The revenue and results of each segment of the Group's business for the year ended 31 December 2022 are set forth in the table below.

Business Segment	Revenue <i>RMB million</i>	Growth Rate <i>(%)</i>	Profit/(loss) Before Income Tax		Growth Rate <i>(%)</i>	Profit/(loss) Before Income Tax Margin <sup>1</sup> <i>(%)</i>	Revenue as a Percentage of Total <i>(%)</i>	Profit/(loss) Before Income Tax as a Percentage of Total <i>(%)</i>
			<i>RMB million</i>	<i>(%)</i>				
Infrastructure Construction	1,019,730	7.0	39,286	14.9	3.9	82.0	78.8	
Survey, Design and Consulting Services	19,795	6.4	1,753	8.5	8.9	1.6	3.5	
Engineering Equipment and Component Manufacturing	38,863	17.1	2,375	17.1	6.1	3.1	4.8	
Property Development	54,082	5.4	(1,451)	Profit turned into loss	(2.7)	4.3	(2.9)	
Other Businesses	111,538	9.4	7,856	34.8	7.0	9.0	15.8	
Inter-segment Elimination and Adjustments	(89,659)		(5,127)					
<b>Total</b>	<b>1,154,349</b>	<b>7.6</b>	<b>44,692</b>	<b>12.8</b>	<b>3.9</b>	<b>100.0</b>	<b>100.0</b>	

<sup>1</sup> Profit/(loss) before tax margin is the profit before tax divided by the revenue.



## MANAGEMENT DISCUSSION AND ANALYSIS

### Infrastructure construction business

Revenue from the Group's infrastructure construction business is mainly derived from construction of railway, highway and municipal works. Revenue from the infrastructure construction business continues to account for a high percentage of total revenue of the Group. In 2022, the revenue from the infrastructure construction business accounted for 82.0% of the total revenue of the Group (2021: 82.3%). In 2022, various tasks of the Group progressed steadily and orderly and the Group's revenue of infrastructure construction business increased by 7.0% year-on-year to RMB1,019.730 billion. Gross profit margin and profit before income tax margin of the infrastructure construction segment for 2022 was 8.1% and 3.9% respectively, remained basically the same as 8.1% and 3.6% respectively for 2021.

### Survey, design and consulting services business

Revenue from the operation of the survey, design and consulting services business primarily derives from providing a full range of services on survey, design and consulting, research and development, feasibility studies and compliance certification of infrastructure construction projects. In 2022, the Group's survey, design and consulting services business developed sustainably and steadily, with revenue recorded RMB19.795 billion, representing a year-on-year increase of 6.4%. Gross profit margin and profit before income tax margin for the segment for 2022 was 27.9% and 8.9% respectively, remained basically the same as 27.9% and 8.7% respectively for 2021.

### Engineering equipment and component manufacturing business

Revenue from the operation of the engineering equipment and component manufacturing business primarily derives from the design, research and development, manufacture and sale of turnouts and other railway-related equipment, bridge steel structures and construction machinery. In 2022, the Group seized the dividends of the "steady growth" policy and the development opportunities of the equipment manufacturing industry, and continued to increase market development efforts. In 2022, the Group's revenue of the engineering equipment and component manufacturing business of the Group increased by 17.1% year-on-year to RMB38.863 billion. Gross profit margin and profit before income tax margin was 20.0% and 6.1% respectively for 2022 (2021: 21.0% and 6.1% respectively). The decrease in gross profit margin was mainly due to the decrease in profitability of manufacture and installation of steel structure business resulting from the fluctuation of steel price and intense market competition.

### Property development business

In 2022, the Group closely monitored the changes in policies and market conditions, speed up the progress of house delivery and destocking. In 2022, revenue from property development business recorded RMB54.082 billion, increased by 5.4% year-on-year. Gross profit margin and profit before income tax margin was 12.4% and -2.7% (2021: 17.0% and 3.2% respectively). The decrease in gross profit margin and the turnaround of profit to loss before income tax was mainly due to ① certain projects were sold at low prices due to market downturn factors. ② the profitability was affected by the change in product mix recognized for revenue this year.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Other businesses

In 2022, the Group strived to progressively implementing the “limited and interrelated” diversification strategy, revenue from other businesses increased year-on-year by 9.4% to RMB111.538 billion in 2022. Gross profit margin for 2022 was 17.4%, remained basically the same as 17.8% for 2021. Profit before income tax for 2022 was RMB7.856 billion (2021: RMB5.830 billion). Among which, ① Revenue from mining was RMB8.007 billion, a year-on-year increase of 26.9% while gross profit margin was 55.3%, an increase of 0.7 percentage point from last year. ② Revenue from merchandise trading was RMB77.715 billion, a year-on-year increase of 4.1% while gross profit margin was 3.4%, an increase of 0.3 percentage point from last year. ③ Revenue from financial business was RMB4.620 billion, a year-on-year increase of 10.4% while gross profit margin was 91.1%, an increase of 1.4 percentage points from last year. ④ Revenue from infrastructure operation business was RMB4.413 billion, a year-on-year increase of 78.7% while gross profit margin was 18.3%, an increase of 6.2 percentage points from last year.

## IV. Cash Flow

In 2022, the net cash inflow from operating activities of the Group amounted to RMB43.552 billion, representing an increase in net cash inflow of RMB30.483 billion from RMB13.069 billion for 2021, mainly attributable to the Group actively took advantage of the “steady growth” measures implemented by the state to speed up the recovery of funds, and at the same time strengthened cash flow management and control, striving to improve the financial situation.

In 2022, the net cash outflow from investing activities of the Group amounted to RMB84.388 billion, representing an increase in net cash outflow of RMB6.931 billion from RM77.457 billion for 2021, which was mainly due to the increase of investment in long-term assets.

In 2022, the net cash inflow from financing activities of the Group amounted to RMB96.365 billion, an increase in net cash inflow of RMB29.000 billion from RMB67.365 billion for 2021, which was mainly due to the increase in external financing to meet production and operation needs.

### Capital expenditure

The capital expenditure of the Group primarily comprises expenditure on purchases of equipment, the expenditure of service concession arrangements including in intangible assets and upgrading of the Group’s production facilities. The Group’s total capital expenditure for 2022 was RMB103.246 billion (2021: RMB65.542 billion), which was mainly due to the capital expenditure in relation with the Group’s acquisition of equity interest in Yunnan Dianzhong Water Diversion Engineering Co., Ltd. during the year.

## MANAGEMENT DISCUSSION AND ANALYSIS

The following table sets forth the Group's capital expenditure by business segment in 2022.

	Infrastructure construction <i>RMB million</i>	Survey, design and consulting services <i>RMB million</i>	Engineering equipment and component manufacturing <i>RMB million</i>	Property development <i>RMB million</i>	Other businesses <i>RMB million</i>	Total <i>RMB million</i>
Property, plant and equipment	49,822	530	926	2,002	1,059	54,339
Lease prepayments	56	46	12	281	9	404
Investment properties	1,100	200	–	14	433	1,747
Intangible assets	14,837	30	5	20	30,824	45,716
Mining assets	8	–	–	–	–	8
Right-of-use assets	794	26	16	37	159	1,032
<b>Total</b>	<b>66,617</b>	<b>832</b>	<b>959</b>	<b>2,354</b>	<b>32,484</b>	<b>103,246</b>

### Working capital

	As at 31 December	
	2022	2021
	<i>RMB million</i>	<i>RMB million</i>
Inventories	<b>49,198</b>	45,371
Trade and bills receivables	<b>160,574</b>	157,025
Trade and bills payables	<b>480,430</b>	405,520
Turnover of inventory (days)	<b>16</b>	16
Turnover of trade and bills receivables (days)	<b>50</b>	50
Turnover of trade and bills payables (days)	<b>153</b>	147

At the end of 2022, the balance of the Group's inventories was RMB49.198 billion, representing an increase of 8.4% from the end of 2021. The Group's inventory turnover days was 16 days in 2022, basically remained the same as 2021.

### Trade and bills receivables

At the end of 2022, the Group's trade and bills receivables increased by 2.3% from the end of 2021 to RMB160.574 billion while the turnover days of trade and bills receivables was 50 days in 2022, basically remained the same as 2021. According to the ageing analysis of the Group's trade and bills receivables, most of the Group's trade and bills receivables were of less than one year and the trade and bills receivables of more than one year accounted for 27.6% (31 December 2021: 24.5%) of the total receivables, which reflected the sound receivables management capability of the Group.

## MANAGEMENT DISCUSSION AND ANALYSIS

The following table sets forth the ageing analysis of the Group's trade and bills receivables as at 31 December 2022 and 2021, based on invoice date.

	As at 31 December	
	2022	2021
	<i>RMB million</i>	<i>RMB million</i>
Less than one year	<b>116,291</b>	118,517
One year to two years	<b>19,811</b>	14,919
Two years to three years	<b>7,853</b>	10,297
Three years to four years	<b>5,587</b>	4,562
Four years to five years	<b>3,245</b>	1,407
More than five years	<b>7,787</b>	7,323
<b>Total</b>	<b>160,574</b>	157,025

### Trade and bills payables

The Group's trade and bills payables primarily consist of amounts owed to the Group's suppliers of raw materials, machinery and equipment. The Group's trade and bills payables increased by 18.5% from end of 2021 to RMB480.430 billion as at the end of 2022. The turnover days of trade and bills payables was 153 days in 2022, an increase of 6 days from 147 days in 2021. According to the ageing analysis of the Group's trade and bills payables, most of the Group's trade and bills payables were of less than one year and the trade and bills payables of more than one year accounted for 8.5% (31 December 2021: 8.6%) of the total payables.

The following table sets forth the ageing analysis of the Group's trade and bills payables as at 31 December 2022 and 2021, based on invoice date.

	As at 31 December	
	2022	2021
	<i>RMB million</i>	<i>RMB million</i>
Less than one year	<b>439,796</b>	370,538
One year to two years	<b>22,478</b>	19,622
Two years to three years	<b>9,311</b>	9,274
More than three years	<b>8,845</b>	6,086
<b>Total</b>	<b>480,430</b>	405,520

## MANAGEMENT DISCUSSION AND ANALYSIS

### V. Borrowings

The following table sets forth the Group's total borrowings as at 31 December 2022 and 2021. 28.0% of the Group's borrowings were short-term borrowings (31 December 2021: 36.4%). The Group is generally capable of making timely repayments.

	As at 31 December	
	2022	2021
	<i>RMB million</i>	<i>RMB million</i>
Bank borrowings		
Secured	<b>120,449</b>	81,976
Unsecured	<b>205,020</b>	152,824
	<b>325,469</b>	234,800
Long-term debentures, unsecured	<b>53,122</b>	55,007
Other borrowings		
Secured	<b>1,895</b>	1,992
Unsecured	<b>11,756</b>	20,128
<b>Total</b>	<b>392,242</b>	311,927
Long-term borrowings	<b>282,508</b>	198,503
Short-term borrowings	<b>109,734</b>	113,424
<b>Total</b>	<b>392,242</b>	311,927

Bank borrowings carry interest rates ranging from 0.75% to 6.65% (31 December 2021: 0.75% to 9.50%) per annum. Long-term debentures carry fixed interest rates ranging from 2.14% to 4.80% per annum (31 December 2021: 2.14% to 4.50%). Other borrowings carry interest rates of 2.90% to 4.43% (31 December 2021: 2.35%) per annum. In 2022, the Group's average cost of financing was 3.94%, representing a year-on-year decrease of 0.17 percentage point.

## MANAGEMENT DISCUSSION AND ANALYSIS

The following table sets forth the maturity of the Group's borrowings as at 31 December 2022 and 2021.

	As at 31 December	
	2022	2021
	<i>RMB million</i>	<i>RMB million</i>
Less than one year	<b>109,734</b>	113,424
One year to two years	<b>42,096</b>	31,351
Two years to five years	<b>71,435</b>	64,552
More than five years	<b>168,977</b>	102,600
<b>Total</b>	<b>392,242</b>	311,927

As at 31 December 2022 and 2021, the Group's floating-rate borrowings was RMB233.856 billion and RMB156.440 billion respectively.

The following table sets forth the carrying amounts of the Group's borrowings by currencies as at 31 December 2022 and 2021. The Group's borrowings are primarily denominated in Renminbi and the Group's foreign currency borrowings are primarily denominated in U.S. dollars.

	As at 31 December	
	2022	2021
	<i>RMB million</i>	<i>RMB million</i>
RMB	<b>383,834</b>	299,876
USD	<b>8,213</b>	11,682
Euro	<b>10</b>	13
Others	<b>185</b>	356
<b>Total</b>	<b>392,242</b>	311,927



## MANAGEMENT DISCUSSION AND ANALYSIS

The following table sets forth the details of the Group's secured borrowings as at 31 December 2022 and 2021.

	As at 31 December			
	2022		2021	
	Secured borrowings <i>RMB million</i>	Carrying amount of pledged assets and contract value of certain rights <i>RMB million</i>	Secured borrowings <i>RMB million</i>	Carrying amount of pledged assets and contract value of certain rights <i>RMB million</i>
Property, plant and equipment	2,205	3,878	295	1,715
Intangible assets	75,252	96,955	45,894	64,728
Properties under development for sale	5,013	13,420	7,699	30,698
Trade and bills receivables	319	319	221	221
Trade receivables from fellow subsidiaries of the Group	14	375	34	375
Contract assets	39,541	63,529	29,825	48,320
<b>Total</b>	<b>122,344</b>	<b>178,476</b>	<b>83,968</b>	<b>146,057</b>

As at 31 December 2022, the Group's unused credit line facility from banks was RMB1,505.574 billion (31 December 2021: RMB1,201.491 billion). As at 31 December 2022, the Group's gearing ratio (total liabilities/total assets) was 73.8%, representing an increase of 0.1 percentage point from 73.7% as at 31 December 2021.

## MANAGEMENT DISCUSSION AND ANALYSIS

### VI. Contingent Liabilities

The contingent liabilities related to legal claims in the Group's ordinary course of business are set forth in the table below:

	As at 31 December	
	2022	2021
	RMB million	RMB million
Pending lawsuits ( <i>Note 1</i> )		
– arising in the ordinary course of business	5,116	5,256

*Note 1: The Group has been involved in a number of lawsuits arising in the ordinary course of business. Provision has been made for the probable losses to the Group on those claims when the management can reasonably estimate the outcome of the lawsuits taking into account of the legal advice. No provision has been made for those pending lawsuits where the management considered that the outcome of the lawsuits cannot be reasonably estimated or management believes the outflow of resources is not probable. The aggregate sum of those unprovided claims is disclosed in the table above.*

### VII. Business Risks

The risks faced by the Group include investment risk, international operation risk, cash flow risk, and health, safety and environmental protection risk in the ordinary course of business.

- (1) **Investment risk:** It refers to the risk that due to the uncertainty of investment results arising from uncontrollable external factors, insufficient research and feasibility studies prior to project investment, inappropriate project implementation and management, significant changes in external macro environment and policies and other factors, which may lead to an investment return lower than expected or an investment failure, and scale risk arising from the increase number of investment projects of the Company; among which, the overseas investment risk refers to the risk that overseas investment is affected by factors including local society, politics, economy, culture, policies and regulations, as well as relevant domestic policies and the corporate internationalization talent pool, which may lead to investment failure, lower-than-expected investment return, lower personnel security, damage to the reputation of the enterprise, etc.
- (2) **International operation risk:** It refers to the risk that due to the influence of international political situation, foreign policy changes, administrative intervention from government, economic, social, environmental or technological standard changes and other factors, which may lead to the failure to normally carry out the Company's overseas construction projects.
- (3) **Cash flow risk:** It refers to the possibility that the Company may incur economic losses or damage of reputation in the event of failure to meet the requirements of timely payment, investment expenses or timely repayment of the Company's debts in its operations due to improper management of cash flow.
- (4) **Health, safety and environmental protection risk:** The health, safety and environmental protection risks faced by the Company are mainly concentrated in the construction safety risks of construction projects, and the risk due to the lack of effective management in management system implementation, measure implementation, technical management, subcontract management, equipment management and accident management of the Group, which may lead to major production safety accidents and safety hazards in the enterprise.

## MANAGEMENT DISCUSSION AND ANALYSIS

To prevent the occurrence of various types of risks, the Company carries out monitoring and early warning of relevant major risks, makes various types of risks correspond to the various business processes through the establishment and operation of the risk management and internal control systems, pursuant to which the Group can decompose and identify the critical control point of business processes, develop specific control measures, establish procedures critical control documents, implement the responsibilities of the various types of risks and critical control point, work closely with the day-to-day management and control, and control risk factors and elements. In addition, the Company strictly supervises the important control aspects of earlier stage of feasibility study, planning, reviewing, auditing, approval and decision-making; enhances procedure control and post-assessment work, and develops strategies and contingency plans to deal with risks, which guarantees the overall controllability of the Company's various types of risks.

### Foreign exchange risk

The business operations of the Group are mainly in China with most of its transactions settled in RMB. Nevertheless, the Group continually monitors its exposure to foreign exchange and will take appropriate actions to mitigate the foreign exchange risk when necessary.

## VIII. Material Acquisitions or Disposals

In May 2022, the Group, which originally held 19.83% of Yunnan Dianzhong Water Diversion Engineering Co., Ltd. ("**Yunnan Dianzhong**"), acquired 33.54% equity interest of Yunnan Dianzhong for RMB11,000 million. Yunnan Dianzhong is principally engaged in construction management of Yunnan Dianzhong Water Diversion Project (Phase I). Upon completion of the acquisition, the Group held 53.37% equity interest of Yunnan Dianzhong, which became a subsidiary of the Company.

In October 2022, the Company entered into a joint venture shareholders agreement to set up a joint venture, China Railway Yunnan Construction Investment Co., Ltd.\* ("**Yunnan Construction**"). Yunnan Construction is committed to building an international, professional and market-oriented investment and construction platform centering on Southwest China and expanding to South Asia, Southeast Asia, the Indian Ocean Rim and other regional markets, covering the whole industrial chain business fields such as investment, financing, construction, operation and service. The Company subscribed for a registered capital of RMB70,510 in cash, representing 70.51% of the registered capital of Yunnan Construction. Upon completion of the establishment of Yunnan Construction, the parties increased the registered capital of Yunnan Construction. The Company further subscribed for an additional registered capital of RMB27.284 billion, representing 70.51% of the registered capital upon completion of the increase of the capital contribution, which was paid by the Company by way of injection of its 53.37% equity interest in Yunnan Dianzhong and 100% equity interest in another subsidiary of the Company into Yunnan Construction. Yunnan Construction became a direct subsidiary of the Company upon its establishment and Yunnan Dianzhong became a direct subsidiary of Yunnan Construction. Yunnan Construction is owned as to 70.51% by the Company. As other shareholders of Yunnan Dianzhong injected their respective equity interest in Yunnan Dianzhong into Yunnan Construction to satisfy their respective capital commitment and Yunnan Construction became a subsidiary of the Company, there was a deemed acquisition of 34.79% equity interest in Yunnan Dianzhong by the Company. Details of the acquisition of Yunnan Dianzhong and establishment of Yunnan Construction are disclosed in the Company's announcements (dated 12 May 2022 and 8 October 2022) published on the website of the Hong Kong Stock Exchange.

Save as disclosed in this annual report, the Group did not have any other material acquisitions or disposals of subsidiaries, associates and joint ventures during the reporting period.

## MANAGEMENT DISCUSSION AND ANALYSIS

### IX. Significant Investment

Saved as disclosed in the section headed “Material Acquisitions or Disposals” of “Management Discussion and Analysis” on page 56 of this annual report, the Company did not have any other significant investment during the year ended 31 December 2022. As at 31 December 2022, the total assets of Yunnan Construction is RMB143,555.098 million, accounting for approximately 8.90% of the total assets of the Group. As at 31 December 2022, the net assets of Yunnan Construction is RMB67,360.334 million, accounting for approximately 15.9% of the net assets of the Group. For the year ended 31 December 2022, the net profit of Yunnan Construction is RMB3,070.181 million. Neither Yunnan Dianzhong or Yunnan Construction distributed any dividend after its establishment. Details of the acquisition of Yunnan Dianzhong and establishment of Yunnan Construction are disclosed in the Company’s announcements (dated 12 May 2022 and 8 October 2022) published on the website of the Hong Kong Stock Exchange.

The Company is optimistic about the prospect of Yunnan Dianzhong and Yunnan Construction. The water resources and hydropower engineering is one of the emerging businesses vigorously cultivated to start the second growth curve in the Company’s development planning during the “14th Five-Year Plan” period. The acquisition of Yunnan Dianzhong will help the Group speed up the cultivation and development of their water conservancy and hydropower business, and contribute to the Company’s further participation in water conservancy and hydropower projects within Yunnan Province and even all over the PRC. The Company believes that Yunnan Construction is committed to building an international, professional and market-oriented investment and construction platform centering on Southwest China and expanding to South Asia, Southeast Asia, the Indian Ocean Rim and other regional markets, covering the whole industrial chain business fields such as investment, financing, construction, operation and service.

### X. Future Plans for Material Investments or Acquisitions of Capital Assets and Expected Source of Funding

Save as disclosed in this annual report, the Group did not have any other plans for material investments or acquisition of capital assets as at 31 December 2022.

# BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

## I. Directors



**CHEN Yun**

*Chairman, Executive Director and Secretary to the CPC Committee*

**CHEN Yun (陳雲)** (no other former name/alias), aged 59, senior economist, senior engineer, currently is the President, an executive director, Secretary to the CPC Committee and Chairman of the Strategy Committee and the Nomination Committee under the Board of the Directors of the Company, and is the Chairman and the Secretary to the CPC Committee of CREC. He served as a Standing Member of the CPC Committee of China Communications Construction Group Co., Ltd. and the Deputy General Manager and a Standing Member of the CPC Committee of China Communications Construction Company Limited from April 2007 to September 2014; a Standing Member of the CPC Committee of China Communications Construction Group and a Standing Member of the CPC Committee and the Deputy General Manager of China Communications Construction Company Limited from September 2014 to March 2017; the Deputy Secretary to the CPC Committee of China Communications Construction Group and the Deputy Secretary to the CPC Committee and the Vice President of China Communications Construction Company Limited from March 2017 to September 2017; the Deputy Secretary to the CPC Committee of China Communications Construction Group and the Deputy Secretary to the CPC Committee and an executive director of China Communications Construction Company Limited from September 2017 to November 2017; the Deputy Secretary to the CPC Committee and the Chairman of the Labor Union of China Communications Construction Group and the Deputy Secretary to the CPC Committee, an executive director and the Chairman of the Labor Union of China Communications Construction Company Limited from November 2017 to June 2019. He served as the Deputy Secretary to the CPC Committee of the Company and the Deputy Secretary to the CPC Committee of CREC from June 2019 to August 2019; the President and the Deputy Secretary to the CPC Committee of the Company and the General Manager, a director and the Deputy Secretary to the CPC Committee of CREC from August 2019 to October 2019; the President, an executive director and the Deputy Secretary to the CPC Committee of the Company and the General Manager, a director and the Deputy Secretary to the CPC Committee of CREC from October 2019 to November 2020. He served as the President, an executive director and the Deputy Secretary to the CPC Committee of the Company and the Chairman and the Secretary to the CPC Committee of CREC from November 2020 to December 2020; and served as the Chairman, an executive director and the Secretary to the CPC Committee of the Company and the Chairman and the Secretary to the CPC Committee of CREC since December 2020.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**CHEN Wenjian**

*Executive Director, President and Deputy Secretary to the CPC Committee*

**CHEN Wenjian (陳文健)** (no other former name/alias), aged 50, senior engineer, currently is the President, an executive director, the Deputy Secretary to the CPC Committee and Chairman of the Safety, Health and Environmental Protection Committee under the Board of the Directors of the Company, and is concurrently the General Manager, a director and the Deputy Secretary to the CPC Committee of CREC. He served as the General Manager and the Secretary to the CPC Committee of the Algeria branch of CSCEC from January 2007 to September 2014; the General Manager of the Overseas Business Department of China State Construction Engineering Corporation Limited ("**CSCEC**") from September 2014 to August 2016; the General Manager and the Secretary to the Community Party Working Committee of the Overseas Business Department of CSCEC from August 2016 to December 2017; the General Manager and the Secretary to the Community Party Working Committee of the Overseas Business Department of CSCEC and the General Manager of the Overseas Department of CSCEC from December 2017 to June 2018; the General Manager of the Overseas Department of CSCEC and the Chairman and the Secretary to the CPC Committee of the China State Construction Engineering Corporation International Operations ("**CSCEC International Operations**") from June 2018 to October 2018; the General Manager of the Overseas Department of CSCEC, the Chairman and the Secretary to the CPC Committee of CSCEC International Operations and the Chairman of China Construction (South Pacific) Development Co., Pte Ltd. from October 2018 to March 2020; the Secretary to the CPC Committee and the Chairman of the China Construction Third Engineering Bureau Co., Ltd. from March 2020 to November 2020. He served as the General Manager, a director and the Deputy Secretary to the CPC Committee of CREC from November 2020 to December 2020. He served as the President, an executive director, and the Deputy Secretary to the CPC Committee of the Company, and the General Manager, a director and the Deputy Secretary to the CPC Committee of CREC from December 2020 to today.



## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**WANG Shiqi**

*Executive Director, Deputy Secretary to the CPC Committee and Chairman of the Labour Union*

**WANG Shiqi (王士奇)** (no other former name/alias), aged 57, senior economist, senior political engineer, currently is an executive director, the Deputy Secretary to the CPC Committee and Chairman of the Labor Union of the Company, and the employee director, Deputy Secretary to the CPC Committee, Chairman of the Labor Union, and Party School Principal of CREC. He served as the discipline inspector (deputy bureau director) and supervision commissioner of the Case Hearing Office of the Central Commission for Discipline Inspection of the Communist Party ("CCDI") from February 2009 to April 2014. He served as a Standing Member of the CPC Committee, and the Secretary to the Discipline Inspection Committee of the CPC Committee of the Company and a Standing Member of the CPC Committee and the Secretary to the Discipline Inspection Committee of the CPC Committee of CREC from April 2014 to January 2020; Standing Member of the CPC Committee, the Secretary to the Discipline Inspection Committee of the CPC Committee of the Company and the Deputy Secretary to the CPC Committee of CREC from January 2020 to February 2020. He served as the Deputy Secretary to the CPC Committee of the Company and the Deputy Secretary to the CPC Committee of CREC from February 2020 to April 2020; and an executive Director and the Deputy Secretary to the CPC Committee of the Company, the Deputy Secretary to the CPC Committee and Party School Principal of CREC from April 2020 to January 2021. He has been serving as the executive Director, the Deputy Secretary to the CPC Committee and the Chairman of the Labour Union of the Company and the employee director, the Deputy Secretary to the CPC Committee, the Chairman of the Labour Union, and Party School Principal of CREC since January 2021.



**WEN Limin**

*Non-executive Director*

**WEN Limin (文利民)** (no other former name/alias), aged 56, senior accountant and certified public accountant, currently is a non-executive Director of the Company and an external director of China Aerospace Science & Technology Corporation and an external director of China First Heavy Industries Group Co. Ltd. He served as the Chief Accountant of Dongfang Electric Corporation from September 2005 to August 2016 with concurrent position as the Chairman of the Supervisory Committee of Dongfang Electric Co., Ltd. from June 2014 to March 2018, the Chief Accountant and a member of the CPC Committee Leadership Group of Dongfang Electric Corporation from August 2016 to January 2018, and the Chief Accountant and a member of the CPC Committee Leadership Group of China Southern Power Grid Company Limited from January 2018 to September 2020. He has been an external director of China Aerospace Science & Technology Corporation and an external director of China First Heavy Industries Group Co. Ltd. since December 2020. He has been a non-executive Director of the Company since March 2021.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**CHUNG Shui Ming Timpson**  
*Independent Non-executive  
Director*

**CHUNG Shui Ming Timpson (鍾瑞明)** (no other former name/alias), aged 71, currently is an independent non-executive director of the Company, and concurrently a Pro-Chancellor of the City University of Hong Kong. He is currently an independent non-executive director of The Miramar Hotel & Investment Co., Limited, China Unicom (Hong Kong) Limited, China Overseas Grand Oceans Group Limited, China Everbright Limited, Orient Overseas (International) Limited and Postal Savings Bank of China Co., Ltd.. He served as a member of the 10th to 13th National Committee of the Chinese People's Political Consultative Conference, a senior audit officer of PricewaterhouseCoopers, an independent non-executive director of China Netcom Group Corporation (Hong Kong) Limited, the chairman of China Business of Jardine Fleming Holdings Limited, deputy chief executive officer of BOC International Limited, director-general of the Democratic Alliance for the Betterment and Progress of Hong Kong, chairman of the Advisory Committee on Art Developments, chairman of the Council of the City University of Hong Kong, chairman of the Hong Kong Housing Society, member of the Executive Council of the Hong Kong Special Administrative Region, vice chairman of the Land Fund Advisory Committee of Hong Kong Special Administrative Region Government, member of the Managing Committee of the Kowloon-Canton Railway Corporation, member of the Hong Kong Housing Authority, member of the Disaster Relief Fund Advisory Committee, independent non-executive director of Henderson Land Development Company Limited and Nine Dragons Paper (Holdings) Limited, and China Construction Bank Corporation, independent director of China Everbright Bank Corporation Limited and China State Construction Engineering Corporation Limited, external director of China Mobile Communications Corporation and external director of China COSCO Shipping Corporation Limited. He holds a bachelor of science degree from the University of Hong Kong and a master's degree of business administration from the Chinese University of Hong Kong and obtained a Doctor of Social Sciences honoris causa from the City University of Hong Kong. He was appointed as a Justice of the Peace and received the Gold Bauhinia Star from the Government of Hong Kong Special Administrative Region. He has been an independent non-executive director of the Company since June 2017.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**ZHANG Cheng**

*Independent Non-executive Director*

**ZHANG Cheng (張誠)**, formerly named as ZHANG Xuedong, aged 65, senior engineer, currently is an independent non-executive director of the Company and an external director of Dongfang Electric Corporation. He served as the General Manager and the Secretary to the CPC Committee of China Yangtze Power Co., Ltd. from January 2006 to March 2010, a member of the CPC Committee Leadership Group and a Deputy General Manager of China Three Gorges Corporation with concurrent position as the General Manager and a director of China Yangtze Power Co., Ltd. from March 2010 to April 2015, and concurrently a director of China National Nuclear Power Co., Ltd. from May 2013 to December 2018, as well as a member of the CPC Committee Leadership Group and a Deputy General Manager of China Three Gorges Corporation with concurrent position as Vice Chairman of China Yangtze Power Co., Ltd. from May 2015 to December 2017. He has been an external director of Dongfang Electric Corporation since June 2020. He has been an independent non-executive director of the Company since March 2021.



**XIU Long**

*Independent Non-executive Director*

**XIU Long (修龍)**, formerly named as Xiu Long (修龍), aged 65, senior engineer, researcher and an expert with special State Council allowances, currently is an independent non-executive director of the Company, an external director of China Green Development and Investment Group Co., Ltd. and concurrently the Chairman of the Architectural Society of China. He served as the President and the Deputy Secretary to the CPC Committee of China Architecture Design & Research Group from January 2007 to December 2017 with concurrent position as the Chairman of China Construction Technology Consulting Co., Ltd in 2014, and the Secretary to the CPC Committee and the Chairman of China Construction Technology Co., Ltd. from January 2018 to July 2020 with concurrent position as the Secretary to the CPC Committee and the Chairman of China Construction Technology Consulting Co., Ltd. He has been the Chairman of the Architectural Society of China since 2016 and an external director of China Green Development and Investment Group Co., Ltd. since November 2020. He has been an independent non-executive director of the Company since March 2021.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

### II. Supervisor



**JIA Huiping**

*Chairman of Supervisory  
Committee and Shareholder  
Representative Supervisor*

**JIA Huiping (賈惠平)** (no other former name/alias), aged 57, senior economist and senior political work professional, currently is the Chairman of the Supervisory Committee and Shareholder Representative Supervisor of the Company. He served as the Deputy Secretary to the CPC Committee and the Secretary to the Disciplinary Committee of China Railway No.7 Engineering Group Co., Ltd. from March 2008 to November 2010; the Deputy Secretary to the CPC Committee, the Secretary to the Discipline Inspection Committee, and the Chairman of the Supervisory Committee of China Railway Airport Construction Co., Ltd. from November 2010 to December 2011; the Deputy Secretary to the CPC Committee, the Secretary to the Discipline Inspection Committee and the Chairman of the Supervisory Committee of China Railway Airport Construction Co., Ltd., and head of the South China Center of China Railway Airport Construction Co., Ltd. from December 2011 to August 2014; the Chairman and the Secretary to the CPC Committee of Wuhan Railway Electrification Bureau Group Co., Ltd. from August 2014 to June 2017, as well as head of the cadre department of the Company and head of the cadre department of the CPC Committee of CREC from June 2017 to February 2020. He served as the Vice Chairman of the Labour Union of the Company and the Vice Chairman of the Labour Union of CREC from February 2020 to March 2021. He has been the Chairman of the Supervisory Committee and Shareholder Representative Supervisor of the Company since March 2021.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**YUAN Baoyin**

*Employee Representative  
Supervisor*

**YUAN Baoyin (苑寶印)** (no other former name/alias), aged 59, senior engineer, currently is an employee representative supervisor and the Deputy Secretary to the Discipline Inspection Committee of the Company and concurrently the Deputy Secretary to the Discipline Inspection Committee of CREC. He served as the Deputy Secretary to the CPC Committee and Secretary to the Discipline Inspection Committee of China Railway No.9 Group Co., Ltd. from March 2008 to March 2011; the Deputy Secretary to the Discipline Inspection Committee of the Company and concurrently the Deputy Secretary to the Discipline Inspection Committee of CREC from March 2011 to January 2013; the Chairman and the Secretary to the CPC Committee of China Railway No.9 Group Co., Ltd. from January 2013 to March 2014. He has served as the Deputy Secretary to the Discipline Inspection Committee of the Company and the Deputy Secretary to the Discipline Inspection Committee of CREC from March 2014 to September 2019. He has been an employee representative supervisor and the Deputy Secretary to the Discipline Inspection Committee of the Company, and the Deputy Secretary to the Discipline Inspection Committee of CREC since September 2019.



**LI Xiaosheng**

*Employee Representative  
Supervisor*

**LI Xiaosheng (李曉聲)** (no other former name/alias), aged 50, senior political work professional, currently is an employee representative supervisor and Vice Chairman of the Labour Union of the Company, and concurrently the Vice Chairman of the Labour Union of CREC. He served as the Deputy Secretary to the CP Committee of China Railway No.5 Engineering Group Co., Ltd. from January 2008 to August 2011 and concurrently the external director and vice-chairman of China Railway No.5 Mechanized Engineering Co., Ltd. from April 2009, and the Commanding Officer of China Railway No.5 China-Laos Railway Construction Headquarters from December 2010; the Secretary to the CPC Committee, director and vice-chairman of China Railway International Economic Cooperation Co. Ltd. from August 2011 to October 2013. He served as the deputy chief economist and head of the International Business Department of the Company from October 2013 to April 2015; the vice-chairman of the Labour Union of the Company and CREC from April 2015 to January 2021. He has been an employee representative supervisor and the vice-chairman of the Labour Union of the Company and the vice-chairman of the Labour Union of CREC since January 2021.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**WANG Xinhua**

*Employee Representative  
Supervisor*

**WANG Xinhua (王新華)** (no former name/alias), aged 52, senior accountant, currently is an employee representative supervisor and head (supervisor) of the Audit Department (Office of the Supervisory Committee) of the Company. He served as the chief accountant of the Seventh Engineering Branch of China Railway No.4 Engineering Group Co., Ltd. from January 2011 to July 2014; head of the Finance and Accounting Department, deputy chief accountant, Secretary to the Board of Directors, chief accountant and member of the Standing Committee of the CPC Committee of China Railway No.6 Engineering Group Co., Ltd. from August 2014 to January 2020. He served as the deputy head of the Audit Department of the Company from January 2020 to July 2020, and the head (supervisor) of the Audit Department (Office of Supervisory Committee) of the Company from July 2020 to January 2021. He has been an employee representative supervisor and the head (supervisor) of the Audit Department (Office of Supervisory Committee) of the Company since January 2021.



**WANG Ming**

*Employee Representative  
Supervisor*

**WANG Ming (萬明)** (no other former name/alias), aged 52, senior economist, currently is an employee representative supervisor, and head of the Legal and Compliance Department of the Company. He served as the Chief Legal Advisor of the 8th Engineering Co., Ltd. of CTCE Group from December 2006 to April 2008; the director of the General Office of the Office of the Board of Directors of the Company from April 2008 to March 2011; the deputy director of the Office of the Board of Directors (Office of Supervisory Committee) from March 2011 to September 2015; the director of the Office of Discipline Inspection Committee and director of the Inspection Office of the Company from September 2015 to March 2018; a Standing Member of the CPC Committee, Deputy Secretary to the CPC Committee and the Secretary to the Discipline Inspection Committee of the CPC (kept original rank) of the Company from March 2018 to May 2021; head of the Legal and Compliance Department of the Company from May 2021 to September 2021. He has been an employee representative supervisor, and head of the Legal and Compliance Department of the Company since September 2021.



## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

### III. Senior Management



**SUN Cui**  
*Chief Accountant*

**SUN Cui (孫璀)** (no other former name/alias), aged 56, senior accountant, currently is a Standing Member of the CPC Committee and Chief Accountant of the Company and is also a Standing Member of the CPC Committee of CREC. He served as a member of Preparatory Group and a temporary Standing Member of the CPC Committee of Power Construction Corporation of China, and a Standing Member of the CPC Committee of Sinohydro Corporation and Chief Accountant and Standing Member of the CPC Committee of Sinohydro Group Ltd. from March 2011 to August 2011; the Chief Accountant of Power Construction Corporation of China, a Standing Member of the CPC Committee of Sinohydro Corporation, and Chief Accountant and Standing Member of the CPC Committee of Sinohydro Group Ltd. from August 2011 to December 2011; the Chief Accountant of Power Construction Corporation of China and a Standing Member of the CPC Committee of Sinohydro Corporation from December 2011 to February 2014; a Standing Member of the CPC Committee of Power Construction Corporation of China and a Standing Member of the CPC Committee and Chief Accountant of Powerchina Limited from February 2014 to January 2020; a Standing Member of the CPC Committee of CREC from January 2020 to March 2020. He has been a Standing Member of the CPC Committee and Chief Accountant of the Company and a Standing Member of the CPC Committee of CREC since March 2020.



**LIU Baolong**  
*Vice President*

**LIU Baolong (劉寶龍)**, formerly named as LIU Baolong (劉保龍), aged 58, senior engineer, currently is a Standing Member of the CPC Committee and the Vice President of the Company and a Standing Member of the CPC Committee of CREC. He served as the General Manager, Deputy Secretary to the CPC Committee and Vice Chairman of China Railway No.3 Engineering Group Co., Ltd. and the Commanding Officer of the Construction Headquarters of the Beijing-Shanghai Express Railway undertaken by China Railway No.3 Engineering Group Co., Ltd. from November 2009 to January 2013; a Secretary to the CPC Committee and Vice Chairman of China Railway No.3 Engineering Group Co., Ltd. from January 2013 to March 2014; a Secretary to the CPC Committee, Chairman and legal representative of China Railway No.3 Engineering Group Co., Ltd. from March 2014 to June 2018. He was a Vice President of the Company from June 2018 to February 2021. He served as a Standing Member of the CPC Committee of the Company and a Standing Member of the CPC Committee of CREC from February 2021 to March 2021. He has been a Standing Member of the CPC Committee and the Vice President of the Company and a Standing Member of the CPC Committee of CREC since March 2021.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**REN Hongpeng**  
*Vice President*

**REN Hongpeng (任鴻鵬)** (no other former name/alias), aged 49, senior engineer, currently is a Standing Member of the CPC Committee and the Vice President of the Company and a Standing Member of the CPC Committee of CREC. He served as a Deputy General Manager of China Road and Bridge Corporation from September 2011 to August 2015, a Deputy General Manager and Standing Member of the CPC Committee of China Road and Bridge Corporation from August 2015 to December 2015; a Deputy General Manager and Standing Member of the CPC Committee of China Road and Bridge Corporation and director of CCCG Real Estate Group Co., Ltd. from December 2015 to January 2016; a director of CCCG Real Estate Group Co., Ltd., director, General Manager (legal representative) and temporary Secretary to the CPC Committee of CCCG Overseas Real Estate Pte. Ltd. from January 2016 to February 2017; a director and temporary member of CPC Committee of CCCG Real Estate Group Co., Ltd. and a director, General Manager (legal representative) and temporary Secretary to the CPC Committee of CCCG Overseas Real Estate Pte. Ltd. from February 2017 to June 2018. He served as the Vice President of the Company from June 2018 to February 2021; the Vice President of the Company and a Standing Member of the CPC Committee of CREC from February 2021 to March 2021. He has been a Standing Member of the CPC Committee and the Vice President of the Company and a Standing Member of the CPC Committee of CREC since March 2021.



**KONG Dun**  
*Vice President and Chief Engineer*

**KONG Dun (孔遁)** (no other former name/alias), aged 57, senior engineer, currently is a Standing Member of the CPC Committee, Vice President, and the Chief Engineer of the Company. He served as the Deputy General Manager of China Railway No.4 Engineering Group Co., Ltd. from September 2005 to November 2010; a director, General Manager, and Deputy Secretary to the CPC Committee of Shanghai Civil Engineering Co., Ltd. of CREC from November 2010 to June 2018. He was the Chief Engineer of the Company from June 2018 to April 2021. He has been a Standing Member of the CPC Committee, Vice President, and Chief Engineer of the Company since April 2021.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**MA Jiangqian**

*Vice President and Chief Economist*

**MA Jiangqian (馬江黔)** (no other former name/alias), aged 54, senior economist, currently is a Standing Member of the CPC Committee and Vice President of the Company. He served as the Secretary to the CPC Committee and a director of China Railway No.5 Engineering Group Co., Ltd. From November 2010 to August 2011; the Chairman and Secretary to the CPC Committee of China Railway No.5 Engineering Group Co., Ltd. from August 2011 to January 2013; the General Manager, Deputy Secretary to the CPC Committee and a director of China Railway No.6 Engineering Group Co., Ltd. from January 2013 to June 2014; the General Manager, Deputy Secretary to the CPC Committee and Vice Chairman of China Railway No.6 Engineering Group Co., Ltd. from June 2014 to June 2018. He served as the Chief Economist of the Company from June 2018 to April 2021; a Standing Member of the CPC Committee, Vice President and Chief Economist of the Company from April 2021 to June 2022. He has been a Standing Member of the CPC Committee and Vice President of the Company since June 2022.



**LI Xinsheng**

*Vice President*

**LI Xinsheng (李新生)** (no other former name/alias), aged 43, senior economist and senior political work professional, currently is a Standing member of the CPC Committee and Vice President of the Company. He served as a member of the CPC Committee and the Secretary of the Youth League Committee of the Company from January 2008 to April 2014; the Deputy Secretary to the CPC Committee, the Secretary to the Discipline Inspection Committee of the CPC Committee, Chairman of the Labor Union, and Chairman of Supervisory of Committee of China Railway Resources Group Co., Ltd. from April 2014 to November 2015; the Secretary to the CPC Committee, Executive Director and legal representative of China Railway Material Trade Co., Ltd. from November 2015 to June 2017; the Director of the Party Committee Office (Confidentiality Office) of the Company from June 2017 to October 2017; a member of the CPC Committee, and the Director of the Party Committee Office (Confidentiality Office) of the Company from October 2017 to January 2020; and the Secretary of the CPC Committee, Chairman, and legal representative of China Railway No.5 Engineering Group Co., Ltd. from January 2020 to April 2021. He has been a Standing Member of the CPC Committee and Vice President of the Company since April 2021.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**HE Wen**

*Secretary to the Board of Directors  
and Joint Company Secretary*

**HE Wen (何文)** (no other former name/alias), aged 58, senior accountant, currently is the Secretary to the Board of Directors and Joint Company Secretary of the Company, and concurrently the head of the Appraisal and Distribution Department of the Company. He served as a director and Chief Accountant of China Railway No.4 Engineering Group Co., Ltd. from April 2007 to November 2013, and the Secretary to the CPC Committee, Chairman of the Board of Supervisors and Secretary to the Discipline Inspection Committee of China Railway Trust Co., Ltd. from November 2013 to March 2014. He served as the Deputy Chief Accountant and head of the Finance Department of the Company from March 2014 to June 2017; the head of the Finance Department of the Company from June 2017 to August 2018; the Secretary to the Board of Directors, Joint Company Secretary of the Company, and the head (director) of the Finance and Financial Management Department (Beijing Financial Shared Service Center) of the Company from August 2018 to May 2021. He has been the Secretary to the Board of Directors, Joint Company Secretary of the Company, and the head of Appraisal and Distribution Department of the Company since May 2021.



**ZHAO Bin**

*Chief Economist*

**ZHAO Bin (趙斌)**, (no other former name/alias), aged 54, senior engineer, currently is the Chief Economist and General Manager of Operation and Development Center of the Company. He served as the Deputy General Manager of China Railway No.3 Engineering Group Co., Ltd. from April 2009 to November 2010; a Standing Member of the CPC Committee and Deputy General Manager of China Railway Shanghai Engineering Group Co. Ltd. from November 2010 to December 2017; General Manager (in charge of administration), Deputy Secretary to the CPC Committee and a director of China Railway Guangzhou Engineering Group Co., Ltd. from December 2017 to March 2018; General Manager, Deputy Secretary to the CPC Committee and a director of China Railway Guangzhou Engineering Group Co. Ltd. from March 2018 to May 2021; Director of the Operation and Development Center of the Company from May 2021 to September 2021; General Manager of the Operation and Development Center of the Company from September 2021 to June 2022. He has been the Chief Economist and General Manager of Operation and Development Center of the Company since June 2022.

## BIOGRAPHY OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT



**GENG Shubiao**

*Assistant to the President*

**GENG Shubiao (耿樹標)**, (no other former name/alias), aged 44, senior engineer, currently is the Assistant to the President, Head of Planning and Development Department (Corporate Management Laboratory) (Director) of the Company, General Manager of China Railway High Quality Development Research Institute Co., Ltd., and Director of the “Three Transformations” Research Institute of China Railway. He served as the General Manager, Deputy Secretary to the CPC Committee and Vice Chairman of China Railway No.4 Engineering Group No. 3 Construction Company Limited from May 2011 to June 2014; the Assistant General Manager of China Railway No.4 Engineering Group Co., Ltd. from June 2014 to August 2015; the Deputy General Manager of China Railway No.4 Engineering Group Co., Ltd. from August 2015 to February 2016; the Deputy General Manager and General Counsel of China Railway No.4 Engineering Group Co., Ltd. from February 2016 to December 2019; the Deputy General Manager of China Railway No.4 Engineering Group Co., Ltd. and Executive Deputy Head of the Preparatory Group of China Railway Professional Waterworks and Environmental Protection Company (later China Tiegong Investment and Construction Co., Ltd.) from December 2019 to January 2020; the General Manager, Deputy Secretary to CPC Committee and a Director of China Tiegong Investment and Construction Co., Ltd. from January 2020 to May 2021; the Head of Planning and Development Department (Corporate Management Laboratory) (Director) of the Company, General Manager of China Railway High Quality Development Research Institute Co., Ltd., and Director of the “Three Transformations” Research Institute of China Railway from May 2021 to June 2022. He has been the Assistant to the President of the Company, Head of Planning and Development Department (Corporate Management Laboratory) (Director) of China Railway Group Limited, General Manager of China Railway High Quality Development Research Institute Co., Ltd., and Director of the “Three Transformations” Research Institute of China Railway since June 2022.



**TAM Chun Chung**

*Joint Company Secretary and  
Authorized Representative*

**TAM Chun Chung (譚振忠)**, (no other former name/alias), aged 50, currently is the Joint Company Secretary and authorized representative of the Company and also an independent non- executive director of Lap Kei Engineering (Holdings) Limited. Mr. TAM joined the Company in November 2007. Prior to joining the Company, he served as a Qualified Accountant and Joint Company Secretary of an H-share listed company in Hong Kong. He had also held various senior positions including senior manager of internal audit and senior manager of finance department in another Hong Kong listed company previously. From 1994 to 2000, Mr. TAM worked for a large international accounting firm as an assistant manager. Mr. TAM has over 28 years of experience in the accounting and auditing field. He has been a member of the Hong Kong Institute of Certified Public Accountants since December 1997 and a fellow of the Chartered Association of Certified Accountants since November 2002.



# REPORT OF THE DIRECTORS



## Business Review

### 1. Business Review of the Financial Year

We are one of the strongest and largest multifunctional integrated construction groups in the PRC and even in the world. We are primarily engaged in infrastructure construction, survey, design and consulting services, engineering equipment and component manufacturing, property development and other businesses.

In 2022, faced with a complex and severe external environment and arduous reform and development tasks, the management of the Group has conscientiously implemented the policy decisions and arrangements of the Party Central Committee, the State Council and State-owned Assets Supervision and Administration Commission, and seized opportunities and overcome difficulties, and worked hard and practically, and maintained a good trend of development featuring steady progress and quality improvement throughout the year, and taken solid steps towards high-quality development.

In the year of 2022, the Group achieved revenue of RMB1,154,349 million, representing a year-on-year increase of 7.6%. In the year of 2022, the Group achieved net profit of RMB34,972 million, representing a year-on-year increase of 14.8%. The profit for the year attributable to the owners of the Company was RMB31,276 million, representing a year-on-year increase of 13.2%. The Group has reached a new level of scale, efficiency and quality in its operations.



## REPORT OF THE DIRECTORS

The Group has been one of the top 500 enterprises in the world for 17 consecutive years, ranking 34th in the Fortune Global 500 and 5th in Fortune China 500; ranking No. 2 amongst 250 largest global contractors in the Engineering News Record ENR. It has obtained Grade A in the SASAC Business Performance Appraisal for nine consecutive years, and Class A evaluation result of information disclosure of the Shanghai Stock Exchange for nine consecutive years. Moody's, Fitch and S&P, the three major international rating agencies, rated China Railway as A3/A-/BBB+, with an outlook rating of "stable".

Further details of the Group's business review of the financial year are set out in Parts I to VII of "Business Overview" on pages 22 to 40 and Parts I to VI of "Management Discussion and Analysis" on pages 44 to 55 of this annual report.

### 2. Principal Risks and Uncertainties

The Group may be exposed to a variety of business risks, including investment risk, international operation risk, cash flow risk, health, safety and environmental protection risk in the ordinary course of business.

Further details of the Group's principal risks are set out in "Business Risks" of "Management Discussion and Analysis" on pages 55 to 56 of this annual report.

### 3. Future Development of Businesses

During the "14th Five-Year Plan" period, China Railway continued to deepen the changes in quality, efficiency and power, and fully implemented the key measures of "ten projects", namely strategic leadership, in-depth reform, scientific and technological innovation, management improvement, strengthening enterprises with talents, "double excellence" development overseas, risk prevention and control, digital China Railway, cultural brand, and Party construction, so as to strive to achieve the scale of operation, efficiency, innovation-driven operation, talent development, internationalization, green development, safety and quality and other development goals to achieve the high quality development of China Railway.

Details of the Group's expectations to and plans of future businesses development are set out in Part VIII to Part IX of "Business Overview" on pages 40 to 43 of this annual report.

## Financial Statements

The profits of the Group for the year ended 31 December 2022 and the financial positions of the Group as at such date are set out in the Financial Statements on pages 116 to 292.

## Dividends

The Board of Directors recommends the payment of a final dividend in the amount of RMB0.200 per share (including tax), totalling approximately RMB4.950 billion for the financial year ended 31 December 2022 (2021: RMB0.196 per share (including tax), totalling approximately RMB4.849 billion). The distribution plan will be implemented upon approval at the 2022 annual general meeting and the dividends are expected to be paid in around August 2023 to the shareholders of the Company.

For details of the policies for profit distribution of the Company, please refer to "Specific policies for profit distribution" of "Significant Events" on page 293 of this annual report.

## REPORT OF THE DIRECTORS

### Donations

Donations made by the Group during the financial year amounted to RMB89.48 million (2021: RMB75.58 million).

### Property, Plant and Equipment

Changes in property, plant and equipment of the Group during the financial year are set out in note 18 to the Financial Statements.

### Share Capital

Details of the Company's share capital are set out in note 38 to the Financial Statements.

### Distributable Reserves

As at 31 December 2022, pursuant to the relevant laws and regulations, the Company's distributable reserves amounted to approximately RMB91.722 billion.

### Reserves

Changes in reserves of the Group and the Company during the financial year are set out in the consolidated statement of changes in equity on pages 120 to 121 of this annual report.

### Major Customers and Suppliers

The China State Railway Group Co., Ltd. (formerly known as China Railway Corporation), which was founded on 14 March 2013 by the State Council, is the largest customer of the Group. For the year ended 31 December 2022, sales to the China State Railway Group Co., Ltd. accounted for approximately 19.58% of the total revenue of the Group. For the same period, sales to the five largest customers of the Group (including the China State Railway Group Co., Ltd.) in aggregate accounted for approximately 21.63% of the total revenue of the Group. At no time during the financial year have the directors, their close associates or any shareholder of the Company (which, to the knowledge of the board of the directors, owns more than 5% of the Company's share capital) had any interest in these five largest customers.

For the year ended 31 December 2022, purchases from the five largest suppliers of the Group in aggregate accounted for approximately 1.93% of the total cost of sales of the Group in 2022.

### Subsidiaries and Associates

Particulars of the Company's principal subsidiaries and the Group's principal associates as at 31 December 2022 are set out in note 25 and note 26, respectively, to the Financial Statements.

## REPORT OF THE DIRECTORS

### Directors, Supervisors and Senior Management of the Company

The directors of the Company during the financial year were as follows:

Name	Position
CHEN Yun	Chairman and Executive Director
CHEN Wenjian	Executive Director and President
WANG Shiqi	Executive Director
WEN Limin	Non-executive Director
CHUNG Shui Ming Timpson	Independent Non-executive Director
ZHANG Cheng	Independent Non-executive Director
XIU Long	Independent Non-executive Director

The supervisors of the Company during the financial year were as follows:

Name	Position
JIA Huiping	Chairman of the Supervisory Committee and Shareholder Representative Supervisor
YUAN Baoyin	Employee Representative Supervisor
LI Xiaosheng	Employee Representative Supervisor
WANG Xinhua	Employee Representative Supervisor
WAN Ming	Employee Representative Supervisor

The senior management of the Company during the financial year were as follows:

Name	Position
CHEN Wenjian	Executive Director and President
SUN Cui	Chief Accountant
LIU Baolong	Vice President
REN Hongpeng	Vice President
KONG Dun	Vice President and Chief Engineer
MA Jiangqian	Vice President
LI Xinsheng	Vice President
HE Wen	Secretary to the Board of Directors, Joint Company Secretary
ZHAO Bin (appointed on 22 June 2022)	Chief Economist
GENG Shubiao (appointed on 22 June 2022)	Assistant to President
TAM Chun Chung	Joint Company Secretary and Company Authorized Representative
YU Tengqun (ceased to act on 30 August 2022)	Vice President and General Legal Advisor
LI Fengchao (ceased to act on 1 February 2022)	Safety Production Officer

## REPORT OF THE DIRECTORS

On 22 June 2022, on the 17th meeting of the fifth session of the board of directors of the Company, Mr. MA Jiangqian was removed from the position of Chief Economist and continued acting as Vice President; Mr. ZHAO Bin was appointed as Chief Economist and Mr. GENG Shubiao was appointed as Assistant to President, whose terms of office commenced from the date on which the appointment was passed by the board of directors and will end on the expiry of the fifth session of the board of directors.

On 30 August 2022, the Company held the 19th meeting of the fifth session of the board of directors and approved to release Mr. YU Tengqun from the position of Vice President and General Legal Advisor due to job transfer.

On 1 February 2022, LI Fengchao, the Safety Production Officer of the Company, retired due to age.

The biographical details of the current directors, supervisors and senior management of the Company are set out in "Biography of Directors, Supervisors and Senior Management".

### Directors' and Supervisors' Interests in Contracts

No transaction, arrangement or contract of significance to which the Company, or the Company's holding company or subsidiary or a subsidiary of the Company's holding company was a party and in which a director or supervisor of the Company or an entity connected with a director or a supervisor of the Company had a material interest, whether directly or indirectly, subsisted at the end of the financial year or at any time during the financial year.

### Emoluments of the Directors, Supervisors and Senior Management of the Company

Details of the emoluments of the directors, supervisors and senior management of the Company in 2022 are set out in note 17 and note 51 to the audited Financial Statements.

### Directors' and Supervisors' Rights to Acquire Shares or Debentures

For the year ended 31 December 2022, none of the Company or the Company's holding company or subsidiary or a subsidiary of the Company's holding company was a party to any arrangement to enable the Company's directors, supervisors or their respective spouses or minor children to acquire shares in or debentures of the Company or any other body corporate.

### Directors' and Supervisors' Service Contracts

None of the directors and supervisors of the Company has entered into a service contract with the Company or its subsidiary that is not terminable within one year without payment of compensation (in addition to statutory compensation).

### Permitted Indemnity Provisions

The Company has not entered into any agreement with permitted indemnity provisions with directors or supervisors of the Company to provide indemnity to a director or a supervisor of the Company against liability incurred by the director or the supervisor to third parties or other types of liabilities.

However, during the financial year, the Company has purchased appropriate liability insurance coverage for the directors, supervisors and senior management of the Company.

## REPORT OF THE DIRECTORS

### Directors' and Supervisors' Interests and Short Positions in Shares, Underlying Shares and Debentures

As at 31 December 2022, none of the directors and supervisors of the Company had any interests or short positions in the shares, underlying shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) (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 and short positions which they are 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 which will be required to be notified to the Company and the Hong Kong Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers.

### Substantial Shareholders and Holders of Interests or Short Positions Required to be Disclosed under Divisions 2 and 3 of Part XV of the Securities and Futures Ordinance

As at 31 December 2022, the Company had been informed by the following persons that they had interests or short positions in the shares or underlying shares of the Company as recorded in the register required to be maintained under Section 336 of the SFO:

#### Holder of A shares

Name of substantial shareholders	Capacity	Number of A shares held (Shares)	Nature of interest	Approximate percentage of issued A shares (%)	Approximate percentage of total issued shares (%)
CREC	Beneficial owner	11,458,725,890	Long position	55.77	46.29

#### Holder of H shares

Name of substantial shareholders	Capacity	Number of H shares held (Shares)	Nature of interest	Approximate percentage of issued H shares (%)	Approximate percentage of total issued shares (%)
BlackRock, Inc.	Interest of controlled corporations	247,978,335	Long position	5.89	1.00
		9,988,000	Short position	0.24	0.04
Deutsche Bank Aktiengesellschaft	(Note 1)	229,803,271	Long position	5.46	0.93
		123,424,962	Short position	2.93	0.50
		10,406,000	Lending Pool	0.25	0.04
Lehman Brothers Holdings Inc.	Interest of controlled corporations	210,186,560	Long position	5.00	0.85
		94,560,550	Short position	2.25	0.38

## REPORT OF THE DIRECTORS

Note:

- 1 According to the Corporate Substantial Shareholder Notice filed by Deutsche Bank Aktiengesellschaft with the Hong Kong Stock Exchange dated 13 January 2014, the interests held by Deutsche Bank Aktiengesellschaft were held in the following capacities:

Capacity	Number of H shares (Long position)	Number of H shares (Short position)
Beneficial owner	139,171,310	123,424,962
Person having a security interest in shares	17,515,361	–
Interest of controlled corporations	54,042,600	–
Custodian corporation	10,406,000	–
Others	8,668,000	–

- 2 The interests or short positions include the underlying shares as follows:

Name of substantial shareholders	Long Position				Short Position			
	Listed equity		Non-listed equity		Listed equity		Non-listed equity	
	derivative	derivatives	derivatives	derivatives	derivatives	derivatives	derivatives	derivatives
	payment	settled	payment	settled	payment	settled	payment	settled
	in kind	in cash	in kind	in cash	in kind	in cash	in kind	in cash
BlackRock, Inc.	–	–	–	5,885,000	–	–	–	1,116,000
Deutsche Bank Aktiengesellschaft	–	–	–	17,624,000	–	–	–	10,166,000
Lehman Brothers Holdings Inc.	–	–	10,000,000	–	–	–	60,000	–

Apart from the foregoing, as at 31 December 2022, no person or corporation had any interest in the share capital of the Company as recorded in the register required to be kept under section 336 of the SFO as having an interest of or any short position in the issued share capital of the Company that would fall to be disclosed to the Company under Divisions 2 and 3 of Part XV of the SFO.

## Competing Business

None of the Company's directors held any interest in any business that competes or competed or is or was likely to compete, either directly or indirectly, with the Group.

## Connected Transactions

### 1. Continuing Connected Transactions Defined under the Listing Rules

CREC is the Company's controlling shareholder and is therefore one of the Company's connected persons under the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong (the "Listing Rules"). Transactions between the Company and/or its subsidiaries and CREC and/or its associates constitute connected transactions.



## REPORT OF THE DIRECTORS

### **Financial Services Framework Agreement between China Railway Finance Co, Ltd. (“China Railway Finance”) and CREC**

On 29 April 2014, China Railway Finance (a subsidiary of the Company, with 95% of its equity interest being held by the Company and 5% of its equity interest being held by CREC) executed a financial services framework agreement with CREC (the “**Financial Services Framework Agreement**”), which took effect upon the completion of relevant statutory procedures, being 16 March 2014, till 31 December 2015. Subsequently, on 29 December 2015, China Railway Finance and CREC entered into a financial services framework renewal agreement with a term of three years. Pursuant to the Financial Services Framework Agreement, China Railway Finance agreed to provide deposit services, loan services and other financial services to CREC in accordance with the terms and conditions stipulated in the agreement.

On 27 December 2018, China Railway Finance and CREC further entered into a financial services framework renewal agreement, effective from 1 January 2019 to 31 December 2021, to further renew the Financial Services Framework Agreement. The Company has made announcement in respect of this financial services framework renewal agreement on 27 December 2018.

On 30 December 2021, China Railway Finance and CREC further entered into a financial services framework renewal agreement (the “**Financial Services Framework Renewal Agreement 2022-2024**”), effective from 1 January 2022 to 31 December 2024, to further renew the Financial Services Framework Agreement. The Company has made announcement in respect of the Financial Services Framework Renewal Agreement 2022-2024 on 30 December 2021.

The factors in determining the above proposed annual caps include: (1) historical transaction amount; (2) the strategy of financial management of the Company by taking into account the cash flow and capital needs as required by the business expansion plan of the Group; and (3) the effective and reasonable control of financial risks. The Company has made announcement in respect of this financial services framework renewal agreement on 30 December 2021.

## REPORT OF THE DIRECTORS

The annual caps for the year of 2022, 2023 and 2024 under the Financial Services Framework Renewal Agreement 2022 are as follows:

	For the financial year ending 31 December		
	2022	2023	2024
	RMB	RMB	RMB
<b>(i) deposit service</b>			
The maximum of daily deposit balance in China Railway Finance by CREC (including interest accrued)	20,000,000,000	20,000,000,000	20,000,000,000
<b>(ii) loan services</b>			
The maximum of daily loan balance from China Railway Finance to CREC (including interest accrued)	500,000,000	500,000,000	500,000,000
<b>(iii) other financial services</b>			
The aggregate annual amount of maximum service fees for financial services provided by China Railway Finance to CREC	80,000,000	80,000,000	80,000,000

The Company confirms that the signing and execution of specific agreements under the continuing connected transactions during the reporting period have complied with the pricing principles of these continuing connected transactions.

The independent non-executive directors of the Company are of the opinion that, during the financial year, the above continuing connected transactions between the Group and the CREC were entered into:

- (i) in the ordinary and usual course of business of the Group;
- (ii) either on normal commercial terms or better; and
- (iii) in accordance with the relevant agreements governing them on terms that are fair and reasonable and in the interests of the shareholders of the Company as a whole.

## REPORT OF THE DIRECTORS

Pursuant to Rule 14A.56 of the Listing Rules, the Company must engage its auditors to report on the continuing connected transaction every year. The auditors must provide a letter to the Company's Board of Directors confirming whether anything has come to their attention that causes them to believe that the continuing connected transactions:

- (i) have not been approved by the Board of Directors;
- (ii) were not, in all material aspects, in accordance with the pricing policies of the Group if the transactions involve the provision of goods or services by the Group;
- (iii) were not entered into, in all material respects, in accordance with the relevant agreement governing the transactions; and
- (iv) have exceeded the cap.

In order to comply with the above requirements, the Board of Directors engaged the auditor of the Company to report on the Group's continuing connected transactions in accordance with Hong Kong Standard on Assurance Engagements 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information" and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants. The auditor has issued its unqualified letter containing the findings and conclusions in respect of the continuing connected transactions disclosed by the Group in pages 77 to 80 of this annual report in accordance with Rule 14A.56 of the Listing Rules. A copy of the auditor's letter has been provided by the Company for submission to the Hong Kong Stock Exchange.

In respect of the above continuing connected transactions, the Company has complied with the disclosure requirements under the Listing Rules in force from time to time.

## REPORT OF THE DIRECTORS

### 2. Significant Related Party Transactions as Defined under PRC Laws and Regulations

Details of the significant related party transactions as defined by PRC laws and regulations during the reporting period are set out on pages 279 to 282 of this annual report. The Company confirms save and except for those continuing connected transactions set out in the section “Continuing Connected Transactions Defined under the Listing Rules” above, the other transactions were not regarded as connected transactions or continuing connected transactions under the Listing Rules or were exempt from reporting, announcement and shareholders’ approval requirements under the Listing Rules.

### 3. Contract of Significance

Save as disclosed in this annual report, there were no contracts of significance between the Company or any of its subsidiaries and a controlling shareholder or any of its subsidiaries or any contracts of significance for the provision of services to the Company or any of its subsidiaries by a controlling shareholder or any of its subsidiaries.

## Purchase, Sale or Redemption of the Company’s Listed Securities

During the year ended 31 December 2022, the Company repurchased and cancelled part of the restricted A shares granted under the Incentive Scheme.

Because 2 participants were transferred from the Company and ceased to take office in the Company due to organisational arrangements, 3 participants were disqualified for the Incentive Scheme due to incompetence to the position, disqualification in performance appraisal, negligence, violation of laws, non-compliance of laws, etc., in accordance with the Incentive Scheme and relevant laws and regulations, the Company repurchased and cancelled from the above 5 participants of all the restricted shares (1,379,700 restricted shares in total) which were granted but not yet unlocked. The repurchase price of the restricted shares repurchased from the 3 participants was RMB3.354 per share, and the repurchase price of the restricted shares from the 2 participants was RMB3.354 per share, plus the interests calculated according to the benchmark deposit interest rate published by the People’s Bank of China for the same period. Please refer to the announcements (dated 28 October 2022 and 26 December 2022) published on the website of the Hong Kong Stock Exchange.

Save for the aforementioned matters, neither the Company nor any of its subsidiaries sold any securities of the Company, nor did they repurchase or redeem any of the securities of the Company during the year ended 31 December 2022.

## Pre-emptive Rights

There are no provisions for pre-emptive rights pursuant to the Company’s articles of association (the “**Articles of Association**”) and the relevant laws and regulations of the PRC.

## Equity-linked Agreements

Save as disclosed under the section headed “2021 Restricted Share Incentive Scheme” in Significant Events below, no equity-linked agreements were entered into by the Company during the financial year, or existed as at 31 December 2022.

## REPORT OF THE DIRECTORS

### Bank and Other Loans

Details of bank and other loans of the Group as at 31 December 2022 are set out in note 43 to the Financial Statements.

### Management Contract

No contracts concerning the management and administration of the whole or any substantial part of the business of the Company were entered into or existed during the financial year.

### Tax Relief and Exemption

The directors of the Company are not aware of any tax relief and exemption available to the Shareholders by reason of their holding of the Company's securities.

### Financial Summary

The summary of the audited consolidated statement of profit or loss and of the audited statements of the assets and liabilities of the Group for the last five financial years is set out on pages 4 to 5 of this annual report.

### Emolument Policy

The Group has been devoted to continuously improving the market-based remuneration distribution mechanism in accordance with the requirements of the modern enterprise system. By adhering to the general principle of "payroll decided by benefits, adjustment based on efficiencies and control of pay level", the Group optimised its payroll management and devoted more payroll budget to talents who have made outstanding contributions and key frontline workers who bear hardships, perform dirty work, expose to dangers and suffer from exhaustion. A payroll filing mechanism has been vigorously implemented which grant greater autonomy to the enterprise. Differentiated indicators linked with the approval-based payroll were decided to adapt to the actual development of the enterprise, and adjustment based on efficiencies has been placed on a prominent position to play the leading role of the human resources input-output efficiency. The Group constantly improved the distribution system according to factors of production, actively and prudently promoted the medium and long term incentive, completed the registration of the first grant and grant of the reserve portion of the incentive scheme, closely aligning the interests of the key employees with the interests of the enterprise. Duty post-based dividend is available across the whole scientific and technological enterprises and it has obvious effect to include knowledge as one of the factors of production in the course of profit distribution. Incentive guarantee for scientific and technological innovation has been strengthened and implementation plans to incentivise scientific and technological innovation has been formulated to freeze the motivation power of science and technology in driving the development of the productive forces. The Group safeguarded the payment of salaries to employees, established long-term mechanism to hold the bottom line of "zero wage arrear" in order to build the sound and harmonious employment relationship.

## REPORT OF THE DIRECTORS

Member companies of the Group have exercised their autonomy in distributing remuneration to employees and established a base wage system which features wage decided by duty post. Employee remuneration comprises basic salary, performance-based bonus and allowances and subsidies, etc. In accordance with the PRC laws, the Group entered into an employment contract with each of its employees. Such contracts include provisions on wages, vacation, employee benefits, training programs, health and safety, confidentiality obligations and grounds for termination. In accordance with the national policies, the Group makes full contributions to the employee pension contribution plan, medical insurance, unemployment insurance, maternity insurance, workers' compensation insurance and housing provident fund. In addition to statutory contributions, the Group also provides voluntary benefits to employees. These benefits include the enterprise annuities for employees.

The remuneration of executive directors of the Group is on an annual basis and consists of base salary and performance-based bonus. According to the Salary (Remuneration, Work Subsidy) Management Measures of Directors and Supervisors of China Railway Group Limited, the remuneration of independent non-executive directors shall be determined with reference to provisions on the board of directors' pilot scheme of remuneration and treatment of external directors of central enterprises issued by the SASAC. For the head of central enterprises who has left the current office and serves as an independent non-executive director, the remuneration shall be determined in accordance the requirements of the SASAC on the relevant matters regarding the payment of work subsidies for the head of central enterprises who has left the current office and serves as an external director as well as the performance evaluation result. For details in connection with the remuneration of directors of the Group, please refer to note 17 and note 51 to the financial statements.

In 2022, the Group continued to thoroughly implement the Cadres Education and Training Work Regulations and the National Cadres Education and Training Plan for 2018-2022, by scientifically formulating training plans, coordinating and classifying the education and training of cadres at all levels, strengthening the training of key talents, ensuring that the training is highly consistent with enterprise development and talent training, accelerating the improvement of the quality of staff and promoting the enhancement of enterprise development ability. During the year, the Group strengthened trainings on areas such as political theories, ideals and beliefs, as well as operation and management and business knowledge. 49 training lessons have been held for 70,552 persons (including more than 60,000 person times in subsidiaries and sub-subsidiaries who joined the training via online video in certain training sessions). In light of the new situation and new tasks, in order to further enrich the "three-in-one" training idea for leaders of "calcium supplement, foundation building and energy improvement", the Group optimises the training curriculum, selected excellent training teachers and strengthened class attendance management, and the Group successfully held the 13th session of leadership ideals and beliefs training, the 20th session of leadership political theories training, the 10th and 11th session of leadership operation and management training, and a number of 192 management team members from the secondary companies and department heads of the headquarter have participated in the training. Based on the characteristics of young cadres and rules for talent training, and the "five forces model" training system, the third training session for middle-aged and young cadres and the second training session for young cadres (youth Marxism training course) were held. 104 cadres at department level were systematically trained to further strengthen the theoretical belief of the young cadres, improve the level of controlling and managing enterprises, and reserve a pool of outstanding young cadres who will be able to take major roles in enterprise development. In order to strengthen the construction of the highly skilled talent team, improve the theoretical level of the highly skilled talents and promote the spirit of craftsmen, three training courses for highly skilled talents were held to offer "four new" skill training to 193 senior technicians. In order to strengthen the management of the construction site, improve the comprehensive quality of the professionals on the construction site and promote the training of professionals at construction site, 90 training sessions were held and a total of 5,753 persons were trained and evaluated. 5,440 persons have qualified from the evaluation, representing a qualification ratio of 99%.



## REPORT OF THE DIRECTORS

In 2023, the Group will continuously implement the requirements of the Party Central Committee and the SASAC for the training of personnel, take Xi Jinping's thought on socialism with Chinese characteristics for a new era as the guide to launch targeted and time-sensitive quality training courses in respect of leadership enhancement, training of outstanding young cadres, market development, investment business, financial and tax management, whole business cycle management, party mass business, international business, legal and compliance and professional management, etc. to help cultivate professional talent teams of high quality.

The personnel expenses of the Company for the year of 2022 were RMB53.579 billion. As at 31 December 2022, the number of employees hired by the Group was 297,620. The following table sets forth a breakdown of the Group's employees by professional composition as at 31 December 2022:

Professional Composition	Number of employees as at 31 December 2022
Production staff	18,498
Salesperson	3,253
Technical personnel	219,780
Financial staff	9,285
Administrative staff	46,804
<b>Total</b>	<b>297,620</b>

Education Level	Number of employees as at 31 December 2022
Doctor degree candidate	323
Master degree candidate	14,154
Undergraduate	164,128
Junior College and below	119,015
<b>Total</b>	<b>297,620</b>

## REPORT OF THE DIRECTORS

### Employee Retirement Benefits

Particulars of the employee retirement benefits of the Group are set out in note 44 to the Financial Statements.

### Public Float

As at the date of this annual report, the Company has maintained sufficient public float, based on the information that is publicly available to the Company and within the knowledge of the directors of the Company.

### Compliance with the Corporate Governance Code

For details of the Company's corporate governance practices, please refer to the Report on Corporate Governance Practices on pages 87 to 108 of this annual report.

### Event After the Reporting Period

In February 2023, L'Inspection Générale des Finances de la République Démocratique du Congo (the General Inspectorate of Finance of the Democratic Republic of the Congo) released a report on the implementation of cooperation agreements signed between the Democratic Republic of the Congo and the Chinese companies. The report recommended that the relevant contract parties to review the cooperation agreements in terms of the shareholder structure of specific structure companies, the capital expenditure of the infrastructure projects and the preferential tax treatment of the jointly invested companies. The Group will continue to pay attention to the progress of this event and evaluate its impact to the Group's financial position and operating results. As of the date of this annual report, there is no significantly negative influence has been identified by the Group.

### 2021 Restricted Share Incentive Scheme

181,266,700 A shares were issued under the Incentive Scheme and the total grant price was RMB645,046,645 (excluding the 1,379,700 restricted shares that were repurchased and canceled by the Company in accordance with the terms of the Incentive Scheme). The repurchased restricted shares were listed on the Shanghai Stock Exchange and the total repurchase price was RMB4,647,304. The repurchase and cancellation was completed on 28 December 2022. For details of the Incentive Scheme, including the purpose of the Incentive Scheme, please refer to "Share Incentive Scheme, Employee Stock Ownership Plan and Other Incentive Measures and the Impacts Thereof" of "Significant Events" on pages 298 to 300 of this annual report.

### Implementation of Environmental Protection Measures

The details are set out in "Environmental Information" of "Environmental and Social Responsibility" on pages 329 to 332 of this annual report.

## REPORT OF THE DIRECTORS

### Compliance with Laws and Regulations

The details are set out in “Compliance with Laws and Regulations” of “Business Overview” on page 40 of this annual report.

### Maintenance of Relationship with Stakeholders

The details are set out in the “Maintenance of Relationship with Stakeholders” of “Business Overview” on page 40 of this annual report.

### Auditors

The 2022 financial statements of the Company which were prepared in accordance with the International Financial Reporting Standards were audited by PricewaterhouseCoopers, and the financial statements prepared in accordance with the Chinese Accounting Standards were audited by PricewaterhouseCoopers Zhong Tian LLP.

All references in this part of the annual report (Report of the Directors) to other parts, sections of or notes in the annual report, form part of the Report of the Directors.

By order of the Board of Directors

**CHEN Yun**

*Chairman*

Beijing, the PRC

30 March 2023



# REPORT ON CORPORATE GOVERNANCE PRACTICES



## Overview

During the reporting period, the Company has complied with the laws and regulations of the places where it operates its business as well as the regulations and guidelines prescribed by regulatory authorities such as the CSRC, the Securities and Futures Commission, the Shanghai Stock Exchange and the Hong Kong Stock Exchange. The goals of the Company are to ensure the sustainable long-term development of the Company and generate greater returns for its shareholders. The Board believes that, in order to achieve these goals, the Company must implement and maintain corporate governance principles of and structures consistent with integrity, transparency, openness and effectiveness. For this reason, the Company has taken various measures to achieve an effective Board of Directors, including the establishment of five committees under the Board, i.e. the Strategy Committee, the Audit and Risk Management Committee, the Remuneration Committee, the Nomination Committee and the Safety, Health and Environmental Protection Committee, and setting up relevant functional departments. We have adopted internal working procedures to ensure accurate and timely information disclosure in accordance with the requirements under the Listing Rules as well as the requirements under relevant PRC laws and regulations. The Company will continue to adopt measures to refine its corporate governance structures, improve its corporate governance and enhance practices in corporate governance standards in light of the actual circumstances of the Company.

## Corporate Governance Framework

Pursuant to the requirements of the Company Law, the Securities Law, the Listing Rules and other relevant laws and regulations, the Company established a corporate governance framework comprising the Shareholders' General Meeting, the Board of Directors, the Supervisory Committee and senior management.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### Compliance with the Code Provisions of the Corporate Governance Code

As a company listed on the main board of the Hong Kong Stock Exchange, the Company is committed to complying with the principles of the Corporate Governance Code set out in Appendix 14 to the Listing Rules. The Company has complied with all provisions of the Corporate Governance Code during the reporting period and the principles as set out in the Corporate Governance Code have been applied in our corporate governance structure.

#### Diversity

The Company has always focused on diversity of Board members to enhance the efficiency in decision-making of the Board and the quality of corporate governance. In accordance with the listing rules and regulatory provisions of both Shanghai and Hong Kong, the Company has formulated and implemented the Diversity Policy of the Members of the Board. Amongst the seven Directors currently on the Board of the Company, three Executive Directors have extensive experience in the construction industry and management, and four Non-Executive Directors have extensive experience in the practice and management of finance, construction engineering and design sectors. The structure and composition of the Board are in line with the requirements of the diversity policy and also satisfy the business development needs. In the context of the diversity of Board members, the Board of the Company has actively established an atmosphere of democratic deliberation, strictly implemented the voting system for motions and made full use of the advantage of the diversity of Board members, ensuring that each Director can participate in the governance of the Company and express independent opinions and decisions on matters of importance by actively making use of his or her rich expertise and management experience. The diversity of Board members has played an important role in improving the quality of corporate governance, enhancing the scientific and effective nature of Board decisions, safeguarding the overall interests of the Company and the legitimate rights and interests of all shareholders, especially the interests of minority shareholders.

In order to achieve Board diversity, the Company has adopted the Board Diversity Policy by taking into account a number of factors including without limitation of gender, age (18 years old or above), cultural and educational background, qualifications, race, professional experience, skills, knowledge and years of service. All Board members are appointed on the basis of abilities and in order to effectively achieve Board diversity, candidates will be considered on objective conditions. The Company values gender diversity and the Board aims to gradually increase the number of female directors among the Board members.

The Nomination Committee has been monitoring the implementation of the Board Diversity Policy to ensure the effectiveness of the Board Diversity Policy. In 2022, the Nomination Committee reviewed the nomination policy and the Board Diversity Policy and considered that such policies were proper and effective.

The Board valued diversity at all levels within the Group (including gender diversity). As at 31 December 2022, the Group had 248,821 male employees and 48,799 female employees, representing a proportion of 84:16. The Group would consider multiple factors when recruiting employees, including without limitation gender, age, cultural and educational background, qualifications, race, professional experience, skills, knowledge and years of service, and the Group will ensure gender diversity across the entire workforce.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### Shareholders' General Meeting

The Shareholders' General Meeting is an organ of power of the Company. In accordance with the requirements of the Company Law, the Securities Law and other relevant laws and regulations, the Company formulated the Articles of Association and the Procedural Rules for Shareholders' General Meeting to regulate the convening, consideration and voting procedures for shareholders' general meetings.

During the reporting period, the Company convened and held one H share class meeting and one shareholders' general meeting, being the 2021 first H share class meeting held on 12 January 2022 and the 2021 annual general meeting held on 22 June 2022. At the 2021 first H share class meeting, the resolution regarding the 2021 Restricted Share Incentive Scheme of the Company and its summary, the resolution regarding Appraisal Management Measures for Implementation of the 2021 Restricted Share Incentive Scheme of the Company, the resolution regarding the Management Measures of the 2021 Restricted Share Incentive Scheme of the Company and the resolution regarding the mandate to the board of directors of the Company to handle the relevant matters in respect of the 2021 Restricted Share Incentive Scheme. At the 2021 annual general meeting, a total of 13 ordinary resolutions and another six special resolutions were considered and approved, including report of the board of directors of the Company for the year ended 31 December 2021, the report of the supervisory committee of the Company for the year ended 31 December 2021, the work report of independent directors of the Company for the year ended 31 December 2021, 2021 A share annual report and the abstract, H share annual report and results announcement for the year of 2021 of the Company, the audited consolidated financial statements of the Company for the year ended 31 December 2021, the proposal regarding The Plan for Shareholders' Return for 2021 to 2023 of the Company, the profit distribution plan of the Company for the year ended 31 December 2021, the proposal in relation to the engagement of the auditors for 2022, the proposal in relation to the appointment of internal control auditors for 2022, the proposal on the salary (remuneration, work subsidy) of directors and supervisors of the Company for the year of 2021, the proposal on the purchase of liabilities insurance for directors, supervisors and senior management of the Company for the year of 2022, the proposal in relation to the total amount of the provision of external guarantee by the Company for the second half of 2022 to the first half of 2023, and the proposed amendments to the Rules for the Independent Directors of the Company as set out in the Appendix V to the circular of the Company dated 23 May 2022.

The table below sets out the details of general meetings attendance of each director during the reporting period:

Director	Number of meetings requiring attendance	Number of meetings attended in person	Number of meetings attended by proxy
CHEN Yun	2	2	–
CHEN Wenjian	2	2	–
WANG Shiqi	2	2	–
WEN Limin	2	2	–
CHUNG Shui Ming Timpson	2	2	–
ZHANG Cheng	2	2	–
XIU Long	2	2	–



## REPORT ON CORPORATE GOVERNANCE PRACTICES

### The Board of Directors

#### 1. Composition of the Board of Directors

During the reporting period, the members of the Board of the Company were as follows:

Name	Title
CHEN Yun	Chairman and Executive Director
CHEN Wenjian	Executive Director and President
WANG Shiqi	Executive Director
WEN Limin	Non-executive Director
CHUNG Shui Ming Timpson	Independent Non-executive Director
ZHANG Cheng	Independent Non-executive Director
XIU Long	Independent Non-executive Director`

There was no financial, business, family or other material relationship among the directors of the Company.

During the reporting period, the Company complied with Rules 3.10(1) and 3.10(2) of the Listing Rules which require the Company to maintain at least three independent non-executive directors and have an independent non-executive director with appropriate professional qualifications or accounting or financial management expertise.

Three seventh of the members of the Board of Directors are independent non-executive directors, which is in compliance with Rule 3.10A of the Listing Rules which requires independent non-executive directors of the Company must represent at least one-third of the Board of Directors. The Company has received confirmation of independence from the independent non-executive directors in accordance with Rule 3.13 of the Listing Rules and the Company considered each independent non-executive director as independent.

Pursuant to the Articles of Association, the term of office of each director of the Company (including the non-executive directors and the independent non-executive directors) is three years which is renewable upon re-election and each independent non-executive director shall not serve for more than six consecutive years in order to ensure his independence.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### 2. Board Meetings

In 2022, the Company held 10 Board meetings, 8 of which were on-site meetings and 2 of which were meetings held by communications. The table below sets out the details of Board meeting attendance of each director during the reporting period.

Director	Number of meetings requiring attendance	Number of meetings attended in person	Number of meetings held by communications	Number of meetings attended by proxy
CHEN Yun	10	10	2	–
CHEN Wenjian	10	10	2	–
WANG Shiqi	10	9	2	1
WEN Limin	10	9	2	1
CHUNG Shui Ming Timpson	10	10	2	–
ZHANG Cheng	10	10	2	–
XIU Long	10	10	2	–

### 3. Responsibilities and Operation of the Board

The responsibilities of the Board of Directors are, among other things, convening shareholders' general meetings and reporting its work to shareholders at such meetings, implementing resolutions of the shareholders' general meeting, making decisions on its business strategies, business plans and major investment plans of the Company, formulating proposed annual financial budgets and final accounts, formulating profit distribution plans and (where applicable) plans for making up losses previously incurred, formulating plans relating to the increase or reduction of the Company's registered capital, the issue of corporate bonds or other securities, and (where applicable) the listing of such securities, deciding the Company's internal management scheme, developing and reviewing the Company's policies and practices on corporate governance and making recommendations to the Board of Directors, reviewing and monitoring the training and continuous professional development of the directors and the senior management, reviewing and monitoring the Company's policies and practices on the compliance with law and regulatory requirements, formulating, reviewing and monitoring the code of conduct and compliance manual applicable to the employees and the directors, reviewing the Company's compliance with corporate governance, and the disclosures made in the Corporate Governance Report, and exercising any other powers conferred by the shareholders' general meeting or under the Articles of Association.

There are currently five committees established under the Board of Directors, being the Strategy and Investment Committee, the Audit and Risk Management Committee, the Remuneration Committee, the Nomination Committee and the Safety, Health and Environmental Protection Committee. Each committee has its own rules of procedures.

The offices of the Chairman and President of the Company are held by different persons and division of power between the Board of Directors and the senior management strictly complies with the Articles of Association and the relevant regulations. The Board of Directors formulates the overall strategy of the Company and monitors the financial performance of the Company. The management of the Company implements the strategic plans as determined by the Board of Directors and is responsible for the daily operations and management of the Company. The Chairman is responsible for convening and presiding over Board meetings, supervising the implementation of the Board's resolutions and coordinating the operation of the Board of Directors. Pursuant to the Articles of Association, the President is delegated with the authority to, among other things, oversee the operation and management of the Company, implement the decisions of the Board of Directors, carry out investment plans and formulate the basic management policies of the Company.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### 4. Model Code for Securities Transactions by Directors

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers (the “**Model Code**”) as set out in Appendix 10 to the Listing Rules as the code for securities transactions by its directors and supervisors. After specific enquiries to all directors and supervisors, the Company confirms that the directors and supervisors complied with the standards set out in the Model Code during the reporting period.

### 5. Director’s Training

Directors are encouraged to participate in various continuing professional development to develop and refresh their knowledge and skills in order to constantly improve their abilities to perform duties and make their contributions for the Board of Directors. In 2022, the State-owned Assets Supervision and Administration Commission of the State Council, the Beijing Branch of the China Securities Regulatory Commission, the Shanghai Stock Exchange and the China Association of Listed Companies successively held “Special Training for Doing a Good Job in Achieving Emission Peak and Carbon Neutrality to Promote High-Quality Development of Enterprises”, “Analysis and Training of the Rules for the Independent Directors of Listed Companies”, “Special Training on Corporate Governance”, analysis and training of the Rules for the Independent Directors of Listed Companies, trainings for directors and supervisors of listed companies, “Special Trainings for Listed Companies Controlled by Central Enterprises” for the purpose of improving the quality of listed companies, in order to promote the construction of the board of directors of central enterprises, including seminars and special trainings on capital operations on the topics of infrastructure REITs and the implementation of equity based incentives of listed companies. Directors participated in these trainings, in particular, CHEN Yun attended four trainings, CHEN Wenjian attended two trainings, WANG Shiqi attended two trainings, Wen Limin attended four trainings, CHUNG Shui Ming Timpson attended one training, ZHANG Cheng attended two trainings and XIU Long attended 3 trainings.

### 6. Committees under the Board

As at the end of 2022, the composition of the committees under the Board of Directors was as follows: Mr. CHEN Yun, Mr. CHEN Wenjian, Mr. CHUNG Shui Ming Timpson, Mr. ZHANG Cheng and Mr. XIU Long were members and Mr. CHEN Yun was the Chairman of the Strategy and Investment Committee of the Board of Directors, Mr. CHUNG Shui Ming Timpson, Mr. WEN Limin and Mr. ZHANG Cheng were members and Mr. CHUNG Shui Ming Timpson was the Chairman of the Audit and Risk Management Committee of the Board of Directors, Mr. XIU Long, Mr. WEN Limin and Mr. ZHANG Cheng were members and Mr. XIU Long was the Chairman of the Remuneration Committee of the Board of Directors, Mr. CHEN Yun, Mr. CHUNG Shui Ming Timpson and Mr. XIU Long were members and Mr. CHEN Yun was the Chairman of the Nomination Committee of the Board of Directors, and Mr. CHEN Wenjian, Mr. WANG Shiqi, Mr. WEN Limin, Mr. ZHANG Cheng and Mr. XIU Long members and Mr. CHEN Wenjian was the Chairman of the Safety, Health and Environmental Protection Committee of the Board.

#### (a) Strategy and Investment Committee

The primary responsibilities of the Strategy and Investment Committee include, among other things, reviewing proposals and making recommendations to the Board of Directors regarding the Company’s strategic development plans, annual budget, capital allocation plan, major mergers and acquisitions, major investment and financing plans, material internal reorganization and work on Environmental, Social and Corporate governance.

As at the end of 2022, the Strategy and Investment Committee comprised Mr. CHEN Yun and Mr. CHEN Wenjian, who are executive directors, and Mr. CHUNG Shui Ming Timpson, Mr. ZHANG Cheng and Mr. XIU Long, who are independent non-executive directors, and is chaired by Mr. CHEN Yun.

During the reporting period, the Strategy and Investment Committee held four meetings, at which 14 resolutions were considered including the Resolution on “the 14th Five-Year Plan for the Design and Consulting Business of China Railway”, and two reports were heard including the “Report on Market Value Management in 2021”.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

The table below sets out the details of meeting attendance of each member of the Strategy and Investment Committee during the reporting period.

Director	Number of meetings requiring attendance	Number of meetings attended in person	Number of meetings attended by proxy
CHEN Yun	4	4	–
CHEN Wenjian	4	4	–
WANG Shiqi (resigned on 29 April 2022)	1	1	–
CHUNG Shui Ming Timpson	4	4	–
ZHANG Cheng (appointed on 29 April 2022)	3	3	–
XIU Long	4	4	–

### (b) Audit and Risk Management Committee

The primary responsibilities of the Audit and Risk Management Committee are:

- (1) making recommendations to the Board of Directors on the appointment, reappointment and removal of the external auditors, and approving the remuneration and terms of engagement of the external auditors;
- (2) reviewing and overseeing the external auditors' independence and objectivity and the effectiveness of the audit process;
- (3) overseeing the integrity of the financial statements of the Company and the Company's annual report and accounts, interim report and quarterly reports, and reviewing significant financial reporting judgments contained in such reports;
- (4) overseeing the Company's financial reporting system and risk management and internal control procedures, including but not limited to, reviewing the financial control, risk management and internal control systems, deliberating on actions to be taken in respect of any findings of major investigations of risk management and internal control matters as delegated by the Board of Directors or at its own initiative and management's response thereto, and reviewing the Group's financial and accounting policies and practices; and
- (5) reviewing arrangements that employees of the Company can use, in confidence, to raise concerns about possible improprieties in financial reporting, internal control or other matters.

The Audit and Risk Management Committee's terms of reference are available on the websites of the Company and the Hong Kong Stock Exchange.

As at the end of 2022, the Audit and Risk Management Committee comprised Mr. CHUNG Shui Ming Timpson, who is an independent non-executive director, Mr. WEN Limin, who is a non-executive director, and Mr. ZHANG Cheng, who is an independent non-executive director, and is chaired by Mr. CHUNG Shui Ming Timpson.

During the reporting period, the Audit and Risk Management Committee held six meetings, at which a total of 25 proposals were considered, including the periodical reports, financial statements, and proposals on and effectiveness of internal auditing, internal control assessment and risk management, and heard eight briefings.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

The table below sets out the details of meeting attendance of each member of the Audit and Risk Management Committee during the reporting period.

Director	Number of meetings requiring attendance	Number of meetings attended in person	Number of meetings attended by proxy
CHUNG Shui Ming Timpson	6	6	–
WEN Limin	6	5	1
ZHANG Cheng	6	6	–

### (c) Remuneration Committee

The primary responsibilities of the Remuneration Committee are:

- (1) making recommendations to the Board of the Directors on the Company's policy and structure for remuneration of directors and senior management and on the formulation of a formal and transparent process for developing policy on such remuneration;
- (2) reviewing and approving the management's remuneration proposals with reference to the corporate goals and objectives set by the Board of Directors;
- (3) determining, as authorised by the Board of Directors, the specific remuneration packages of individual executive directors and senior management, including benefits in kind, pension rights and compensation payments, including any compensation payable for loss or termination of their office or appointment, and making recommendations to the Board of Directors in relation to the remuneration of non-executive directors;
- (4) considering salaries paid by comparable companies, time commitment and responsibilities and employment conditions of other positions in the Company; and
- (5) ensuring that no director or any of his associates is involved in deciding his own remuneration.

The Remuneration Committee's terms of reference are available on the websites of the Company and the Hong Kong Stock Exchange.

As at the end of 2022, the Remuneration Committee comprised Mr. XIU Long, who is an independent non-executive director, Mr. WEN Limin, who is a non-executive director, and Mr. ZHANG Cheng, who is an independent non-executive director, and is chaired by Mr. XIU Long.

During the reporting period, the Remuneration Committee held eight meetings, at which a total of 12 reports and proposals were considered, including the plan for the performance contract with senior management and the contract signing, remuneration and assessment payment for directors and senior management, total remuneration management, performance remuneration and business payment management plan for personnel at all levels of the Company, assessment of performance of directors, approving the terms of executive directors' service contracts, performance assessment plan and remuneration management plan for responsible officer of the subordinate enterprises, and heard one briefings. The Remuneration Committee made recommendations to the board on the remuneration packages of individual executive directors and senior management.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

The Remuneration Committee was responsible for preparing the Incentive Scheme and submitted it to the Board for consideration. The Remuneration Committee reviewed material matters relating to the Incentive Scheme, including the purpose of the Incentive Scheme and participants of the Incentive Scheme. For details of the Incentive Scheme, please refer to “Share Incentive Scheme, Employee Stock Ownership Plan and Other Incentive Measures and the Impacts Thereof” of “Significant Events” on pages 298 to 300 of this annual report.

The table below sets out the details of meeting attendance of each member of the Remuneration Committee during the reporting period.

Director	Number of meetings requiring attendance	Number of meetings attended in person	Number of meetings attended by proxy
XIU Long	8	8	–
WEN Limin	8	8	–
ZHANG Cheng	8	8	–

The emolument paid to directors, supervisors and members of senior management of the Company are determined in accordance with the contractual terms under their respective service contract. Details of the remuneration of directors and supervisors are set out in note 17 to the Financial Statements.

### (d) Nomination Committee

The primary responsibilities of the Nomination Committee are:

- (1) formulating the standards, procedures and methods for election of directors and senior management of the Company and submitting the same to the Board of Directors for consideration;
- (2) identifying individuals suitably qualified to become Board members, selecting and nominating individuals for directorship or make recommendations to the Board of Directors in this regard, reviewing the candidates for directors and President and making recommendations;
- (3) reviewing the structure, size and composition (including the skills, knowledge and experience) of the Board of Directors at least annually and making recommendations on any changes to the Board of Directors proposed to support the Company’s corporate strategy;
- (4) assessing the independence of independent non-executive directors of the Company; and
- (5) making recommendations to the Board of Directors on the appointment or re-appointment of directors and succession planning for directors, in particular the Chairman and the President.

The Nomination Committee’s terms of reference are available on the websites of the Company and the Hong Kong Stock Exchange.

As at the end of 2022, the Nomination Committee comprised Mr. CHEN Yun, who is executive director, and Mr. CHUNG Shui Ming Timpson and Mr. XIU Long, who are independent non-executive directors, and is chaired by Mr. CHEN Yun.



## REPORT ON CORPORATE GOVERNANCE PRACTICES

According to the nomination policy adopted by the Company, the Nomination Committee shall nominate director candidates for election in accordance with the formalities and procedures stipulated in the Articles of Association and the rules of procedures of the Nomination Committee, and consider candidates for directorship based on objective standards, including but not limited to education background, qualification, ability, industry related experience of the individual candidates and if the candidate is proposed to be elected as an independent non-executive director of the Company, whether or not such candidate meets the independence requirements under the Listing Rules.

According to the Articles of Association, the methods and procedures of nomination of director and supervisor candidates are as follows:

- (1) shareholders holding, individually or jointly, more than 3% in the total number of the outstanding voting shares of the Company may put forward in a written proposal to the general meeting of shareholders the candidates of non-independent directors and supervisors to be appointed from those other than the employee representatives, provided that the number of persons nominated must comply with the provisions of the Articles and be not more than the number of persons contemplated to be elected. The said proposal put forward by the shareholders to the Company shall be sent to the Company at least fourteen (14) days prior to the date of the general meeting of shareholders;
- (2) the Board of Directors and the Supervisory Committee may, within the scope of the number of persons as provided in the Articles, formulate a proposed name list of the candidates of directors and supervisors who are not employee representatives according to the number of persons contemplated to be elected, and put forward the said list in a written proposal to the general meeting of shareholders;
- (3) the Company shall separately formulate a special system for the nomination of independent directors;
- (4) the written notice concerning the intention to nominate candidates of directors and supervisors and the nominees' statement for acceptance of the nomination, as well as relevant written information of the nominees, shall be sent to the Company at least seven (7) days prior to the date the general meeting of shareholders is held. The Board of Directors and the Supervisory Committee shall provide resumes and basic information of the candidates of directors and supervisors to the shareholders;
- (5) the period given by the Company to relevant nominators and nominees to submit the aforesaid notices and documents (which is counted from the next day when the notice of general meeting of shareholders is issued) shall be at least seven (7) days;
- (6) the general meeting of shareholders shall vote on each candidate of directors and supervisors one by one, except those circumstances under which the cumulative voting system is applicable; and
- (7) in case of any interim increase or addition of directors and supervisors, the candidates shall be put forward and suggested by the Board of Directors and the Supervisory Committee for election or replacement by the general meeting of shareholders.

During the reporting period, the Nomination Committee held two meetings and considered the "Proposal for Appointment of Senior Management of China Railway Group Limited" and heard the "Assessment Report on the Structure of the Board of Directors of China Railway".

## REPORT ON CORPORATE GOVERNANCE PRACTICES

The table below sets out the details of meeting attendance of each member of the Nomination Committee during the reporting period.

Director	Number of meetings requiring attendance	Number of meetings attended in person	Number of meetings attended by proxy
CHEN Yun	2	2	–
CHEN Wenjian (resigned on 29 April 2022)	1	1	–
CHUG Shui Ming Timpson	2	2	–
ZHANG Cheng (resigned on 29 April 2022)	1	1	–
XIU Long	2	2	–

In order to enhance the efficiency in decision-making of the Board and the quality of corporate governance, and to achieve diversity on the Board, the Board of Directors has adopted the Board diversity policy, which sets out the approaches to achieve diversity among members of the Board of Directors and is available on the website of the Company. When selecting Board members, the Company gives full consideration to the benefits of all aspects of Board diversity, including but not limited to gender, race, age, territory, cultural and educational background, professional experience and length of service. All the members of the Board of Directors are appointed based on meritocratic principles and eventually decided by considering their strengths and contributions they can make to the Board of Directors.

For the purpose of implementation of the Board diversity policy, the following measurable objectives were adopted by the Board:

- at least one independent non-executive director must be ordinary resident in Hong Kong;
- at least one independent non-executive director has work experience in taking charge of financial affairs in a large-scale enterprise, or is an expert in corporate financial and accounting affairs;
- at least one independent non-executive director has experience in the selection, performance review and remuneration management of senior management personnel in an enterprise;
- the number of independent non-executive directors shall not be less than one third of the members of the Board, and the number of independent non-executive directors and external non-executive directors shall be more than half of the members of the Board;
- the members of the Board shall have professional background and work experience closely related to the business development of the Company, understand the industry in which the Company conducts its business, and have the knowledge or work experience in infrastructure construction, real estate, mining resources, corporate management, accounting, economics, law, finance and etc., and most of the directors shall be experienced in decision-making on the operation and management of largescale enterprises.

For the year ended 31 December 2022, the Board has fulfilled the measurable objectives of the Board diversity policy.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### (e) Safety, Health and Environmental Protection Committee

The primary responsibilities of the Safety, Health and Environmental Protection Committee include, among other things, providing guidance, inspecting and evaluating the implementation of the Company's plans on safety, health and environmental protection, making plans and recommendations to the Board of Directors regarding material matters relating to safety, health and environmental protection.

As at the end of 2022, the Safety, Health and Environmental Protection Committee comprised Mr. CHEN Wenjian and Mr. WANG Shiqi, who are executive directors, Mr. WEN Limin, who is non-executive director, and Mr. ZHANG Cheng and Mr. XIU Long, who are independent non-executive directors, and is chaired by Mr. CHEN Wenjian.

During the reporting period, the Safety, Health and Environmental Protection Committee held three meetings, at which two proposals including the Proposal on Action Plan in respect of Emission Peak of China Railway Group Limited was considered, and two reports including the Report on Safety, Quality, Health and Environmental Protection of China Railway for 2021 and the Key Working Arrangement for 2022 were heard.

The table below sets out the details of meeting attendance of each member of the Safety, Health and Environmental Protection Committee during the reporting period.

Director	Number of meetings requiring attendance	Number of meetings attended in person	Number of meetings attended by proxy
CHENG Wenjian	3	2	1
WANG Shiqi	3	2	1
WEN Limin	3	3	–
ZHANG Cheng	3	3	–
XIU Long	3	3	–

## Supervisory Committee

The primary responsibilities of the Supervisory Committee are

- (1) supervising the performance of directors and senior management of their duties, and proposing removal of directors or senior management who have violated laws and regulations, the Articles of Association or resolutions of shareholders' general meetings;
- (2) requesting directors and senior management to rectify any actions damaging the Company's interests;
- (3) examining the Company's financial matters;
- (4) making proposals to convene extraordinary general meetings of shareholders, and convene and preside over shareholders' general meetings in case the Board of Directors fails to perform its duty of convening and presiding over shareholders' general meetings under the Company Law;

## REPORT ON CORPORATE GOVERNANCE PRACTICES

- (5) making proposals for shareholders' general meetings;
- (6) making proposals to convene extraordinary meetings of the Board of Directors other than regular meetings;
- (7) supervising the establishment and implementation of internal controls by Board of Directors; and
- (8) supervising the review of, voting on, disclosure and performance of connected transactions, and providing comments in the annual report.

During the reporting period, the members of the Supervisory Committee of the Company were as follows

Name	Title
JIA Huiping	Chairman of the Supervisory Committee and Shareholder Representative Supervisor
YUAN Baoyin	Employee Representative Supervisor
Li Xiaosheng	Employee Representative Supervisor
WANG Xinhua	Employee Representative Supervisor
WAN Ming	Employee Representative Supervisor

The Supervisory Committee has detailed rules of procedures that specify its responsibilities, ensuring that the Supervisory Committee operates in a compliant and efficient manner. The term of office for each supervisor of the Company is three years which is renewable upon re-election.

During the reporting period, the Supervisory Committee held eight meetings, considered a total of 28 proposals, and heard a total of 29 briefings. The Supervisory Committee did not find any risks other than those set out in the paragraph "Business Risks" under the section "Management Discussion and Analysis" in this report, and had no objection to the supervisory matters during the reporting period.

The table below sets out the details of meeting attendance of each member of the Supervisory Committee during the reporting period.

Supervisor	Number of meetings requiring attendance	Number of meetings attended in person	Number of meetings attended by proxy
JIA Huiping	8	8	–
YUAN Baoyin	8	7	1
LI Xiaosheng	8	6	2
WANG Xinhua	8	8	–
WAN Ming	8	8	–

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### Joint Company Secretaries

Mr. HE Wen and Mr. TAM Chun Chung serve as joint company secretaries of the Company.

Mr. HE and Mr. TAM have confirmed that they had taken not less than 15 hours of relevant professional trainings during the reporting period.

### Shareholders' Rights

#### 1. Convening of Extraordinary General Meeting

According to the Articles of Association, the shareholders of the Company who individually or jointly hold more than 10% of the voting shares at such proposed meeting may propose to convene an extraordinary general meeting of shareholders or a class shareholders' meeting. The procedures for shareholders to convene an extraordinary general meeting or a class shareholders' meeting are stated as below:

- (1) The proposing shareholder(s) shall execute one or several copies of written request with the same form and contents to propose to the Board of Directors to convene an extraordinary general meeting of shareholders or a class shareholders' meeting and set out the topics of the meeting. The Board of Directors shall make a written response as to whether or not it agrees to convene such an extraordinary general meeting of shareholders or class shareholders' meeting within ten days upon receipt of the request in accordance with laws, regulations and the Articles of Association.
- (2) If the Board of Directors agrees to convene an extraordinary general meeting or a class shareholders' meeting, a notice of the meeting shall be issued within five days after the resolution of the Board of Directors is passed.
- (3) In case the Board of Directors refuses to convene an extraordinary general meeting or a class shareholders' meeting, or does not give any response within ten days upon receipt of the request, the shareholders who individually or jointly hold more than 10% of the voting shares at such proposed meeting shall have the right to propose to the Supervisory Committee for convening of such meeting, and shall make such request to the Supervisory Committee in writing. If the Supervisory Committee agrees to convene an extraordinary general meeting or a class shareholders' meeting, a notice of the meeting shall be issued within five days upon receipt of the request. Changes made to the original request in the notice shall be approved by relevant shareholders. If the Supervisory Committee fails to give the notice of such a meeting within the specified time limit, it shall be deemed to have failed to convene or preside over the meeting, in which case, the shareholders who either individually or jointly hold more than 10% of the Company's shares for more than ninety consecutive days may convene and preside over the meeting by themselves.
- (4) When the Supervisory Committee or the shareholders decide to convene a general meeting of shareholders by themselves, they must notify the Board of Directors in writing and at the same time file the notice with the local branch of CSRC and the stock exchange where the Company is domiciled. Before the resolutions of general meeting of shareholders are publicly announced, the proportion of shares held by the convening shareholder should be not less than 10%. When issuing the notice of general meeting of shareholders and the public announcement of the resolutions of general meeting of shareholders, the convening shareholder shall submit relevant supporting materials to the local branch of CSRC and the stock exchange where the Company is domiciled.
- (5) For the general meeting of shareholders convened by the Supervisory Committee or the shareholders themselves, the Board of Directors and the Secretary to the Board of Directors shall provide cooperation. The Board of Directors shall provide the register of shareholders as at the date of record.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### 2. Putting Forward Proposals in the Shareholders' General Meeting

The procedures for putting forward proposals in the shareholders' general meeting are stated as below:

- (1) When the Company holds a general meeting of shareholders, shareholders who individually or jointly hold more than 3% of shares of the Company shall have the right to prepare a proposal to the Company. Shareholders who hold more than 3% of shares of the Company, either individually or jointly, may prepare an interim proposal and submit it in writing to the person(s) convening the meeting ten days before the general meeting of shareholders convenes. The person(s) convening the meeting shall issue a supplementary notice of the general meeting of shareholders within two days upon receipt of the proposal and publicly announce the contents of such proposal.
- (2) When the Company holds an annual general meeting of shareholders, it shall send a written notice to the shareholders at least twenty clear business days prior to the meeting; when holding an extraordinary general meeting of shareholders, it shall send a written notice to the shareholders at least ten clear business days or fifteen days, whichever is longer, prior to the meeting. Shareholders intending to be present in the general meeting of shareholders shall send a written reply of attendance to the Company within the time period stipulated in the notice.

### 3. Review of Shareholders' Communication

The Company reviewed its shareholders engagement and communication activities conducted in 2022 and was satisfied with the implementation and effectiveness of its shareholders' communication policy.

### 4. Enquiries to the Board

Shareholders who intend to put forward their enquiries about the Company to the Board of Directors could email their enquiries to: [ir@crec.cn](mailto:ir@crec.cn).

## Amendment to the Articles of Association

Taking into account the Guidelines for the Articles of Association of Listed Companies, the Rules Governing Shareholders' General Meetings of Listed Companies, the Rules Governing the Listing of Stocks on the Shanghai Stock Exchange, the Shanghai Stock Exchange Self-Regulatory Supervision Guidelines for Listed Companies No. 1 – Standardized Operation, the Working Rules of the Board of Directors of Central Enterprises (Trial) and other latest revisions of laws and regulations, as well as the Company's actual management needs, certain amendments to the Articles of Association were approved by the Company at the 2021 annual general meeting held on 22 June 2022.

The latest version of the Articles of Association is available on the websites of the Company and the Hong Kong Stock Exchange.

## Relationship with the Controlling Shareholder

CREC is the Company's controlling shareholder. The Company is independent from CREC in respect of its staff, assets, finance, organisational structure and business. During the reporting period, except for Mr. CHEN Yun, Chairman and executive director of the Company, who also serves as a chairman of CREC, Mr. CHEN Wenjian, executive director of the Company, who also serves as a director and the general manager of CREC, Mr. WANG Shiqi, executive director of the Company, who also serves as an employee director of CREC, none of the other directors, supervisors or senior management of the Company held any positions of directors, supervisors or senior management



## REPORT ON CORPORATE GOVERNANCE PRACTICES

with CREC or received any salary from CREC and/or its associates. Notwithstanding the fact that Mr. CHEN Yun, Mr. CHEN Wenjian and Mr. WANG Shiqi (each an “**Overlapping Director**”) act as directors or senior executives of CREC and directors, supervisors or senior executives of the Company respectively, they have the capacity to commit to the daily management of the Company because there was less day-to-day management work of CREC. Moreover, each of the Overlapping Director represents a minority in the Board of Directors. During the reporting period, the Board of Directors also had three independent non-executive directors, which ensured that the interests of the Company and shareholders were protected. The Company also has its own financial management system and related personnel who are independent from CREC.

The Company entered into the Comprehensive Services Agreement and its renewal agreements with CREC in relation to the mutual provision of comprehensive services between the CREC and the Group on 23 November 2007, 1 January 2010, 28 March 2013, 30 December 2015 and 27 December 2018 respectively, with each valid for three years. Pursuant to the Comprehensive Services Agreement and its renewal agreements, CREC and/or its associates will provide social services to the Group, including health check, vaccination and preventive medical services, on-site medical services, prevention of occupational diseases and other special medical services to employees of the Group as well as training to the Group’s employees. On 30 December 2021, the Company entered into another comprehensive services renewal agreement with CREC, effective from 1 January 2022 to 31 December 2024. None of the relevant percentage ratios of the transactions under this comprehensive services renewal agreement is more than 0.1%, and is therefore exempted from all reporting, announcement and independent shareholders’ approval under the Listing Rules.

On 29 April 2014, China Railway Finance (a subsidiary of the Company, with 95% of its equity interest being held by the Company and 5% of its equity interest being held by CREC) entered into the Financial Services Framework Agreement with CREC, effective from 16 March 2014 to 31 December 2015. Pursuant to the Financial Services Framework Agreement, China Railway Finance agreed to provide deposit services, lending services and miscellaneous financial services to CREC. On 29 December 2015, China Railway Finance and CREC entered into the Financial Services Framework Renewal Agreement, effective from 1 January 2016 to 31 December 2018, to renew the Financial Services Framework Agreement. On 27 December 2018, China Railway Finance and CREC entered into another financial services framework renewal agreement, effective from 1 January 2019 to 31 December 2021. On 30 December 2021, China Railway Finance and CREC entered into a new financial services framework renewal agreement, effective from 1 January 2022 to 31 December 2024, to further renew the Financial Services Framework Agreement.

### Auditors’ Remuneration

The Company has engaged PricewaterhouseCoopers and PricewaterhouseCoopers Zhong Tian LLP (collectively the “**External Auditors**”) as the international and domestic auditors of the Company for 2022, respectively.

For the year ended 31 December 2022, fees paid to the External Auditors for the audit of the financial statements of the Group are approximately RMB43 million and fees paid to the External Auditors (and member firms) for the non-audit services are approximately RMB21 million, which mainly includes tax services and agreed-upon procedures services etc.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### Information Disclosure

The Secretary to the Board of Directors and the Joint Company Secretaries are in charge of information disclosure affairs of the Company. During the reporting period, the Company actively studied and reacted to new changes in regulatory policies in the Chinese capital market and domestic and overseas securities, and continuously adapted itself to the new requirements on information disclosure by regulatory authorities; it continued to advocate for voluntary information disclosure as a supplement to statutory disclosure requirements, intensified its efforts in internal report and approval on material matters, strengthened targetedness and effectiveness of content of periodical reports, and effectively increased transparency in information disclosure by the Company. The Company published 316 announcements and circulars in total, among which, announcements for A shares totalled 125, and announcements and circulars for H shares totalled 191. All of the announcements and circulars are duly published through the Shanghai Stock Exchange, Hong Kong Stock Exchange and designated newspapers.

### Risk Management and Internal Control

In accordance with the Basic Standards for Internal Control of Enterprises and its Implementation Guidance issued by five ministries including the Ministry of Finance and the CSRC and the Internal Control of Listed Companies issued by the Shanghai Stock Exchange, subject to the working discipline of “step-by-step promotion, horizontal and vertical expansion and comprehensive coverage”, the Company established the framework for risk management and internal control at both headquarters and subsidiary and branch levels, covering various aspects including operation, production, management and control, and prepared the working standard and procedural documents according to different business modules in relation to corporate governance, strategic management, production and operation, operation supervision, information disclosure, legal matters, safety quality and environmental protection, human resources, finance management, international business, procurement management and information management, stipulated management measures on internal control system in order to ensure the internal control management of the Company and its subsidiaries and branches has rules in place. Meanwhile, controlling measures have been proactively taken to prevent and manage various risk factors and ensure the smooth production and operation of the Company.

In terms of identification, evaluation and management of significant risks, the Company formed a normalized mechanism of risk management evaluation and reporting. Through preparation of risk evaluation questionnaire and comprehensive application of qualitative and quantitative methods, the Company identifies, distinguishes and evaluates various types of risks and determines the priority of control of significant risk, principle risk and general risk. Based on the above, the Company formulates risk management strategies, solutions and control methods, and forms significant risk assessment report.

In terms of reviewing the effectiveness of the risk management and internal control system, the Company has established three defense lines in order to review and oversee the effectiveness of the risk management and internal control system:

- The first defence line consists of the functional departments and business units who are in charge of significant risk management control, so as to implement the risk management and control mechanism into specific business procedures;

## REPORT ON CORPORATE GOVERNANCE PRACTICES

- The second defence line consists of management of the Company and the functional department in charge of risk management, which are responsible for the supervision of the formulating and implementing process of significant risk management strategies and solutions of the members of the Company; and
- The third defence line consists of the Board of Directors, the Supervisory Committee, the audit department, legal and compliance department and external auditors. The audit department of the Company is responsible for assessment work on internal control. The legal and compliance department is responsible for organizing and implementing risk management, supervising the execution of significant risk management strategies and solutions, recognising problems and proposing rectification methods by carrying out various specific investigation activities and reporting to the Board regularly. The Supervisory Committee is responsible for supervising the implementation status of the risk management and internal control of the Board, and putting forward improvement suggestions.

In view of the potential defects of internal control, the Company has established corporate governance structure including the shareholders' general meeting, the Board of Directors, the Supervisory Committee and senior management, clearly defined the boundaries of power on decision-making, implementation and supervision, formed scientific and efficient mechanism of divisions and balances of duties so as to ensure the effective operation of the internal control system.

In terms of the handling, dissemination and internal supervision of inside information, the Company has formulated the Insiders Registration and Management Regulations and specified the procedures and relevant internal control methods for dissemination of inside information in accordance with the Securities Law, the Administrative Measures for the Disclosure of Information of Listed Companies and other relevant laws and regulations.

The Board is responsible for the on-going supervision of the risk management and internal control system of the Company and reviewing their effectiveness through the Audit and Risk Management Committee. The Audit and Risk Management Committee assists the Board to perform the duties of supervision and corporate governance and review the effectiveness of the risk management and internal control systems of the Company and its subsidiaries at least annually, including the functions of financial, management, compliance, risk management and internal control, and financial resources and internal audit of the Group. The process is designed to manage rather than eliminating risk of failure to achieve business objectives, and can only provide reasonable and not absolute assurance against material misstatement or loss.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

The Audit and Risk Management Committee has reviewed the effectiveness of risk management and internal control system of the Group, covering all material aspects, including financial, operational and compliance controls, and taking into account the adequacy of resources, staff qualifications and experience, training programmes and budget of the Group's accounting, compliance, risk management, internal audit and financial reporting, and has reported relevant matters to the Board. No significant defect in respect of internal control has been discovered by relevant reviews. The Audit and Risk Management Committee has obtained the confirmation of the management on the effectiveness of the risk management and internal control system of the Group during the reporting period. The Board is of the view that the current risk management and internal control system of the Group is adequate to protect the interests of the shareholders during the reporting period.

The Company proactively implemented the decisions and plans of the Three-Year Action of State-owned Enterprise Reform, accelerated improving the modern enterprise system with Chinese characteristics, and actively promoted the wholly-owned, holding and actually controlled subsidiaries to exercise the powers of the board of directors. By successively issuing the "Breakdown List of Key Reform Tasks to Establish and Strengthen the Board of Directors of Subsidiaries of the China Railway Group", the "Management Rules of China Railway Group Limited to Implement the Functions and Powers of the Board of Directors of Subsidiaries", the "Work Plan of China Railway Group Limited to Strengthen the Construction of Board of Directors of Subsidiaries", the Company further improved the capabilities of the board of directors of the subsidiaries to exercise their powers. The Company issued the "Management Rules on Appointed External Directors and Supervisors" and the "Work Rules on Performance Management and Support Services for Appointed External Directors and Supervisors" to improve the selection and performance management of appointed directors and supervisors and guarantee the functionality of appointed directors and supervisors. In order to strengthen the control over holding companies and participating companies, the Company issued the "Management Rules on Review of Proposals of Shareholders' Meeting, Board of Directors and Supervisory Committee of Holding Subsidiaries and Participating Companies (Trial)". The Company also successively issued the "Management Measures of China Railway Group Limited for Operating Results Assessment (Trial)", the "Implementation Rules of China Railway for Assessment and Evaluation of the Three-year Action of Deepening of Reforms", the "Measures of China Railway Group Limited for the Management of Medium – and Long-Term Incentive", the "Regulations of Management of Equity Incentives for Listed Companies of China Railway Group Limited", the "Guiding Opinions of China Railway on Strengthening the Construction of the Third Level Engineering Companies" to further clarify the operating objectives and responsibilities of enterprises at each level, reasonably assess the performance results, establish and improve the award and penalty mechanism, promote enterprises at each level to accelerate adapting to the market and development strategies, and implement the plans and achieve important strategic objectives. The "Management Measures of China Railway Group Limited for Information Disclosure" has been issued to clarify the internal reporting mechanism for major issues of the Company. The Company also from time to time attended

## REPORT ON CORPORATE GOVERNANCE PRACTICES

the board meetings of the holding subsidiaries to understand the operation of shareholders' meeting, the board of directors and the special committees of the holding subsidiaries in a manner of "face-to-face consultation", in order to timely rectify the issues spotted and propose suggestions for improvement and continuously enhance the corporate governance standard of the holding subsidiaries. The monthly, quarterly and annual financial reports are regularly collected from the subsidiaries to thoroughly analyse the financial condition of the subsidiaries and release early warnings of the economic and operation risks. Accounting firms are centrally selected to carry out audit on the annual financial statements of subsidiaries, perform comprehensive performance assessment based on financial indicators so that the operation results of the subsidiaries can be evaluated completely, accurately and comprehensively. With a target to establish the long-term comprehensive risk management mechanism, implement the risk management responsibilities, improve the risk management capabilities and effectively prevent various major risks, the Company successively issued the "Comprehensive Risk Management Measures of China Railway Group Limited", the "Guiding Opinions of China Railway on Carrying out the Integrated Construction of Risk Internal Control and Legal Compliance", etc. to constantly improve its risk management systems, providing process assurance for the achievement of strategic and operation objectives of the enterprise. As at the end of 2022, the Company has achieved the first round objective to carry out random inspection and evaluation over all affiliates of the Group on a three-year basis, and has promoted the continuous optimisation of the Company's internal control system and the standardised implementation of evaluation work.

In addition, the Company carefully complied with regulatory rules and prepared 2022 annual social responsibility report and appraisal report on internal control. The Company engaged PricewaterhouseCoopers Zhong Tian LLP as the internal control auditor of the Company for 2022. PricewaterhouseCoopers Zhong Tian LLP has audited the effectiveness of the Company's internal control in relation to financial report in 2022 and issued unqualified opinions in this respect.

### Whistleblowing Policy

The Group has whistleblowing policy in place, which is applicable to all directors, employees and stakeholders (including investors, customers, suppliers, creditors, debtors, etc.). The purpose of the policy is to provide channels for employees and any external parties to report any improper or illegal acts of the Company, whether potential or existing, in respect of the financial reporting, internal control or otherwise on a confidential basis.

A whistleblower can report through the reporting platform of the Company's website. The disciplinary committee of the Company is responsible for the investigation of all whistleblowing cases reported in good faith. The board of directors of the Company will decide any further actions (if necessary) based on the investigation findings of the disciplinary committee.

The identity of the whistleblower and all concerns or irregularities raised will be considered as confidential information, and the Company is committed to ensure the whistleblower shall not be harmed or unfairly treated as well as the confidentiality of the whole reporting process.

## REPORT ON CORPORATE GOVERNANCE PRACTICES

### Anti-corruption Policy

The Company issued the “Implementation Measures for the Supervision and Management of Handling of Complaints, Reports and Cases by the Disciplinary Inspection Organisations”, to strictly supervise and manage the handling of complaints, reports and cases pursuant to rules, disciplines and laws. Disciplinary inspection organisations have been established in the headquarter and each level of enterprises of the Company to handle any complaints and reports on anti-corruption. Disciplinary inspection organisations at each level had records to keep track of the handling of any clues of complaints and reported issues, and handled each issue and clue strictly in accordance with the relevant regulations. The approval procedures in respect of handling of any complaints and reports have been strictly followed, and the relevant staff are required to strictly comply with the confidentiality requirements to protect the privacy and safety of whistleblowers, and those who conceal the clues or leak any secrets will be held responsible.

### Accountability of the Directors in Relation to Financial Statements

The directors of the Company are responsible for overseeing the preparation of financial statements. In preparing the financial statements for the year ended 31 December 2022, the directors of the Company have selected and applied appropriate accounting policies and made prudent and reasonable judgment and estimation so as to give a true and fair view of the financial position, results and cash flow of the Group for that financial year.

### Board Independence

In order to ensure that independent views and input of the independent non-executive directors are made available to the Board, the Board is committed to assess the directors’ independence annually with regards to all relevant factors related to the independent non-executive directors including the following:

- required character, integrity, expertise, experience and stability to fulfill their roles;
- time commitment and attention to the Company’s affairs;
- firm commitment to their independent roles and to the Board;
- declaration of conflict of interest in their roles as independent non-executive directors;
- no involvement in the daily management of the Company nor in any relationship or circumstances which would affect the exercise of their independent judgement; and
- the Chairman meets with the independent non-executive directors regularly without the presence of the executive directors.

All directors are entitled to seek advice from the company secretary as well as from independent professional advisors at the Company’s expenses.

The statement of the auditors of the Company about their reporting responsibilities on the financial statements is set out in the Independent Auditor’s Report on pages 109 to 115 of this annual report.



## REPORT ON CORPORATE GOVERNANCE PRACTICES

### Investors Relations

The Group constantly deepens and improves the concept system of “comprehensive investors relations” and “three-dimensional investors relations”. The first is improving the investors relations management system. In accordance with the relevant regulations and normative guidelines newly issued by the securities regulatory authorities in 2022 and in light of the actual condition for management, the Group has modified the original investors relations management system and formulated the new “Management Measures of Investors Relations”. The second is strengthening communications in all respects. Taking into account the characteristics and focus of different types of investors, the Group constantly enriched the investor communication methods. During last year, we held 6 results briefings, 140 video, telephone and physical meetings targeting domestic and offshore investors and analysts, especially those medium and small investors; answered 897 hotlines from investors, responded to 117 questions from investors on the e-interactive platform of the Shanghai Stock Exchange, handled 1,173 IR emails, and timely summarised and sorted out the concerns and demands of investors, further enhancing investors’ understanding of the Company’s production and operation and boosting their confidence in sustainable development. The third is attaching importance to the feedback from capital market. The Company has prepared the annual market capitalisation management report, the feedback report of stock price movement and capital market consensus after the results briefings, the analysing report of monthly shareholders register, the weekly capital market monitory report and the daily stock price movement report and other feedback mechanism, which will be used to timely provide the management team with feedbacks on market focus and relevant policy changes, respond to investors’ demands and take them into consideration during the management of the enterprise, in order to continuously achieve the high quality development for the Company. The fourth is that we have won recognition and praise for our practices. Our “China Railway: Improving ESG Governance System and Promoting Sustainable Development of the Enterprise” and “China Railway’s Practice of High Quality 2021 Annual Results Briefing” have been awarded the “2022 ESG Best Practice of A-share Listed Company” and “Best Practice of Annual Results Briefing by Listed Companies” by China Association for Public Companies and the Listed Companies Association of Beijing. The fifth is that we have repeatedly won awards from the capital market. The Group is included in SASAC’s “Central Enterprises ESG Leading 50 Index” and Forbes’ “China ESG 50”. We have been awarded “The Best IR Hong Kong Stock Company (A+H-shares)” issued by New Fortune for four consecutive years, and included in the “Best ESG Information Disclosure Award”, becoming the only award winner from China’s construction sector. In addition, we also received a number of awards, including “ESG Top 100 China Listed Companies” from the Securities Times, “Best IR Management Listed Company” from Golden Bauhinia, and “Outstanding Board of Directors” from Golden Roundtable.

### Continuous Involvement of Corporate Governance

The Company will continue to closely study the development of corporate governance practices by the world’s leading corporations and the requirements of the investors. We will also review and strengthen our corporate governance procedures and practices on a regular basis so as to ensure the long-term sustainable development of the Company.

# INDEPENDENT AUDITOR'S REPORT

## To the Shareholders of China Railway Group Limited

*(incorporated in the People's Republic of China with limited liability)*

## Opinion

### What we have audited

The consolidated financial statements of China Railway Group Limited (the "Company") and its subsidiaries (the "Group"), which are set out on pages 116 to 292, comprise:

- the consolidated balance sheet as at 31 December 2022;
- the consolidated income statement for the year then ended;
- the consolidated statement of comprehensive income for the year then ended;
- the consolidated statement of changes in equity for the year then ended;
- the consolidated statement of cash flows for the year then ended; and
- the notes to the consolidated financial statements, which include significant accounting policies and other explanatory information.

### Our opinion

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2022, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRSs") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

## Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing ("ISAs"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Independence

We are independent of the Group in accordance with the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants ("the Codes"), and we have fulfilled our other ethical responsibilities in accordance with the Codes.

## Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters identified in our audit are summarised as follows:

- Revenue and cost recognition from infrastructure construction contracts
- Expected credit losses of trade receivables and contract assets

## INDEPENDENT AUDITOR'S REPORT

### Key Audit Matters (Continued)

Key Audit Matter	How our audit addressed the Key Audit Matter
<p><b>Revenue and cost recognition from infrastructure construction contracts</b></p> <p>Refer to Note 2.32(a), Note 4(b)(i), and Note 5 to the consolidated financial statements.</p> <p>For the year ended 31 December 2022, the revenue and the cost of sales and services from infrastructure construction contracts amounted to RMB983,533 million and RMB900,755 million, respectively.</p> <p>The Group's revenue from infrastructure construction contracts is recognised over the period of the contract by reference to the progress towards complete satisfaction of that performance obligation, depending on the nature of the contract, is measured mainly by reference to the proportion of contract costs incurred for work performed to date to estimated total contract costs for each contract. Management estimates the total contract revenue and total contract costs at the inception of each contract. As the contract progresses, management regularly reviews and revises the estimates of contract revenue and contract costs if circumstances change, such as variations in contract work, claims and incentive payments. The increases or decreases in estimated total contract revenue or total contract costs resulted in the adjustments to the extent of progress toward completion and revenue recognised in the period in which the circumstances that give rise to the revision becomes known by management.</p>	<p>We performed the following procedures in relation to management's estimates of contract revenue and contract costs:</p> <ul style="list-style-type: none"> <li>– We obtained an understanding of management's internal control and assessment process of revenue and cost recognition from infrastructure construction contracts, and assessed the inherent risk of material misstatement by considering the degree of estimation uncertainty and level of other inherent risk factors such as complexity, subjectivity, changes and susceptibility to management bias;</li> <li>– We evaluated and tested the key controls over estimates of total contract revenue, preparation and review of total contract costs, budget adjustments and review and other key controls related to revenue and cost recognition from infrastructure construction contracts;</li> <li>– We compared, on a sample basis, the actual total contract revenue and total contract costs of completed projects during the year, against the most updated estimates before completion to assess the reliability of the estimates;</li> <li>– We checked construction costs incurred during the year by tracing to supporting documents, such as purchase agreements, materials receipt notes and labour cost records on a sample basis, and performed cut-off tests on construction costs;</li> <li>– In respect of projects under construction, we performed the following procedures on a sample basis:</li> </ul>

## INDEPENDENT AUDITOR'S REPORT

## Key Audit Matters (Continued)

Key Audit Matter	How our audit addressed the Key Audit Matter
<p>We focused on the revenue and cost recognition from infrastructure construction contracts because the high degree of judgement and estimation of contract revenue and contract costs. Therefore, we identified the recognition of revenue and cost from infrastructure construction contracts as a key audit matter.</p>	<ul style="list-style-type: none"> <li>(i) Reviewed the terms and conditions of the infrastructure construction contracts, inspected the contract sum, budget information, variation orders, claims and incentive payments, if any, on which the estimated total contract revenue and total contract costs were based, and evaluated the appropriateness of the basis for management's estimation;</li> <li>(ii) Confirmed contract variations, settlement and historical payment records with owners of infrastructure construction projects;</li> <li>(iii) Assessed the reasonableness of the progress toward completion by visiting the selected sites of infrastructure construction projects to observe the progress of the contract work, and discussing with the site project management the extent to completion of the contract work; and</li> <li>(iv) Tested the mathematical accuracy of the progress toward completion and revenue recognised during the year based on estimates of total contract revenue, total contract costs, and actual contract costs incurred.</li> </ul> <p>Based on our work, we found the judgement and estimates adopted by management in determining the revenue and cost from infrastructure construction contracts are supported by available evidence.</p>

## INDEPENDENT AUDITOR'S REPORT

### Key Audit Matters (Continued)

Key Audit Matter	How our audit addressed the Key Audit Matter
<p><b>Expected credit losses of trade receivables and contract assets</b></p> <p>Refer to Note 2.20, Note 2.21, Note 4(b)(ii), Note 33, and Note 34 to the consolidated financial statements.</p> <p>As at 31 December 2022, the carrying amounts of trade receivables and contract assets amounted to RMB122,237 million and RMB372,867 million, respectively, with loss allowances amounted to RMB11,632 million and RMB4,011 million, respectively.</p> <p>Provision for credit loss allowance of trade receivables and contract assets was made based on an assessment of the lifetime expected credit losses. For trade receivables and contract assets which have impaired, the Group assessed individually and provided for credit losses allowance. For other trade receivables and contract assets, given no reasonable and supportable information is available without undue cost for expected credit losses measurement, the trade receivables and contract assets were grouped by reference to the credit risk characteristics and assessed for credit losses allowance through exposure at default and the lifetime expected credit loss rates. When measuring expected credit loss, the Group considers its own credit loss incurred in the past, and adjusts by taking into consideration current conditions and forward looking factors. In assessing forward-looking information, the Group considers factors mainly including macroeconomic indicators, economic scenarios and weights.</p>	<p>We performed the following procedures in relation to management's assessment on the expected credit losses of trade receivables and contract assets:</p> <ul style="list-style-type: none"> <li>– We obtained an understanding of management's internal control and assessment process of expected credit losses of trade receivables and contract assets, and assessed the inherent risk of material misstatement by considering the degree of estimation uncertainty and level of other inherent risk factors such as complexity, subjectivity, changes and susceptibility to management bias;</li> <li>– We evaluated and tested the key controls in place on management's assessment on the expected credit losses of trade receivables and contract assets;</li> <li>– For trade receivables and contract assets assessed individually, we obtained an understanding of management's assessment of financial position and creditworthiness of customers, historical payment and settlement records and forecasted future economic conditions. On a sample basis, we collaborated management's assessment against available evidence to assess the reasonableness of expected credit loss allowance provided by management.</li> </ul>

## INDEPENDENT AUDITOR'S REPORT

## Key Audit Matters (Continued)

Key Audit Matter	How our audit addressed the Key Audit Matter
<p>We focused on auditing the expected credit losses of trade receivables and contract assets because the judgement and estimation of expected credit losses is subject to high degree of estimation uncertainty. The inherent risk in relation to the expected credit losses of trade receivables and contract assets is considered significant due to the subjectivity of significant assumptions and estimates used. Therefore, we identified the expected credit losses of trade receivables and contract assets as a key audit matter.</p>	<ul style="list-style-type: none"> <li>– For trade receivables and contract assets assessed collectively by reference to the credit risk characteristics, we assessed the reasonableness of the grouping and the measurement method of the expected credit loss model, and tested, on a sample basis, the accuracy of the grouping, the accuracy and the completeness of the source data in the model and the aging profile of trade receivables and contract assets. We evaluated the basis of determining forward-looking factors made by management, including the reasonableness of management's selection of macroeconomic indicators, economic scenarios and weights, and examined the macroeconomic indicators to publicly available external data sources to analyse the reasonableness of forecasted values. We reviewed the sensitivity analysis performed by management on the forward-looking factors to assess the potential impact on expected credit losses if the relevant key assumptions were to change in a reasonable and probable manner; and recalculated the amount of expected credit losses.</li> <li>– We tested the cash collections of trade receivable and settlement of contract assets subsequent to end of the reporting period on a sample basis.</li> </ul> <p>Based on our work, we considered that the significant judgments and estimates made by management in relation to the expected credit losses of trade receivables and contract assets were supportable by the evidence obtained and procedures performed.</p>

## Other Information

The directors of the Company are responsible for the other information. The other information comprises all of the information included in the annual report other than the consolidated financial statements and our auditor's report thereon.

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



## INDEPENDENT AUDITOR'S REPORT

### Other Information (Continued)

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

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

### Responsibilities of Directors and Audit and Risk Management Committee for the Consolidated Financial Statements

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRSs and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Audit and Risk Management Committee are responsible for overseeing the Group's financial reporting process.

### Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. We report our opinion solely to you, as a body, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

## INDEPENDENT AUDITOR'S REPORT

### Auditor's Responsibilities for the Audit of the Consolidated Financial Statements (Continued)

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with Audit and Risk Management Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide Audit and Risk Management Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Audit and Risk Management Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is NG Tsun.

**PricewaterhouseCoopers**

*Certified Public Accountants*

Hong Kong, 30 March 2023

# CONSOLIDATED INCOME STATEMENT

	Note	Year ended 31 December	
		2022	2021
		RMB million	RMB million
Revenue	5	<b>1,154,349</b>	1,073,272
Cost of sales and services	11	<b>(1,045,459)</b>	(969,886)
<b>Gross profit</b>		<b>108,890</b>	103,386
Other income	6	<b>2,623</b>	2,736
Other expenses	6	<b>(1,082)</b>	(1,982)
Net impairment losses on financial assets and contract assets	7	<b>(3,343)</b>	(5,478)
Other gains/(losses), net	8	<b>615</b>	(82)
Losses from derecognition of financial assets at amortised cost	9	<b>(4,520)</b>	(4,595)
Selling and marketing expenses	11	<b>(6,328)</b>	(5,948)
Administrative expenses	11	<b>(26,413)</b>	(25,436)
Research and development expenditures	11	<b>(27,742)</b>	(24,756)
<b>Operating profit</b>		<b>42,700</b>	37,845
Finance income	10	<b>8,273</b>	6,105
Finance costs	10	<b>(9,578)</b>	(7,616)
Share of post-tax losses of joint ventures	26	<b>(1,437)</b>	(507)
Share of post-tax profits of associates	26	<b>4,734</b>	3,809
<b>Profit before income tax</b>		<b>44,692</b>	39,636
Income tax expense	13	<b>(9,720)</b>	(9,166)
<b>Profit for the year</b>		<b>34,972</b>	30,470
<b>Profit attributable to:</b>			
– Owners of the Company		<b>31,276</b>	27,618
– Non-controlling interests		<b>3,696</b>	2,852
		<b>34,972</b>	30,470
<b>Earnings per share for profit attributable to owners of the Company</b> (expressed in RMB per share)			
– Basic	15	<b>1.198</b>	1.037
– Diluted	15	<b>1.198</b>	1.037

The above consolidated income statement should be read in conjunction with the accompanying notes.

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Year ended 31 December	
	2022	2021
Note	RMB million	RMB million
<b>Profit for the year</b>	<b>34,972</b>	30,470
<b>Other comprehensive income/(expenses), net of income tax</b>		
<i>Items that will not be reclassified to profit or loss:</i>		
Remeasurement of retirement and other supplemental benefit obligations	(12)	(78)
Income tax relating to remeasurement of retirement and other supplemental benefit obligations	2	13
Changes in the fair value of equity investments at fair value through other comprehensive income	93	57
Income tax relating to changes in the fair value of equity investments at fair value through other comprehensive income	(20)	(19)
	<b>63</b>	(27)
<i>Items that may be reclassified subsequently to profit or loss:</i>		
Exchange differences on translating foreign operations	158	(64)
Share of other comprehensive income/(expenses) of associates	675	(106)
	<b>833</b>	(170)
<b>Other comprehensive income/(expenses) for the year, net of tax</b>	<b>896</b>	(197)
<b>Total comprehensive income for the year</b>	<b>35,868</b>	30,273
<b>Total comprehensive income for the year attributable to:</b>		
– Owners of the Company	32,120	27,458
– Non-controlling interests	3,748	2,815
	<b>35,868</b>	30,273

The above consolidated statement of comprehensive income should be read in conjunction with the accompanying notes.

# CONSOLIDATED BALANCE SHEET

	Note	As at 31 December	
		2022 RMB million	2021 RMB million
<b>ASSETS</b>			
<b>Non-current assets</b>			
Property, plant and equipment	18	118,250	75,134
Right-of-use assets	19	1,754	1,659
Deposits for acquisition of property, plant and equipment		1,918	2,234
Lease prepayments	20	12,637	12,656
Deposits for investments	21	668	441
Investment properties	22	15,224	14,016
Intangible assets	23	155,137	110,496
Mining assets	24	3,376	3,479
Contract assets	34	203,132	161,377
Investments in joint ventures	26	55,122	49,831
Investments in associates	26	54,611	46,181
Goodwill	28	1,771	1,568
Financial assets at fair value through other comprehensive income	29	14,945	12,164
Other financial assets at amortised cost	30	19,139	22,960
Financial assets at fair value through profit or loss	35	13,543	12,294
Deferred tax assets	46	12,109	10,372
Other prepayments		397	332
Trade and other receivables	33	30,508	23,374
		<b>714,241</b>	<b>560,568</b>
<b>Current assets</b>			
Lease prepayments	20	212	223
Properties held for sale	31	56,979	48,745
Properties under development for sale	31	101,694	109,330
Inventories	32	49,198	45,371
Financial assets at fair value through other comprehensive income	29	766	526
Trade and other receivables	33	252,672	249,169
Contract assets	34	169,735	149,142
Current income tax recoverable		3,849	3,736
Other financial assets at amortised cost	30	14,777	8,553
Financial assets at fair value through profit or loss	35	10,312	7,304
Restricted cash and term deposit with maturity over three months	36	33,597	30,797
Cash and cash equivalents	37	204,987	148,116
		<b>898,778</b>	<b>801,012</b>
<b>Total assets</b>		<b>1,613,019</b>	<b>1,361,580</b>

## CONSOLIDATED BALANCE SHEET

	Note	As at 31 December	
		2022	2021
		RMB million	RMB million
<b>EQUITY</b>			
<b>Equity attributable to owners of the Company</b>			
Share capital	38	24,752	24,571
Shares held for 2021 Restricted Share Incentive Scheme	39	(612)	–
Share premium and reserves	40	231,321	204,927
Perpetual notes	41	45,621	45,624
		<b>301,082</b>	275,122
Non-controlling interests		<b>121,828</b>	83,072
<b>Total equity</b>		<b>422,910</b>	358,194
<b>LIABILITIES</b>			
<b>Non-current liabilities</b>			
Trade and other payables	42	26,288	10,263
Borrowings	43	282,508	198,503
Lease liabilities	19	1,139	972
Retirement and other supplemental benefit obligations	44	2,050	2,293
Provisions	45	578	761
Deferred government grants and income		1,152	1,087
Deferred tax liabilities	46	3,019	1,647
		<b>316,734</b>	215,526
<b>Current liabilities</b>			
Trade and other payables	42	617,305	522,411
Contract liabilities	34	136,937	144,095
Current income tax liabilities		8,663	7,100
Borrowings	43	109,734	113,424
Lease liabilities	19	343	360
Retirement and other supplemental benefit obligations	44	275	300
Financial liabilities at fair value through profit or loss	35	96	122
Provision	45	22	48
		<b>873,375</b>	787,860
<b>Total liabilities</b>		<b>1,190,109</b>	1,003,386
<b>Total equity and liabilities</b>		<b>1,613,019</b>	1,361,580

The above consolidated balance sheet should be read in conjunction with the accompanying notes.

The financial statements on pages 116 to 292 were approved by the Board of Directors on 30 March 2023 and were signed on its behalf.

Director  
Chen Yun

Director  
Chen Wenjian

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Attributable to owners of the Company											
	Share capital	Share premium	Shares held for 2021 Restricted Share Incentive Scheme	Capital reserve	Statutory reserve	Foreign currency translation reserve	Investment revaluation reserve	Retained earnings	Perpetual notes	Total	Non-controlling interests	Total
			(Note 39)									
Note	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
<b>Balance at 1 January 2022</b>	<b>24,571</b>	<b>51,930</b>	<b>-</b>	<b>3,222</b>	<b>16,664</b>	<b>(935)</b>	<b>(88)</b>	<b>134,134</b>	<b>45,624</b>	<b>275,122</b>	<b>83,072</b>	<b>358,194</b>
Profit for the year	-	-	-	-	-	-	-	29,477	1,799	31,276	3,696	34,972
Other comprehensive expenses	-	-	-	(8)	-	86	766	-	-	844	52	896
<b>Total comprehensive (expenses)/ income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(8)</b>	<b>-</b>	<b>86</b>	<b>766</b>	<b>29,477</b>	<b>1,799</b>	<b>32,120</b>	<b>3,748</b>	<b>35,868</b>
<b>Total transactions with owners, recognised directly in equity</b>												
Issuance of shares for 2021 Restricted Share Incentive Scheme	183	467	(650)	-	-	-	-	-	-	-	-	-
Repurchase and cancel unlocked restricted stock	(2)	(3)	5	-	-	-	-	-	-	-	-	-
Amount recorded in shareholders' equity arising from 2021 Restricted Share Incentive Scheme	-	-	-	139	-	-	-	-	-	139	3	142
Capital contributions from non-controlling shareholders of subsidiaries	-	-	-	-	-	-	-	-	-	-	21,519	21,519
Transaction with non-controlling interests resulting from acquisition of equity interests of certain subsidiaries	-	224	-	78	-	-	-	-	-	302	1,550	1,852
Acquisition of subsidiaries	-	-	-	-	-	-	-	-	-	-	17,362	17,362
Disposal of subsidiaries	-	-	-	-	-	-	-	-	-	-	(259)	(259)
Transfer of fair value gains of equity investment in other comprehensive income upon disposal	-	-	-	-	-	-	-	20	-	20	-	20
Issuance of perpetual notes	41	-	-	-	-	-	-	-	8,394	8,394	5,796	14,190
Redemption of perpetual notes	41	-	(3)	-	-	-	-	-	(8,397)	(8,400)	(8,604)	(17,004)
Dividends declared to shareholders	16	-	-	33	-	-	-	(4,849)	-	(4,816)	-	(4,816)
Dividends declared to non-controlling shareholders of subsidiaries	-	-	-	-	-	-	-	-	-	-	(1,209)	(1,209)
Dividends declared to perpetual notes holders	41	-	-	-	-	-	-	-	(1,799)	(1,799)	(1,150)	(2,949)
Transferred to reserves	-	-	-	-	3,163	-	-	(3,163)	-	-	-	-
<b>Balance at 31 December 2022</b>	<b>24,752</b>	<b>52,615</b>	<b>(612)</b>	<b>3,431</b>	<b>19,827</b>	<b>(849)</b>	<b>678</b>	<b>155,619</b>	<b>45,621</b>	<b>301,082</b>	<b>121,828</b>	<b>422,910</b>



## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Attributable to owners of the Company											
	Note	Share capital RMB million	Share premium RMB million	Capital reserve RMB million	Statutory reserve RMB million (Note 40)	Foreign currency		Retained earnings RMB million	Perpetual note RMB million (Note 41)	Total RMB million	Non-controlling interests RMB million	Total RMB million
						translation reserve RMB million	Investment revaluation reserve RMB million					
<b>Balance at 1 January 2021</b>		24,571	51,936	3,128	14,562	(886)	(42)	115,190	46,738	255,197	57,849	313,046
Profit for the year		-	-	-	-	-	-	25,469	2,149	27,618	2,852	30,470
Other comprehensive expenses		-	-	(65)	-	(49)	(46)	-	-	(160)	(37)	(197)
<b>Total comprehensive (expenses)/ income for the year</b>		-	-	(65)	-	(49)	(46)	25,469	2,149	27,458	2,815	30,273
<b>Total transactions with owners, recognised directly in equity</b>												
Capital contributions from non-controlling shareholders of subsidiaries		-	-	-	-	-	-	-	-	-	26,720	26,720
Transaction with non-controlling interests resulting from acquisition of equity interests of certain subsidiaries		-	-	159	-	-	-	-	-	159	(520)	(361)
Acquisition of subsidiaries		-	-	-	-	-	-	-	-	-	221	221
Disposal of subsidiaries		-	-	-	-	-	-	-	-	-	(2,053)	(2,053)
Issuance of perpetual notes	41	-	-	-	-	-	-	-	11,890	11,890	-	11,890
Redemption of perpetual notes	41	-	(6)	-	-	-	-	-	(12,994)	(13,000)	-	(13,000)
Dividends declared to shareholders	16	-	-	-	-	-	-	(4,423)	-	(4,423)	-	(4,423)
Dividends declared to non-controlling shareholders of subsidiaries		-	-	-	-	-	-	-	-	-	(1,239)	(1,239)
Dividends declared to perpetual notes holders	41	-	-	-	-	-	-	-	(2,159)	(2,159)	(721)	(2,880)
Transferred to reserves		-	-	-	2,102	-	-	(2,102)	-	-	-	-
<b>Balance at 31 December 2021</b>		24,571	51,930	3,222	16,664	(935)	(88)	134,134	45,624	275,122	83,072	358,194

The above consolidated statement of changes in equity should be read in conjunction with the accompanying notes.

# CONSOLIDATED STATEMENT OF CASH FLOWS

		Year ended 31 December	
		2022	2021
		RMB million	RMB million
<b>Cash flows from operating activities</b>			
Cash generated from operations	47	<b>52,435</b>	23,970
Income tax paid		<b>(8,883)</b>	(10,901)
<b>Net cash generated from operating activities</b>		<b>43,552</b>	13,069
<b>Cash flows from investing activities</b>			
– Payments for property, plant and equipment		<b>(23,521)</b>	(10,556)
– Proceeds from disposal of property, plant and equipment		<b>2,340</b>	1,620
– Payments for lease prepayments		<b>(360)</b>	(322)
– Proceeds from disposal of lease prepayments		<b>187</b>	604
– Payments for investment properties		<b>(747)</b>	(256)
– Proceeds from disposal of investment properties		<b>13</b>	20
– Payments for intangible assets		<b>(37,673)</b>	(44,837)
– Proceeds from disposal of intangible assets		<b>24</b>	17
– Payments for mining assets		<b>(6)</b>	(2)
– Payments for acquisition of subsidiaries, net of cash acquired		<b>(739)</b>	(749)
– Net proceeds from disposal of subsidiaries		<b>(5)</b>	(696)
– Payments for investments in associates		<b>(10,038)</b>	(7,821)
– Payments for investments in joint ventures		<b>(6,838)</b>	(8,455)
– Proceeds from disposal of associates		<b>681</b>	845
– Proceeds from disposal of joint ventures		<b>105</b>	575
– Payments for financial assets at fair value through profit or loss		<b>(15,217)</b>	(9,023)
– Proceeds from disposal of financial assets at fair value through profit or loss		<b>10,025</b>	4,593
– Payments for financial assets at fair value through other comprehensive income		<b>(2,915)</b>	(3,646)
– Proceeds from disposal of financial assets at fair value through other comprehensive income		<b>246</b>	1,035
– Net flow in respect of other financial assets at amortised cost		<b>(785)</b>	(6,705)
– Interests received		<b>749</b>	744
– Dividends received		<b>1,402</b>	1,464
– Decrease of term deposits with initial term of over three months		<b>1,063</b>	5,198
– Increase of term deposits with initial term of over three months		<b>(1,979)</b>	(824)
– Other investing cash flows		<b>(400)</b>	(280)
<b>Net cash used in investing activities</b>		<b>(84,388)</b>	(77,457)

## CONSOLIDATED STATEMENT OF CASH FLOWS

	Year ended 31 December	
	2022	2021
	RMB million	RMB million
<b>Cash flows from financing activities</b>		
– Capital contributions from non-controlling shareholders of subsidiaries	20,711	27,320
– Issuance of shares for 2021 Restricted Share Incentive Scheme	650	–
– Transaction with non-controlling interests resulting from acquisition of equity interests of certain subsidiaries	(701)	(10)
– Proceeds from debentures	13,150	14,495
– Repayment of debentures	(15,872)	(983)
– Proceeds from issuance of perpetual notes	8,394	11,890
– Redemption of perpetual notes	(8,400)	(13,000)
– Proceeds from bank borrowings	212,713	162,736
– Repayments of bank borrowings	(119,143)	(114,154)
– Proceeds from other borrowings	6,843	2,322
– Repayment of other borrowings	(1,331)	(2,618)
– Interests paid	(14,172)	(12,265)
– Dividends paid to non-controlling shareholders of subsidiaries	(1,209)	(1,900)
– Dividends paid to owners of the Company	(4,849)	(4,423)
– Dividends paid to holders of perpetual notes	(2,949)	(1,970)
– Repayments of lease liabilities	(734)	(960)
– Other financing cash flows	3,264	885
<b>Net cash generate from financing activities</b>	<b>96,365</b>	<b>67,365</b>
<b>Net increase in cash and cash equivalents</b>	<b>55,529</b>	<b>2,977</b>
Cash and cash equivalents at beginning of the year	148,116	145,464
Effect of foreign exchange rate changes	1,342	(325)
<b>Cash and cash equivalents at end of the year</b>	<b>204,987</b>	<b>148,116</b>

The above consolidated statement of cash flow should be read in conjunction with the accompanying notes.

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 1. General information

China Railway Group Limited (the “Company”) was established in the People’s Republic of China (the “PRC”) on 12 September 2007 as a joint stock company with limited liability, as part of the group reorganisation (“Reorganisation”) of China Railway Engineering Group Company Limited (“CREC”) in preparation for the listing of the Company’s A shares on Shanghai Stock Exchange and H shares on the Main Board of The Stock Exchange of Hong Kong Limited (the “HKSE”).

The address of the Company’s registered office is 918, Block 1, No.128 South 4th Ring Road West, Fengtai District, Beijing, the PRC. The Company’s ultimate holding company is CREC, established in the PRC.

The Company and its subsidiaries (together, the “Group”) are principally engaged in infrastructure construction, survey, design and consulting services, engineering equipment and component manufacturing, property development, mining and merchandise trading, financial trust management, comprehensive financial services and insurance agent.

These consolidated financial statements are presented in Renminbi (“RMB”), unless otherwise stated.

These consolidated financial statements have been approved for issue by the Board of Directors (the “Directors”) on 30 March 2023.

## 2. Summary of significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

### 2.1 Basis of preparation

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards (“IFRS”) issued by the International Accounting Standards Board (“IASB”) and interpretations issued by the IFRS Interpretations Committee (“IFRS IC”) applicable to companies reporting under IFRS.

The consolidated financial statements have been prepared on a historical cost basis, except for certain financial assets and liabilities (including derivative instruments) measured at fair value.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group’s accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 4.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.1 Basis of preparation (Continued)

##### (a) Amended standards adopted by the Group

The following amended standards have been adopted by the Group for the first time for the financial year beginning on 1 January 2022.

	Effective for accounting periods beginning on or after
Amendments to IAS 16 "Proceeds before intended use"	1 January 2022
Amendments to IAS 37 "Onerous contracts – costs of fulfilling a contract"	1 January 2022
Amendments to IFRS 3 "Update reference to the Conceptual framework"	1 January 2022
Annual Improvements to IFRS Standards 2018-2020 affecting IFRS 1, IFRS 9, IFRS 16 and IAS 41	1 January 2022

The adoption of above did not have any material impact on the Group's results for the year ended 31 December 2022 and the Group's financial position as at 31 December 2022. The Group did not have to change its accounting policies or make retrospective adjustments as a result of adopting these amended standards.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.1 Basis of preparation (Continued)

##### (b) New and amended standards not yet adopted by the Group

Certain new and amended standards are effective for annual periods beginning after 1 January 2022, and have not been applied in preparing the consolidated financial statements.

	Effective for accounting periods beginning on or after
IFRS 17 "Insurance Contracts"	1 January 2023
Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"	1 January 2023
Amendments to IAS 1 and IFRS Practice Statement 2 "Disclosure of Accounting Policies"	1 January 2023
Amendments to IAS 8 "Definition of Accounting Estimates"	1 January 2023
Amendments to IAS 12 "Deferred Tax related to Assets and Liabilities arising from a Single Transaction"	1 January 2023
Amendments to IFRS 10 and IAS 28 "Sale or contribution of assets between an investor and its associate or joint venture"	to be determined

The adoption of above new and amended standards will have no material impact on the Group's results and financial position.

#### 2.2 Principles of consolidation and equity accounting

##### (a) Subsidiaries

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

Intercompany transactions, balances and unrealised gains on transactions between Group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

Non-controlling interests in the results and equity of subsidiaries are shown separately in the consolidated income statement, statement of comprehensive income, statement of changes in equity and balance sheet respectively.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.2 Principles of consolidation and equity accounting (Continued)

##### (b) Associates

Associates are all entities over which the Group has significant influence but not control or joint control. This is generally the case where the Group holds between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting (see (d) below), after initially being recognised at cost.

In the Company's balance sheet, the investments in associates are stated at cost less provision for impairment losses. The results of associates are accounted for by the Company on the basis of dividends received and receivable.

##### (c) Joint arrangements

Under IFRS 11 Joint Arrangements, investments in joint arrangements are classified as either joint operations or joint ventures. The classification depends on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangement. The Group has both joint operations and joint ventures.

###### *Joint operations*

The Group recognises its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. These have been incorporated in the financial statements under the appropriate headings. Details of the joint operations are set out in Note 27.

###### *Joint ventures*

Interests in joint ventures are accounted for using the equity method (see (d) below), after initially being recognised at cost in the consolidated balance sheet.

In the Company's balance sheet, investments in joint ventures are stated at cost less provision for impairment losses. The results of joint ventures are accounted for by the Company on the basis of dividends received and receivable.

##### (d) Equity accounting

Under the equity method of accounting, the investments are initially recognised at cost and adjusted thereafter to recognise the Group's share of the post-acquisition profits or losses of the investee in profit or loss, and the Group's share of movements in other comprehensive income of the investee in other comprehensive income. Dividends received or receivable from associates and joint ventures are recognised as a reduction in the carrying amount of the investment.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.2 Principles of consolidation and equity accounting (Continued)

##### (d) Equity accounting (Continued)

When the Group's share of losses in an equity-accounted investment equals or exceeds its interest in the entity, including any other unsecured long-term receivables, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the other entity.

Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in these entities. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of equity accounted investees have been changed where necessary to ensure consistency with the policies adopted by the Group.

The carrying amount of equity-accounted investments is tested for impairment in accordance with the policy described in Note 2.13.

##### (e) Changes in ownership interests

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A change in ownership interest results in an adjustment between the carrying amounts of the controlling and non-controlling interests to reflect their relative interests in the subsidiary. Any difference between the amount of the adjustment to non-controlling interests and any consideration paid or received is recognised in a separate reserve within equity attributable to owners of the Company.

When the Group ceases to consolidate or equity account for an investment because of a loss of control, joint control or significant influence, any retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in other comprehensive income are reclassified to profit or loss or transferred to another category of equity as specified/permitted by applicable IFRSs.

If the ownership interest in a joint venture or an associate is reduced but joint control or significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income are reclassified to profit or loss where appropriate.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.3 Business combinations

The acquisition method of accounting is used to account for the acquisitions of subsidiaries of the Group, except for those acquisitions which are considered as a business combination under common control in a manner similar to pooling-of-interests and with reference to the principles of merger accounting under Hong Kong Accounting Guideline 5 “Merger Accounting for Common Control Combinations”.

##### **Merger accounting for common control combinations**

The consolidated financial statements incorporate the financial statements of the combining entities or businesses in which the common control combination occurs as if they had been combined from the date when the combining entities or businesses first came under the control of the ultimate controlling party.

The net assets of the combining entities or businesses are combined using the existing book values from the ultimate controlling parties’ perspective. No amount is recognised in consideration for goodwill or excess of acquirers’ interest in the net fair value of acquiree’s identifiable assets, liabilities and contingent liabilities over cost at the time of common control combination, to the extent of the continuation of the ultimate controlling party’s interest.

The consolidated income statement includes the results of each of the combining entities or businesses from the earliest date presented or since the date when the combining entities or businesses first came under the common control, where there is a shorter period, regardless of the date of the common control combination.

The comparative amounts in the consolidated financial statements are presented as if the entities or businesses had been combined at the previous end of the reporting period or when they first came under common control, whichever is shorter.

Transaction costs, including professional fees, registration fees, costs of furnishing information to shareholders, costs incurred in combining operations of the previously separate businesses, etc., incurred in relation to the common control combination that is to be accounted for by using merger accounting is recognised as an expense in the year in which it is incurred.

##### **Acquisition method of accounting for non-common control combinations**

The Group applies the acquisition method to account for non-common control business combinations. The consideration transferred for the acquisition of a subsidiary comprises the:

- fair values of the assets transferred
- liabilities incurred to the former owners of the acquired business
- equity interests issued by the Group
- fair value of any asset or liability resulting from a contingent consideration arrangement, and
- fair value of any pre-existing equity interest in the subsidiary.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.3 Business combinations (Continued)

##### Acquisition method of accounting for non-common control combinations (Continued)

Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are, with limited exceptions, measured initially at their fair values at the acquisition date. The Group recognises any non-controlling interest in the acquired entity on an acquisition-by-acquisition basis either at fair value or at the non-controlling interest's proportionate share of the acquired entity's net identifiable assets.

Acquisition-related costs are expensed as incurred.

The excess of the

- consideration transferred,
- amount of any non-controlling interest in the acquired entity, and
- acquisition-date fair value of any previous equity interest in the acquired entity

over the fair value of the net identifiable assets acquired is recorded as goodwill. If those amounts are less than the fair value of the net identifiable assets of the business acquired, the difference is recognised directly in profit or loss as a bargain purchase.

Where settlement of any part of cash consideration is deferred, the amounts payable in the future are discounted to their present value as at the date of exchange. The discount rate used is the entity's incremental borrowing rate, being the rate at which a similar borrowing could be obtained from an independent financier under comparable terms and conditions.

Any contingent consideration to be transferred by the Group is recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognised in accordance with IAS 39 either in profit or loss or as a change to other comprehensive income. Contingent consideration that is classified as equity is not remeasured, and its subsequent settlement is accounted for within equity.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date. Any gains or losses arising from such remeasurement are recognised in profit or loss.

#### 2.4 Separate financial statements

Investments in subsidiaries are accounted for at cost less impairment. Cost includes direct attributable costs of investment. The results of subsidiaries are accounted for by the Company on the basis of dividend received and receivable.

Impairment testing of the investments in subsidiaries is required upon receiving a dividend from these investments if the dividend exceeds the total comprehensive income of the subsidiary in the period the dividend is declared or if the carrying amount of the investment in the separate financial statements exceeds the carrying amount in the consolidated financial statements of the investee's net assets including goodwill.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.5 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the Directors, who is the chief operating decision-maker. The Directors are responsible for allocating resources and assessing performance of the operating segments, and making strategic decisions.

#### 2.6 Foreign currency translation

##### (a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ("the functional currency"). The consolidated financial statements are presented in RMB, which is the Company's functional and the Group's presentation currency.

##### (b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are remeasured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the consolidated income statement, except when deferred in other comprehensive income as qualifying cash flow hedges and qualifying net investment hedges.

Foreign exchange gains and losses are presented in the consolidated income statement within "Other gains/(losses), net".

Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. For example, translation differences on non-monetary financial assets and liabilities such as equities held at fair value through profit or loss are recognised in profit or loss as part of the fair value gain or loss. Translation differences on non-monetary financial assets such as equities classified as at fair value through other comprehensive income are included in other comprehensive income.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.6 Foreign currency translation (Continued)

##### (c) Group companies

The results and financial position of all the group entities (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- (i) assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;
- (ii) income and expenses for each income statement are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the dates of the transactions); and
- (iii) all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate. Currency translation differences arising are recognised in other comprehensive income.

##### (d) Disposal of foreign operation and partial disposal

On the disposal of a foreign operation (that is, a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, a disposal involving loss of joint control over a joint venture that includes a foreign operation, or a disposal involving loss of significant influence over an associate that includes a foreign operation), all of the currency translation differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

In the case of a partial disposal that does not result in the Group losing control over a subsidiary that includes a foreign operation, the proportionate share of accumulated currency translation differences are re-attributed to non-controlling interests and are not recognised in profit or loss. For all other partial disposals (that is, reductions in the Group's ownership interest in associates or joint ventures that do not result in the Group losing significant influence or joint control) the proportionate share of the accumulated exchange difference is reclassified to profit or loss.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.7 Property, plant and equipment

Property, plant and equipment are stated at historical cost less depreciation. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of any component accounted for as a separate asset is derecognised when replaced. All other repairs and maintenance are charged to the consolidated income statement during the financial period in which they are incurred.

Depreciation is calculated using the straight-line method and the units of production method to allocate their cost to their residual values over their estimated useful lives, as follows:

– Buildings	15-50 years
– Infrastructure construction equipment	8-15 years
	Units of production method
– Transportation equipment	4-12 years
– Manufacturing equipment	5-18 years
– Testing equipment and instruments	5-10 years
– Other equipment	3-10 years

Construction-in-progress represents buildings, machinery and equipment under construction or pending installation and is stated at cost less accumulated impairment losses, if any. Costs include construction and acquisition costs, and interest charges arising from borrowings used to finance the assets during the construction period. No provision for depreciation is made on construction-in-progress until such time as the relevant assets are completed and available for use. When the assets concerned become available for use, the costs are transferred to appropriate category of property, plant and equipment and depreciated in accordance with the policy as stated above.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.7 Property, plant and equipment (Continued)

The assets' residual values, useful lives and expected output are reviewed, and adjusted if appropriate, at the end of each reporting period.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within "Other gains/(losses), net" in the consolidated income statement.

#### 2.8 Investment properties

Investment properties are interests in land and buildings held to earn rental income and/or for capital appreciation, rather than for internal use purposes; or for sale in the ordinary course of business. Such properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at historical cost less accumulated depreciation and accumulated impairment losses, if any.

Depreciation is calculated using the straight-line method to write off the cost less accumulated impairment loss of the asset over its estimated useful life.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within "Other gains/(losses), net" in the consolidated income statement.

#### 2.9 Lease prepayments

Lease prepayments represent upfront prepayments made for the land use rights and are expensed in the consolidated income statement on a straight-line basis over the period of the lease or when there is impairment, the impairment is expensed in the consolidated income statement.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.10 Intangible assets

##### (a) Service concession arrangements

The Group is engaged in certain service concession arrangements in which the Group carries out construction work (e.g. toll highways and others) in exchange for a right for the Group to operate the asset concerned in accordance with pre-established conditions set by the granting authority. In accordance with the IFRIC Interpretation 12 Service Concession Arrangement (IFRIC 12), the assets under the concession arrangements may be classified as intangible assets or financial assets. The assets are classified as intangibles if the operator receives a right (a license) to charge users of the public service or as financial assets if the operator has an unconditional contractual right to receive cash or another financial asset from or at the direction of the grantor for the construction services. The Group classifies the non-current assets linked to the long-term investment as "service concession arrangements" within intangible assets on the balance sheet if the intangible asset model is adopted. Such concession assets represented the consideration received for its construction service rendered (Note 2.32(e)). Once the underlying infrastructure of the concession arrangements is completed, the concession assets are amortised over the expected useful lives or the term of the concession, whichever is shorter, using traffic flow method or straight-line method under the intangible asset model.

##### (b) Patent and non-patented technologies

Separately acquired patent and non-patented technologies are shown at historical cost. Patent and non-patented technologies acquired in a business combination are recognised at fair value at the acquisition date. Patent and non-patented technologies have a finite useful life and are subsequently carried at cost less accumulated amortisation and impairment losses. Amortisation is calculated using the straight-line method to allocate the cost over their estimated useful lives of 2 to 10 years.

##### (c) Computer software

Acquired computer software license costs recognised as assets are amortised over their estimated useful lives of 2 to 10 years.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.11 Mining assets

##### (a) Exploration and evaluation assets

Exploration and evaluation assets are recognised at cost on initial recognition. Subsequent to initial recognition, exploration and evaluation assets are stated at cost less any identified impairment loss.

Exploration and evaluation assets include the cost of exploration rights and the expenditures incurred in the search for mineral resources as well as the determination of the technical feasibility and commercial viability of extracting those resources. Exploration and evaluation assets are assessed for impairment when facts and circumstances suggest that the carrying amount of an exploration and evaluation asset may exceed its recoverable amount. An impairment loss is recognised in profit and loss.

When the technical feasibility and commercial viability of extracting a mineral resource become demonstrable and the mining rights are obtained, any previously recognised exploration and evaluation assets are reclassified as mining rights or property, plant and equipment, as appropriate. Exploration and evaluation assets are assessed for impairment and any impairment loss is recognised before reclassification.

##### (b) Mining rights

Mining rights acquired separately are initially measured at cost. Mining rights are reclassified from exploration and evaluation assets at the carrying amount when the technical feasibility and commercial viability of extracting mineral resources are demonstrable. Mining rights with finite useful lives are carried at costs less accumulated amortisation and any identified impairment loss. Amortisation for mining rights with finite useful lives is provided using the unit of production method based on the actual production volume over the estimated total proved and probable reserves of the ores mines.

#### 2.12 Goodwill

Goodwill arises on the acquisition of subsidiaries and represents the excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identified net assets acquired.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash-generating units ("CGUs"), or groups of CGUs, that is expected to benefit from the synergies of the combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. Goodwill is monitored at the individual acquisition group level within respective operation segment.

Goodwill impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of CGU containing the goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs of disposal. Any impairment is recognised immediately as an expense and is not subsequently reversed.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.13 Impairment of non-financial assets

Assets that have an indefinite useful life, for example, goodwill, or exploration and evaluation assets, are not subject to amortisation and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. Other assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows which are largely independent of the cash inflows from other assets or groups of assets (cash-generating units). Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

#### 2.14 Investments and other financial assets

##### 2.14.1 Classification

The Group classifies its financial assets in the following measurement categories:

- those to be measured subsequently at fair value (either through other comprehensive income, or through profit or loss), and
- those to be measured at amortised cost.

The classification depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows.

For assets measured at fair value, gains and losses will either be recorded in profit or loss or other comprehensive income. For investments in debt instruments, this will depend on the business model in which the investment is held. For investments in equity instruments that are not held for trading, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income ("FVOCI").

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.14 Investments and other financial assets (Continued)

##### 2.14.2 Recognition and derecognition

Regular way purchases and sales of financial assets are recognised on trade date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

##### 2.14.3 Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss ("FVPL"), transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

##### *Debt instruments*

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the asset. There are three measurement categories into which the Group classifies its debt instruments:

- **Amortised cost:** Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and presented in "Other gains/(losses), net", together with foreign exchange gains and losses. Impairment losses are presented as separate line item in the statement of profit or loss.
- **FVOCI:** Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment gains or losses, interest income and foreign exchange gains and losses which are recognised in profit or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in other comprehensive income is reclassified from equity to profit or loss and recognised in "Other gains/(losses), net". Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in "Other gains/(losses), net" and impairment expenses are presented as separate line item in the statement of profit or loss.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.14 Investments and other financial assets (Continued)

##### 2.14.3 Measurement (Continued)

###### *Debt instruments (Continued)*

- FVPL: Assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within "Other gains/(losses), net" in the period in which it arises.

###### *Equity instruments*

The Group subsequently measures all equity investments at fair value. Where the Group's management has elected to present fair value gains and losses on equity investments in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognised in profit or loss as other income when the Group's right to receive payments is established.

Changes in the fair value of financial assets at FVPL are recognised in "Other gains/(losses), net" in the consolidated income statement as applicable. Impairment losses (and reversal of impairment losses) on equity investments measured at FVOCI are not reported separately from other changes in fair value.

##### 2.14.4 Impairment

The Group assesses on a forward looking basis the expected credit losses associated with its debt instruments carried at amortised cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade and bills receivables, the Group applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognised from initial recognition of the receivables, see Note 33 for further details.

#### 2.15 Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the balance sheet when the Group currently has a legally enforceable right to offset the recognised amounts, and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The Group has also entered into arrangements that do not meet the criteria for offsetting but still allow for the related amounts to be set off in certain circumstances, such as bankruptcy or the termination of a contract.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.16 Financial Guarantee Contracts

Financial guarantee contracts are recognised as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value and subsequently at the higher of:

- the amount determined in accordance with the expected credit loss model under IFRS 9 Financial Instruments and
- the amount initially recognised less, where appropriate, the cumulative amount of income recognised in accordance with the principles of IFRS 15 Revenue from Contracts with Customers.

The fair value of financial guarantees is determined based on the present value of the difference in cash flows between the contractual payments required under the debt instrument and the payments that would be required without the guarantee, or the estimated amount that would be payable to a third party for assuming the obligations.

Where guarantees in relation to loans or other payables of associates and joint ventures are provided for no compensation, the fair values are accounted for as contributions and recognised as part of the cost of the investment.

#### 2.17 Derivatives and hedging activities

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group designates certain derivatives as either:

- hedges of the fair value of recognised assets or liabilities or a firm commitment (fair value hedges)
- hedges of a particular risk associated with the cash flows of recognised assets and liabilities and highly probable forecast transactions (cash flow hedges), or
- hedges of a net investment in a foreign operation (net investment hedges).

At the inception of the hedging, the Group documents the economic relationship between hedging instruments and hedged items, including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items. The Group documents its risk management objective and strategy for undertaking its hedge transactions.

The fair values of derivative financial instruments designated in hedge relationships are disclosed by the Group. Movements in the hedging reserve in shareholders' equity are shown in the consolidated statement of changes in equity. The full fair value of a hedging derivative is classified as a non-current asset or liability when the remaining maturity of the hedged item is more than 12 months; it is classified as a current asset or liability when the remaining maturity of the hedged item is less than 12 months. Trading derivatives are classified as a current asset or liability.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.17 Derivatives and hedging activities (Continued)

##### Cash flow hedge that quantity for hedge accounting

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in cash flow hedge reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss within "Other gains/(losses), net".

When option contracts are used to hedge forecast transactions, the Group designates only the intrinsic value of the options as the hedging instrument.

Gains or losses relating to the effective portion of the change in intrinsic value of the options are recognised in the cash flow hedge reserve within equity. The changes in the time value of the options that relate to the hedged item ("aligned time value") are recognised within other comprehensive income in the costs of hedging reserve within equity.

When forward contracts are used to hedge forecast transactions, the Group generally designates only the change in fair value of the forward contract related to the spot component as the hedging instrument. Gains or losses relating to the effective portion of the change in the spot component of the forward contracts are recognised in the cash flow hedge reserve within equity. The change in the forward element of the contract that relates to the hedged item ("aligned forward element") is recognised within other comprehensive income in the costs of hedging reserve within equity. In some cases, the entity may designate the full change in fair value of the forward contract (including forward points) as the hedging instrument. In such cases, the gains or losses relating to the effective portion of the change in fair value of the entire forward contract are recognised in the cash flow hedge reserve within equity.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects profit or loss, as follows:

- Where the hedged item subsequently results in the recognition of a non-financial asset (such as inventory), both the deferred hedging gains and losses and the deferred time value of the option contracts or deferred forward points, if any, are included within the initial cost of the asset. The deferred amounts are ultimately recognised in profit or loss as the hedged item affects profit or loss (for example through "cost of sales").
- The gain or loss relating to the effective portion of the interest rate swaps hedging variable rate borrowings is recognised in profit or loss within finance cost at the same time as the interest expense on the hedged borrowings.

When a hedging instrument expires, or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative deferred gain or loss and deferred costs of hedging in equity at that time remains in equity until the forecast transaction occurs, resulting in the recognition of a non-financial asset such as inventory. When the forecast transaction is no longer expected to occur, the cumulative gain or loss and deferred costs of hedging that were reported in equity are immediately reclassified to profit or loss.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.18 Inventories

Inventories comprise raw materials and consumables, work in progress and finished goods. Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first-in-first-out, weighted average or specific identification method for inventories with a different nature or use. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity). It excludes borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale.

#### 2.19 Properties held for sale/properties under development for sale

Properties held for sale and under development for sale are stated at the lower of cost and net realisable value. Development cost of properties comprises cost of land use rights, construction costs and borrowing costs eligible for capitalisation incurred during the construction period. Upon completion, the properties are transferred to completed properties held for sale. Net realisable value takes into account the price ultimately expected to be realised, less applicable variable selling expenses and the anticipated costs to completion. Properties held for sale and under development for sale are classified as current assets unless the construction period of the relevant property development project is expected to complete beyond normal operating cycle.

#### 2.20 Trade receivables

Trade receivables are amounts due from customers for services performed or products sold in the ordinary course of business. If collection of trade receivables is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, when they are recognised at fair value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost using the effective interest method. See Note 33 for further information about the Group's accounting for trade receivables and a description of the Group's impairment policies.

#### 2.21 Contract assets and liabilities

A contract asset is the Group's right to consideration in exchange for goods or services that the Group has transferred to the customer. A contract asset becomes a receivable when the Group's right to consideration is unconditional, which is the case when only the passage of time is required before payment of the consideration is due.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.21 Contract assets and liabilities (Continued)

The Group applied the simplified approach to measure expected credit losses which uses a lifetime expected loss allowance for contract assets, see Note 34 for further details.

A contract liability is the Group's obligation to transfer, or to stand ready to transfer goods or services to the customer that the Group has received consideration or the amount is due from the customer. The Group derecognised a contract liability when the Group transfers goods or services and, therefore satisfies performance obligation.

Contract in the financial statements is presented as a contract asset or a contract liability, depending on the relationship between the Group's performance and the customer's payment.

#### 2.22 Cash and cash equivalents

For the purpose of presentation in the statement of cash flows, cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value, and bank overdrafts. Bank overdrafts are shown within borrowings in current liabilities in the balance sheet.

#### 2.23 Share capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

#### 2.24 Financial instruments classified as equity

Financial instruments issued by the Group are classified as equity instruments when all the following conditions have been met:

- (i) The financial instruments have no contracted obligation to pay cash or other financial assets to others, nor to exchange financial assets or liabilities with others under potential unfavorable circumstance;
- (ii) The financial instruments will or may be settled in the Group's own equity instruments: if the financial instrument is non-derivative, it should not have the contractual obligation to be settled by the Group delivering a variable number of its own equity instruments; if the financial instrument is derivative, it should solely be settled by the Group delivering a fixed number of its own equity instruments in exchange for a fixed amount of cash or other financial assets.

Financial instruments classified as equity instruments are recognised initially at fair value, net of transaction costs incurred.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.25 Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Trade payables are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

#### 2.26 Borrowings

Borrowings are initially recognised at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption amount is recognised in the consolidated income statement over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a pre-payment for liquidity services and amortised over the period of the facility to which it relates.

Borrowings are removed from the balance sheet when the obligation specified in the contract is discharged, cancelled or expired. The difference between the carrying amount of a financial liability that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss as finance costs.

Where the terms of a financial liability are renegotiated and the entity issues equity instruments to a creditor to extinguish all or part of the liability (debt for equity swap), a gain or loss is recognised in profit or loss, which is measured as the difference between the carrying amount of the financial liability and the fair value of the equity instruments issued.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the end of the reporting period.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.27 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for its intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

#### 2.28 Current and deferred income tax

The income tax expense for the period is the tax payable on the current period's taxable income based on the applicable income tax rate for each jurisdiction adjusted by changes in deferred tax assets and liabilities attributable to temporary differences and to unused tax losses. Income tax is recognised in the consolidated income statement, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the income tax is also recognised in other comprehensive income or directly in equity, respectively.

##### (a) Current income tax

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Company and its subsidiaries, joint ventures and associates operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.28 Current and deferred income tax (Continued)

##### (b) Deferred income tax

###### *Inside basis differences*

Deferred income tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill. Deferred income tax is also not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

###### *Outside basis differences*

Deferred income tax is provided on temporary differences arising from investments in subsidiaries, associates and joint ventures, except for deferred income tax liability where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets are recognised on deductible temporary differences arising from investments in subsidiaries, associates and joint ventures only to the extent that it is probable the temporary difference will reverse in the future and there is sufficient taxable profit available against which the temporary difference can be utilised.

##### (c) Offsetting

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.29 Employee benefits

The Group operates various post-employment schemes, including both defined benefit and defined contribution pension plans and post-employment medical plans.

##### (a) Pension obligations

For defined contribution plans, the full-time employees of the Group in the Mainland China are covered by the government-sponsored state-managed retirement plans under which the employees are entitled to a monthly pension based on certain formula. The relevant government agencies are responsible for the pension liability to these retired employees. The Group pays contributions to these pension plans monthly, on a mandatory or contractual basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefit expense as incurred.

The Group also provides supplementary pension subsidies to certain qualified retired employees in Mainland China. Such supplementary pension subsidies are considered as defined benefit plans. The cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each annual reporting period. The present value of the defined benefit plans is determined by discounting the estimated future cash outflows using interest rates of government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension obligation. Remeasurement, comprising actuarial gains and losses is reflected immediately in the consolidated balance sheet with a charge or credit recognised in other comprehensive income in the period in which they occur. Remeasurement recognised in other comprehensive income will not be reclassified to profit or loss. Past service cost is recognised in profit or loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are categorised as follows:

- service cost (including current service cost, past service cost, as well as gains and losses on curtailments and settlements);
- net interest expense or income; and
- remeasurement.

The Group presents the first two components of defined benefit costs in profit or loss. Curtailment gains and losses are accounted for as past service costs.

In addition, the Group participates in various defined contribution retirement schemes for its qualified employees in certain countries or jurisdictions outside Mainland China. Employees' and employers' contributions are calculated based on various percentages of employees' gross salaries of fixed sums and length of service.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.29 Employee benefits (Continued)

##### (b) Other post-employment obligations

The Group provides post-retirement healthcare benefits to certain qualified retired employees. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. These obligations are valued semiannually by independent qualified actuaries.

##### (c) Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits at the earlier of the following dates: (a) when the Group can no longer withdraw the offer of those benefits; and (b) when the entity recognise costs for a restructuring that is within the scope of IAS 37 and involves the payment of termination benefits. In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured based on the number of employees expected to accept the offer. Benefits falling due more than 12 months after the end of the reporting period are discounted to their present value.

##### (d) Short-term employee benefits

Short-term employee benefits are recognised at the undiscounted amount of the benefits expected to be paid as and when employees rendered the services. All short-term employee benefits are recognised as an expense unless another IFRS requires or permits the inclusion of the benefits in the cost of an asset.

A liability is recognised for benefits accruing to employees (such as wages and salaries, annual leave and sick leave) after deducting any amount already paid.

##### (e) Housing funds

All full-time employees of the Group in Mainland China are entitled to participate in various government-sponsored housing funds. The Group contributes on a monthly basis to these funds based on certain percentages of the salaries of the employees. The Group's liability in respect of these funds is limited to the contributions payable in each period.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.30 Provisions

Provisions are recognised when: the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated. Provisions are not recognised for future operating losses.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of management's best estimate of the expenditures required to settle the present obligation at the end of the reporting period using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

#### 2.31 Government grants

Grants from the government are recognised where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants relating to costs are deferred and recognised in the consolidated income statement over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to property, plant and equipment and intangible assets are included in non-current liabilities as deferred government grants and are credited to the consolidated income statement on a straight-line basis over the expected lives of the related assets.

#### 2.32 Revenue recognition

Revenue is measured at the transaction price agreed under the contract. Revenue is shown, net of discounts and after eliminating sales within the Group. The Group considers the effects of variable consideration, constraining estimates of variable consideration, the existence of a significant financing component in the contract, non-cash consideration and consideration payable to a customer to determine the transaction price.

Revenues are recognised when or as the control of the asset is transferred to the customer and when specific criteria have been met for each of the Group's activities, as described below. The Group bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.32 Revenue recognition (Continued)

##### (a) Revenue from infrastructure construction contracts and bridge steel structure manufacturing and installation services

Revenue from infrastructure construction contracts and bridge steel structure manufacturing and installation services is recognised when or as the constructions projects and bridge steel structure products and related installation services are transferred to the customer. Depending on the terms of the contracts and the laws that are applicable to the contracts, control of the construction projects and bridge steel structure products and related installation services may transfer over time or at a point in time. If the construction projects and the bridge steel structure manufacturing and installation services have no alternative use to the Group contractually and the Group has an enforceable right to payment from the customers for performance completed to date, the Group satisfies the performance obligation over time, and therefore, recognises revenue over the period of the contract by reference to the progress towards complete satisfaction of that performance obligation. The progress towards complete satisfaction of the performance obligation, in an amount that reflects the consideration expected to be entitled and, depending on the nature of the contract, is measured mainly by reference to (a) the proportion of contract costs incurred for work performed to date to estimated total contract costs for each contract; (b) the amount of work certified by site engineers; or (c) completion of physical proportion of the contract work.

##### (b) Services rendered

Revenue for services rendered including surveying, design, consulting, research and development, feasibility study, compliance certification services with respect to infrastructure projects, is recognised over the period of services are rendered by the progress towards complete satisfaction of that performance obligation measured by reference to (a) the proportion of contract costs incurred for work performed to date to estimated total contract costs for each contract; (b) stage of completion of the specific transactions and when it is probable that the economic benefits associated with the transaction will flow to the entity.

For (a) and (b) above, estimates of revenue, costs or extent of progress toward completion are revised if circumstances change. Any resulting increases or decreases in estimated revenues or costs are reflected in profit or loss in the period in which the circumstances that give rise to the revision become known by management.

The excess of cumulative revenue recognised in profit or loss over the cumulative billings to customers is recognised as contract assets. The excess of cumulative billings to customers over the cumulative revenue recognised in profit or loss is recognised as contract liabilities.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.32 Revenue recognition (Continued)

##### (c) Revenue from properties development

Revenue from sale of properties is recognised when control over the property has been transferred to the customer. The properties have generally no alternative use for the Group due to contractual restrictions. However, an enforceable right to payment does not arise until legal title has passed to the customer. Therefore, revenue is recognised at a point in time when the legal title has passed to the customer.

Some of the Group's primary land development recognised revenue over time, and the progress of implementation is based on the proportion of the cost incurred over the budgeted cost by the end of the reporting period. Some recognised revenue at a point in time.

##### (d) Sales of goods

Sales of goods are recognised when an entity has transferred the products to the customer, and the customer has obtained control of the products.

##### (e) Recognition of revenue from Public-Private Partnership ("PPP")

Public-Private-Partnership project contracts refers to the contract established by the Group and the government for PPP project cooperation in accordance with laws and regulations, and the contract shall meet the following features at the same time (hereinafter referred to as "double features"):

- (1) The Group provides public products and services on behalf of the government by using PPP project assets during the contractually agreed operation period;
- (2) The Group is compensated for the public goods and services it provides for the period agreed in the contract.

The following conditions shall be met at the same time (hereinafter referred to as "double controls"):

- (1) The government controls or regulates the type, object and price of public goods and services that the Group must provide in the use of PPP project assets;
- (2) When the PPP project contract is terminated, the government party controls the significant residual interests of the PPP project assets through ownership, income rights or other forms of control.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.32 Revenue recognition (Continued)

##### (e) Recognition of revenue from Public-Private Partnership (“PPP”) (Continued)

The Group provides multiple service base on PPP contract, recognises revenues and costs of construction service in accordance with construction contract. Revenue from construction service is measured by consideration collected or entitled to charge and recognise contract assets at the same time.

In accordance with the PPP contract, during the operation of PPP project, the Group is entitled to collect cash flows from parties who received public products and services with uncertain amount, and such right doesn't constitute an unconditional right to collect cash. The Group should recognise the consideration or the revenue recognised from construction activity of PPP assets as intangible assets when the PPP assets reach working condition.

In accordance with the PPP contract, during the operation of PPP project, the Group, entitled to collect certain cash flows (or other financial assets), should recognise revenue and receivables simultaneously when the social capital party has the right to collect such consideration (a right is only determined by the passage of time).

After PPP assets reach working condition, the social capital party should recognise revenue for operation of PPP projects.

#### 2.33 Interest income

Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset except for financial assets that subsequently become credit-impaired. For credit-impaired financial assets the effective interest rate is applied to the net carrying amount of the financial asset (after deduction of the loss allowance).

Interest income is presented as finance income where it is earned from financial assets that are held for cash management purposes.

#### 2.34 Dividends

Dividends are received from financial assets measured at FVPL and at FVOCI. Dividends are recognised as other income in profit or loss when the right to receive payment is established. This applies even if they are paid out of pre-acquisition profits, unless the dividend clearly represents a recovery of part of the cost of an investment. In this case, the dividend is recognised in other comprehensive income if it relates to an investment measured at FVOCI. However, the investment may need to be tested for impairment as a consequence.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.35 Leases

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable,
- variable lease payment that are based on an index or a rate, initially measured using the index or rate as at the commencement date,
- amounts expected to be payable by the group under residual value guarantees,
- the exercise price of a purchase option if the Group is reasonably certain to exercise that option, and
- payments of penalties for terminating the lease, if the lease term reflects the group exercising that option.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, the lessee's incremental borrowing rate is used, being the rate that the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, security and conditions.

To determine the incremental borrowing rate, the Group:

- where possible, uses recent third-party financing received by the individual lessee as a starting point, adjusted to reflect changes in financing conditions since third party financing was received
- uses a build-up approach that starts with a risk-free interest rate adjusted for credit risk for leases held by the Group, which does not have recent third party financing, and
- makes adjustments specific to the lease, eg term, country, currency and security.

If a readily observable amortising loan rate is available to the individual lessee (through recent financing or market data) which has a similar payment profile to the lease, then the Group entities use that rate as a starting point to determine the incremental borrowing rate.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.35 Leases (Continued)

The Group is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date less any lease incentives received
- any initial direct costs, and
- restoration costs.

Right-of-use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less without a purchase option.

For the lessor, the Group derecognises assets held under a finance lease in balance sheet and present them as a receivable at the present value of the lease payments. Lease income from operating leases is recognised in the consolidated income statement on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognised as expense over the lease term on the same basis as lease income. The respective leased assets are included in the balance sheet based on their nature.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.36 Research and development

Research expenditure is recognised as an expense as incurred. Costs incurred on development projects (relating to the design and developing of new or improved products and processes) are recognised as intangible assets when it is probable that the project will be a success considering its commercial and technical feasibility and its costs can be measured reliably. Other development expenditures that do not meet these criteria are recognised as an expense when incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Capitalised development cost is measured at cost less accumulated amortisation and accumulated impairment losses. Amortisation of capitalised development cost is calculated using the straight-line method over its expected useful life from the date they are available for use.

#### 2.37 Dividend distribution

Dividend distribution to the Company's shareholders is recognised as a liability in the Group's and the Company's financial statements in the period in which the dividends are approved by the Company's shareholders.

#### 2.38 Share-based payments

A share-based payment is classified as either an equity-settled share-based payment or a cash-settled share-based payment. An equity-settled share-based payment is a transaction in which the Group receives services and uses shares or other equity instruments as consideration for settlement. The 2021 Restricted Share Incentive Scheme implemented by the Group is an equity-settled share-based payment and information relating to these schemes is set out in Note 38.

An equity-settled share-based payment in exchange for services received from employees is measured at the fair value of the equity instruments granted to the employees. If such equity-settled share-based payment could vest immediately, related costs or expenses at an amount equal to the fair value on the grant date less amount paid by employees are recognised, with a corresponding increase in capital reserve; if such equity-settled share-based payment could not vest until the completion of services for a vesting period, or until the achievement of a specified performance condition, the Group at each balance sheet date during the vesting period recognises the services received for the current period as related costs and expenses, with a corresponding increase in capital reserve, at an amount equal to the fair value of the equity instruments at the grant date less amount paid by employees, based on the best estimate of the number of equity instruments expected to vest, which is made on the basis of the latest available information such as the changes in the number of covered employees.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. Summary of significant accounting policies (Continued)

#### 2.38 Share-based payments (Continued)

The cost of equity-settled transactions is recognised, together with a corresponding increase in capital reserve, over the period in which the specified performance and service conditions are fulfilled. The cumulative expense recognised for equity-settled transactions at each end of the reporting period until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest.

Where the terms of an equity-settled share-based award are modified, as a minimum an expense is recognised as if the terms had not been modified. In addition, an expense is recognised for any modification that increases the total fair value of the share-based payments, or is otherwise beneficial to the employee as measured at the date of modification.

Where an equity-settled share-based award is cancelled, it is treated as if it had vested on the date of cancellation, and any expense not yet recognised for the award is recognised immediately. This includes any award where non-vesting conditions within the control of either the Group or the employee are not met. However, if a new award is substituted for the cancelled award, and is designated as a replacement on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award.

### 3. Financial Risk Management

#### 3.1 Financial risk factors

The Group's activities expose it to a variety of financial risks: market risk (including foreign currency risk, price risk and cash flow and fair value interest rate risk), credit risk, and liquidity risk.

The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group identifies, evaluates and uses derivative financial instruments to hedge certain risk exposures.

There has been no change to the types of the Group's exposure in respect of financial instruments or the manner in which it manages and measures the risks.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (a) Market risk

###### (i) Foreign currency risk

The functional currency of majority of the entities within the Group is RMB. Most of the Group's transactions are based and settled in RMB. Foreign currencies are used to settle the Group's revenue from overseas operations, the Group's purchases of machinery and equipment from overseas suppliers, and certain expenses.

RMB is not freely convertible into other foreign currencies and conversion of RMB into foreign currencies is subject to rules and regulations of foreign exchange control promulgated by the PRC Government.

Details of the Group's other financial assets at amortised cost, trade and other receivables, restricted cash and term deposit with maturity over three months, cash and cash equivalents, trade and other payables and borrowings as at 31 December 2022, denominated in foreign currencies, mainly United States Dollars ("USD"), are disclosed in Notes 29, 30, 33, 36, 37, 42 and 43 respectively.

The management of the Group monitors foreign exchange exposure and will consider hedging significant foreign exchange exposure should the need arises.

As at 31 December 2022, if RMB had strengthened/weakened by 9% against USD with all other variables held constant, post-tax profit for the year would have been approximately RMB207 million lower/higher (2021: 2%, RMB34 million lower/higher), mainly as a result of foreign exchange gains/losses on translation of USD-denominated cash and cash equivalents, trade and other receivables, other financial assets at amortised cost, restricted cash, borrowings, and trade and other payables.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (a) Market risk (Continued)

###### (ii) Price risk

The Group's exposure to equity securities price risk arises from investments held by the Group and classified in the balance sheet either as at FVPL or at FVOCI and measured by reference to quoted prices.

The Group currently does not have a policy to hedge the securities price risk. However, the management closely monitors such risk by maintaining a diversified portfolio of investments with different risks.

The Group's sensitivity to equity price risk on the financial assets and liabilities at FVPL and at FVOCI at the end of the reporting period while all other variables were held constant is as follows:

	2022	2021
Increase/(decrease) in quoted price in open markets	15%	6%

	2022	2021
	RMB million	RMB million
Increase/(decrease) in post-tax profit for the year		
– as a result of increase in equity price	90	49
– as a result of decrease in equity price	(90)	(49)
Increase/(decrease) in other comprehensive income		
– as a result of increase in equity price	80	36
– as a result of decrease in equity price	(80)	(36)

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (a) Market risk (Continued)

###### (iii) Cash flow and fair value interest rate risk

The fair value interest rate risk relates primarily to the Group's fixed-rate borrowings and other financial assets at amortised cost. The cash flow interest rate risk of the Group relates primarily to floating-rate bank borrowing and unlisted debt related entrusted products classified in the balance sheet at FVPL. The management of the Group monitors interest rate exposure and will consider hedging significant interest rate exposure should the need arise. The fair value interest rate risk on bank deposits is insignificant as the fixed rate deposits are short-term. During 2022 and 2021, the Group's borrowings at variable rate were mainly denominated in RMB and USD.

The Group's sensitivity to interest rate risk is prepared assuming the amount of floating-rate borrowings at the end of the reporting period were outstanding and the amount of unlisted debt related entrusted products classified in the balance sheet at FVPL at the end of the reporting period retained for the whole year. Bank balances are excluded from sensitivity analysis as the Directors consider that the exposure of cash flow interest rate risk arising from variable-rate bank balances is insignificant.

	2022	2021
Increase/decrease in interest rate	<b>25 basis points</b>	25 basis points

	2022	2021
	RMB million	RMB million
(Decrease)/increase in post-tax profit for the year		
– as a result of increase in interest rate	<b>(422)</b>	(280)
– as a result of decrease in interest rate	<b>422</b>	280

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (b) Credit risk

Credit risk arises from cash and bank balances, trade and other receivables except for prepayments, contract assets, debt investments carried at amortised cost and FVOCI, and the nominal value of the guarantees provided on liabilities.

In order to minimise the credit risk, the management of the Group has delegated the teams responsible for assessment of the credit quality of the customer, taking into account its financial position, past experience and other factors and determination of credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover long aged debts. In addition, the Group reviews the recoverable amount of each material individual debt at the end of the reporting period to ensure that adequate expected credit losses are made for irrecoverable amounts. One major customer (including its controlled entities), which is a wholly state-owned enterprise, contributes a significant portion of the revenue and receivables of the Group. The management considers that the credit risk in respect of this customer is limited.

The Group's concentration of credit risk by geographical locations is mainly in Mainland China, where the Group's operations are primarily located.

The Group has concentration of credit risk in respect of trade receivables as the Group's largest trade receivables and the five largest trade receivables represent 8% (2021:9%) and 16% (2021: 18%) of the total trade receivables respectively.

The Group has concentration of credit risk in respect of other financial assets at amortised cost as the Group's largest other financial assets at amortised cost and the five largest other financial assets at amortised cost represent 10% (2021: 9%) and 29% (2021: 31%) of the total other financial assets at amortised cost respectively.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (b) Credit risk (Continued)

###### (i) Impairment of financial assets

The Group has four types of financial assets that are subject to the expected credit loss model:

- trade and other receivables
- contract assets
- debt investments carried at amortised cost, and
- debt investments carried at FVOCI.

The Group holds substantially all of bank deposits in major financial institutions located in the PRC and certain overseas banks with proper credit ratings. While cash and cash equivalents are also subject to the impairment requirements of IFRS 9, the identified impairment loss was immaterial.

Trade receivables and contract assets

For trade receivables and contract assets which have impaired, the Group assessed individually and provided for credit losses allowance. For other trade receivables and contract assets, given no reasonable and supportable information is available without undue cost for expected credit losses measurement, the trade receivables and contract assets were grouped by reference to the credit risk characteristics and assessed for credit losses allowance through exposure at default and the lifetime expected credit loss rates. When measuring expected credit loss, the Group considers its own credit loss incurred in the past, and adjusts by taking into consideration current conditions and forward looking factors. In assessing forward-looking information, the Group considers factors mainly including macroeconomic indicators, economic scenarios and weights.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (b) Credit risk (Continued)

###### (i) *Impairment of financial assets (Continued)*

###### Debt investments

The Group assesses the loss allowance for debt investments at amortised costs and FVOCI based on expected credit loss model. The management assesses whether the credit risk of debt investments have increased significantly since their initial recognition, and apply a three-stage impairment model to calculate their expected credit loss. For debt investments classified into stages 1 for which credit risk has not increased significantly since initial recognition, the management assesses loss allowance at an amount equal to 12-month expected credit loss. For debt investments classified into stages 2 for which credit risk has increased significantly since initial recognition but that are not credit-impaired, and debt investments classified into stages 3 that are credit-impaired since initial recognition, the management assesses loss allowance at an amount equal to lifetime expected credit loss. When measuring expected credit loss, the Group considers its own credit loss incurred in the past, and adjusts by taking into consideration current conditions and forward looking factors.

###### (ii) *Financial guarantees and shortfall payments*

The Group has provided guarantees to banks in respect of banking facilities utilised by certain related companies and third parties.

The Company has provided shortfall payments given to the senior tranches in respect of asset-backed notes ("ABN") & asset-backed securitisation ("ABS") issued by the subsidiaries of the Company.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (b) Credit risk (Continued)

##### (ii) Financial guarantees and shortfall payments (Continued)

The maximum exposure of these financial guarantees and shortfall payments to the Group is as follows:

	2022		2021	
	RMB million	Expiry period	RMB million	Expiry period
Guarantees given to banks in respect of banking facilities to:				
Joint ventures	5,139	2024-2039	2,969	2022-2042
Associates	1,816	2023-2045	4,730	2022-2045
Government-related entities	362	2023-2027	480	2021-2030
Property purchasers	49,788	2022-2027	51,313	2021-2046
Shortfall payments given to the senior tranches in respect of ABN & ABS	97,413	2022-2037	93,898	2021-2036
	<b>154,518</b>		153,390	

##### (c) Liquidity risk

Liquidity risk encompasses the risk that the Group cannot meet its financial obligations in full.

Prudent liquidity risk management includes maintaining sufficient cash and the availability of funding from an adequate amount of committed credit facilities to meet obligations when due. Due to capital intensive nature of the Group's business, the Group ensures that it maintains flexibility through keeping sufficient cash and cash equivalents and credit lines to meet its liquidity requirements. The Group finances its working capital requirements through a combination of funds generated from operations and bank and other borrowings.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (c) Liquidity risk (Continued)

The table below analyses the Group's non-derivative financial liabilities for which the contractual maturities are essential for an understanding of the timing of cash flows into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date. The spot rate as at the end of the reporting period is used for the cash flow calculation in relation to the amounts settled with foreign currencies. The amounts disclosed in the table are the contractual undiscounted cash flows. To the extent that interest cash flows are floating rate, the undiscounted amount is derived from interest rate at the end of the reporting period.

	On demand or Less than 1 year RMB million	Between 1 and 2 years RMB million	Between 2 and 5 years RMB million	Over 5 years RMB million	Total undiscounted cash flows RMB million	Carrying amount RMB million
<b>At 31 December 2022</b>						
Trade and other payables (excluding statutory and non-financial liabilities) (Note 42)	575,987	8,868	6,113	12,150	603,118	602,091
Borrowings (Note 43)	121,242	51,486	98,659	251,326	522,713	392,242
Lease liabilities (Note 19)	417	451	450	238	1,556	1,482
Financial guarantee contracts and shortfall payments	154,518	-	-	-	154,518	-
Financial liabilities at FVPL (Note 35)	96	-	-	-	96	96
	<b>852,260</b>	<b>60,805</b>	<b>105,222</b>	<b>263,714</b>	<b>1,282,001</b>	<b>995,911</b>
<b>At 31 December 2021</b>						
Trade and other payables (excluding statutory and non-financial liabilities) (Note 42)	487,681	6,427	3,377	1,096	498,581	497,930
Borrowings (Note 43)	123,005	38,882	81,143	154,193	397,223	311,927
Lease liabilities (Note 19)	421	291	306	390	1,408	1,332
Financial guarantee contracts and shortfall payments	153,390	-	-	-	153,390	-
Financial liabilities at FVPL (Note 35)	122	-	-	-	122	122
	<b>764,619</b>	<b>45,600</b>	<b>84,826</b>	<b>155,679</b>	<b>1,050,724</b>	<b>811,311</b>

Note: The difference between total undiscounted cash flows and the carrying amount of trade and other payables represents the imputed interest expenses on interest-free retention payables.

As at 31 December 2022, there is no bank borrowing that contains a repayment on demand clause.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.1 Financial risk factors (Continued)

##### (c) Liquidity risk (Continued)

The amounts included above for financial guarantee contracts and shortfall payment agreements are the maximum amounts the Group could be required to settle under the arrangement for the full guaranteed amount if that amount is claimed by the counterparty to the guarantee. Based on expectations at the end of the reporting period, the Group considers that it is more likely than not that no amount will be payable under the arrangement. However, this estimate is subject to change depending on the probability of the counterparty claiming under the guarantee or shortfall payment which is a function of the likelihood that the financial receivables held by the counterparty which are guaranteed suffer credit losses.

The amounts included above for variable interest rate instruments for non-derivative financial liabilities are subject to change if changes in variable interest rates differ to those estimates of interest rates determined at the end of the reporting period.

##### (d) Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

The Group monitors capital on the basis of the asset-liability ratio. This ratio is calculated as total liabilities divided by total assets. The Group aims to maintain the asset-liability ratio at a reasonable level.

	2022	2021
	RMB million	RMB million
Total liabilities	<b>1,190,109</b>	1,003,386
Total assets	<b>1,613,019</b>	1,361,580
<b>Asset-liability ratio</b>	<b>73.78%</b>	73.69%

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.2 Fair value estimation

Some of the Group's financial assets and financial liabilities are measured at fair value at the end of each reporting period. The following table gives information about how the fair values of these financial assets and financial liabilities are determined (in particular, the valuation technique(s) and inputs used), as well as the level of the fair value hierarchy into which the fair value measurements are categorised (levels 1 to 3) based on the degree to which the inputs to the fair value measurements is observable.

- Level 1: The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting period. The quoted market price used for financial assets held by the Group is the current bid price. These instruments are included in level 1.
- Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity-specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2.
- Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. This is the case for unlisted equity securities, unlisted open-end equity funds, unlisted entrusted products, and other financial assets at FVPL.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 3. Financial Risk Management (Continued)

## 3.2 Fair value estimation (Continued)

## (a) Fair value of the Group's financial assets and financial liabilities that are measured at fair value

Financial assets/financial liabilities	31 December 2022		31 December 2021		Fair value hierarchy	Valuation technique(s) and key input(s)	Significant unobservable input(s)	Range of inputs (probability-weighted average)	Relationship of unobservable inputs to fair value
	Assets/ Liabilities	Amount	Assets/ Liabilities	Amount					
1) Derivative financial instruments					Level 3	Option pricing model	Risk-free interest, Volatility	2.89%, 26.26%	The higher the risk-free interest rate, the higher the option value. The higher the volatility, the higher the option value.
	<b>Assets</b>	<b>134</b>	<b>Assets</b>	<b>149</b>					
2) Listed equity securities and money – market securities investment funds at FVPL	<b>Held-for-trading financial assets in Mainland China:</b>		<b>Held-for-trading financial assets in Mainland China:</b>						
	<b>Industry</b>	<b>Amount</b>	<b>Industry</b>	<b>Amount</b>					
	<b>Finance</b>	<b>7,466</b>	<b>Finance</b>	<b>5,791</b>					
	<b>Manufacturing</b>	<b>50</b>	<b>Manufacturing</b>	<b>65</b>					
	<b>Transportation</b>	<b>1</b>	<b>Transportation</b>	<b>1</b>					
	<b>Others</b>	<b>2</b>	<b>Others</b>	<b>1</b>					
	<b>Total</b>	<b>7,519</b>	<b>Total</b>	<b>5,858</b>	Level 1	Quoted bid prices in active markets.	N/A	N/A	N/A
	<b>Total</b>	<b>7,519</b>	<b>Total</b>	<b>5,858</b>					

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 3. Financial Risk Management (Continued)

## 3.2 Fair value estimation (Continued)

## (a) Fair value of the Group's financial assets and financial liabilities that are measured at fair value (Continued)

Financial assets/financial liabilities	Fair value as at (RMB million)		Fair value hierarchy	Valuation technique(s) and key input(s)	Significant unobservable input(s)	Range of inputs (probability-weighted average)	Relationship of unobservable inputs to fair value
	31 December 2022	31 December 2021					
3) Listed equity securities at fair value through other comprehensive income ("FVOCI")	<b>Listed equity securities in Mainland China:</b>						
	<b>Industry</b>	<b>Amount</b>	Listed equity securities in Mainland China:				
		<b>416</b>	Industry	Amount			
	<b>Finance</b>	<b>522</b>	Finance	522			
	<b>Transportation</b>	<b>11</b>	Transportation	-			
		<b>427</b>		522	Level 1	Quoted bid prices in active markets.	N/A
	<b>Listed equity securities in Hong Kong:</b>						
	<b>Amount</b>	Listed equity securities in Hong Kong:					
	<b>280</b>	Industry	Amount				
	<b>280</b>	Manufacturing	288	Level 1	Quoted bid prices in active markets.	N/A	N/A

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 3. Financial Risk Management (Continued)

## 3.2 Fair value estimation (Continued)

## (a) Fair value of the Group's financial assets and financial liabilities that are measured at fair value (Continued)

Financial assets/financial liabilities	Fair value as at (RMB million)	31 December 2022	31 December 2021	Fair value hierarchy	Valuation technique(s) and key input(s)	Significant unobservable input(s)	Range of inputs (probability-weighted average)	Relationship of unobservable inputs to fair value
4) Unlisted open-end equity funds at FVPL								
	<b>Unlisted open-end equity funds in Mainland China:</b>		Unlisted open-end equity funds in Mainland China:					
	<b>Assets</b>		<b>Assets</b>					
	<b>Industry</b>	<b>Amount</b>	<b>Industry</b>	<b>Amount</b>				
	<b>Finance</b>	<b>1,066</b>	<b>Finance</b>	<b>396</b>	Quoted bid prices in active markets.	N/A	N/A	N/A
					Discounted cash flow.			
					Future cash flows are estimated based on expected recoverable amounts, discounted at rates that reflect management's best estimation of the expected risk level.			The higher the future cash flow, the higher the fair value.
	<b>Finance</b>	<b>2,100</b>	<b>Finance</b>	<b>1,870</b>			2.47%	The lower the discount rate, the higher the fair value.
	<b>Total</b>	<b>3,166</b>	<b>Total</b>	<b>2,266</b>				
	<b>Liabilities</b>		<b>Liabilities</b>					
	<b>Industry</b>	<b>Amount</b>	<b>Industry</b>	<b>Amount</b>				
					Discounted cash flow.			
					Future cash flows are estimated based on expected recoverable amounts, discounted at rates that reflect management's best estimation of the expected risk level.			The higher the future cash flow, the higher the fair value.
	<b>Finance</b>	<b>28</b>	<b>Finance</b>	<b>54</b>			2.47%	The lower the discount rate, the higher the fair value.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 3. Financial Risk Management (Continued)

## 3.2 Fair value estimation (Continued)

## (a) Fair value of the Group's financial assets and financial liabilities that are measured at fair value (Continued)

Financial assets/financial liabilities	Fair value as at (RMB million)		Fair value hierarchy	Valuation technique(s) and key input(s)	Significant unobservable input(s)	Range of inputs (probability-weighted average)	Relationship of unobservable inputs to fair value
	31 December 2022	31 December 2021					
5) Unlisted entrusted products and other financial assets at FVPL	<b>Unlisted entrusted products in Mainland China:</b>						
	<b>Industry</b>	<b>Amount</b>	Unlisted entrusted products in Mainland China:				
	<b>Real estate</b>	<b>3,515</b>	Industry	Amount			
			Real estate	1,662	Level 3	Discounted cash flow.	The higher the future cash flow, the higher the fair value.
	<b>Construction</b>	<b>649</b>	Construction	846		Expected future cash flow, 8.21%-11.03%	The higher the future cash flow, the higher the fair value.
	<b>Finance</b>	<b>1,863</b>	Finance	3,485		Discount rates that correspond to the expected risk level.	The lower the discount rate, the higher the fair value.
	<b>Mining</b>	<b>-</b>	Mining	10			
	<b>Others</b>	<b>163</b>	Others	256		Future cash flows that are estimated based on expected recoverable amounts, discounted at rates that reflect management's best estimation of the expected risk level.	
	<b>Total</b>	<b>6,190</b>	<b>Total</b>	<b>6,259</b>			





## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 3. Financial Risk Management (Continued)

## 3.2 Fair value estimation (Continued)

## (a) Fair value of the Group's financial assets and financial liabilities that are measured at fair value (Continued)

Financial assets/financial liabilities	Fair value as at (RMB million)		Fair value hierarchy	Valuation technique(s) and key input(s)	Significant unobservable input(s)	Range of inputs (probability-weighted average)	Relationship of unobservable inputs to fair value
	31 December 2022	31 December 2021					
7) Unlisted equity investments at FVPL	<b>Unlisted equity investment in Mainland China:</b>		Level 3	Market valuation method by reference to P/B ratio, discount rate that reflects the liquidity level; and cost method by reference to the original investment cost.	P/B ratio, Discount rates that reflect the liquidity level, Original investment cost	0.93-1.57, 20.54%, n/a	The higher the P/B ratio, the higher the fair value. The lower discount rate, the higher the fair value. The original investment cost is positively correlated with the fair value of unlisted equity instruments.
	<b>Industry</b>	<b>Amount</b>					
	<b>Finance</b>	<b>6,846</b>					
8) Bills receivables at FVOCI	<b>Bills receivables in Mainland China:</b>		Level 3	Discounted cash flow with future cash flows that are estimated based on expected recoverable amounts, discounted at rates that reflect management's best estimation of the expected risk level.	Expected future cash flow, Discount rates that correspond to the expected risk level.	3.65%	The higher the future cash flow, the higher the fair value. The lower the discount rate, the higher the fair value.
	<b>Industry</b>	<b>Amount</b>					
	<b>Construction</b>	<b>766</b>					

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 3. Financial Risk Management (Continued)

## 3.2 Fair value estimation (Continued)

## (a) Fair value of the Group's financial assets and financial liabilities that are measured at fair value (Continued)

There were no transfer between Level 1 and 2 during the year.

Reconciliation of Level 3 fair value measurements:

	Unlisted entrusted products RMB million	Unlisted open-end funds RMB million	Unlisted equity investments RMB million	Listed equity securities RMB million	Others RMB million	Total RMB million
<b>Opening balance at 1 January 2022</b>	3,125	1,816	16,420	-	3,809	25,170
Acquisitions	3,324	625	6,087	-	411	10,447
(Losses)/gains recognised in profit or losses	(19)	(44)	87	-	(319)	(295)
Gains recognised in other comprehensive income	-	-	201	-	-	201
Disposals	(1,799)	(325)	(1,711)	-	(1,442)	(5,277)
<b>Closing balance at 31 December 2022</b>	<b>4,631</b>	<b>2,072</b>	<b>21,084</b>	<b>-</b>	<b>2,459</b>	<b>30,246</b>

	Unlisted entrusted products RMB million	Unlisted open-end funds RMB million	Unlisted equity investments RMB million	Listed equity securities RMB million	Others RMB million	Total RMB million
<b>Opening balance at 1 January 2021</b>	4,057	1,319	13,008	1,175	1,645	21,204
Acquisitions	2,398	970	5,827	-	2,502	11,697
Losses recognised in profit or losses	(25)	(23)	(17)	(103)	(291)	(459)
Gains recognised in other comprehensive income	-	-	80	-	-	80
Disposals	(3,305)	(450)	(2,478)	(1,072)	(47)	(7,352)
<b>Closing balance at 31 December 2021</b>	<b>3,125</b>	<b>1,816</b>	<b>16,420</b>	<b>-</b>	<b>3,809</b>	<b>25,170</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. Financial Risk Management (Continued)

#### 3.2 Fair value estimation (Continued)

##### (b) Fair value of financial assets and liabilities measured at amortised cost

Except as detailed in the following table, the Directors consider that the carrying amounts of financial assets and financial liabilities recorded at amortised cost in the consolidated financial statements approximate to their fair values:

	31 December 2022		31 December 2021	
	Carrying amount	Fair value	Carrying amount	Fair value
	RMB million	RMB million	RMB million	RMB million
<b>Financial assets</b>				
Other financial assets at amortised cost – fixed rate	<b>30,416</b>	<b>31,786</b>	29,513	30,849
<b>Financial liabilities</b>				
Long-term bank borrowings – fixed rate	<b>46,361</b>	<b>51,732</b>	43,674	45,638
Long-term debentures – fixed rate	<b>53,122</b>	<b>53,091</b>	55,007	55,657
Other long-term borrowings – fixed rate	<b>3,600</b>	<b>3,690</b>	–	–

The fair values hierarchy of the fair value of fixed rate other financial assets at amortised cost, bank borrowings, long-term debentures and other long-term borrowings are included in level 3. The fair values have been determined based on a discounted cash flow analysis, with the most significant input being the discount rate that reflects the credit risk of counterparties or the issuer.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. Critical Accounting Estimates, Assumptions and Judgments

The preparation of financial statements requires the use of accounting estimates which, by definition, will seldom equal the actual results. Management also needs to exercise judgement in applying the Group's accounting policies.

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that may have a financial impact on the entity and that are believed to be reasonable under the circumstances.

#### (a) Critical judgements in application of accounting policies

##### (i) Revenue from sale of properties

Revenue from sales of properties is recognised at a point in time when the buyer obtains control of the completed property. The Group may recognise the revenue from sales of properties over time when the Group's performance do not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date. Normally, the Group may not change or substitute the property unit or redirect the property unit for another use due to the contractual restrictions with the customer and thus the property unit does not have an alternative use to the Group. However, whether there is an enforceable right to payment depends on the terms of sales contract and the interpretation of the applicable laws that apply to the contract. Such determination requires significant judgments.

The Group provided guarantees in respect of mortgage facilities granted by certain banks relating to the mortgage loans arranged for certain purchasers of the Group's properties. These guarantees will expire when relevant property ownership certificates are mortgaged to banks by the purchasers. In addition, based on the past experiences, defaults of mortgage facilities by the purchasers which resulted in the bank guarantees being called upon were rare. Further, the credit risk of the Group under the circumstance that a purchaser defaults on the payment of its mortgage during the term of the guarantee is very low. The Group believes that significant risks and rewards associated to the ownership of the properties have been transferred to the purchasers when the buyer checks and accepts the property or when the buyer is regarded as checking and accepting the property.

##### (ii) Determination of control over structured entities

The Group invested in several structured entities which were mainly engaged in infrastructure investment activities or acted as manager to a number of structured entities and also carries interests in these entities. Determining whether the Group controls these structured entities usually focuses on the assessment of the power of the Group, its variable returns (including but not limited to any carried interests and commission income or management fees earned) and the ability to exercise its power to influence the variable returns from these structured entities.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. Critical Accounting Estimates, Assumptions and Judgments (Continued)

#### (a) Critical judgements in application of accounting policies (Continued)

##### (ii) Determination of control over structured entities (Continued)

Management considers a number of factors to assess if the Group has control over these structured entities, including the Group acts as a principal or an agent through analysis of the scope of the decision-making authority of the Group, its remuneration entitlement, other interests the Group held, and the rights held by other parties. Based on the assessment following the accounting policies set out in Notes 2.2 and 2.3, the Group consolidates certain structured entities that it has control, accounts for as joint ventures or associates when it has joint control or significant influence over the structured entities. For those that the Group has neither control, joint control nor significant influence, the Group accounts for as financial assets. Judgement is involved when performing the assessment. Should those joint ventures, associates and financial assets be consolidated, net assets, revenue and profit of the Group could be affected.

Further disclosure in respect of unconsolidated structured entities in which the Group has an interest has been set out in Note 25.

##### (iii) Classification of financial assets

The Group classified the financial assets based on the business model for managing the financial assets and the contractual cash flow characteristics of the financial asset.

The Group's business model is determined at a level that reflects how groups of financial assets are managed together to achieve a particular business objective. The judgement when the Group assesses its business model for managing financial assets includes:

- a. how the performance of the business model and the financial assets held within that business model are evaluated and reported to the entity's key management personnel;
- b. the risks that affect the performance of the business model (and the financial assets held within that business model) and, in particular, the way in which those risks are managed; and
- c. how managers of the business are compensated (for example, whether the compensation is based on the fair value of the assets managed or on the contractual cash flows collected).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. Critical Accounting Estimates, Assumptions and Judgments (Continued)

#### (a) Critical judgements in application of accounting policies (Continued)

##### (iii) Classification of financial assets (Continued)

The judgement in assessing contractual cash flows are consistent with a basic lending arrangement include:

- a. if the timing or amount of principal may change over the life of the financial asset (for example, if there are repayment of principal before maturity);
- b. if the interest consists of consideration for the time value of money, for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs, as well as a profit margin.

For example, the prepayment amount before maturity solely represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation of the early termination of the contract.

#### (b) Critical accounting estimates and assumptions

The following critical accounting estimates and assumptions have important risks that will cause significant adjustments to the value of assets and liabilities in the next year:

##### (i) Revenue and cost recognition from infrastructure construction contracts

Revenue from infrastructure construction contracts is recognised over the period of the contract by reference to the progress towards complete satisfaction of that performance obligation, depending on the nature of the contract, is measured mainly by reference to the proportion of contract costs incurred for work performed to date to estimated total contract costs for each contract. Management estimates the total contract revenue and total contract costs at the inception of each contract. As the contract progresses, management regularly reviews and revises the estimates of contract revenue and contract costs if circumstances change, such as variations in contract work, claims and incentive payments. The increases or decreases in estimated total contract revenue or total contract costs resulted in the adjustments to the extent of progress toward completion and revenue recognised in the period in which the circumstances that give rise to the revision becomes known by management.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. Critical Accounting Estimates, Assumptions and Judgments (Continued)

#### (b) Critical accounting estimates and assumptions (Continued)

##### (ii) Expected credit losses of trade receivables and contract assets

The Group applies the IFRS 9 simplified approach to measure expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets. For trade receivables and contract assets which have impaired, the Group assessed individually and provided for credit losses allowance. For other trade receivables and contract assets, given no reasonable and supportable information is available without undue cost for expected credit losses measurement, the trade receivables and contract assets were grouped by reference to the credit risk characteristics and assessed for credit losses allowance through exposure at default and the lifetime expected credit loss rates. When measuring expected credit loss, the Group considers its own credit loss incurred in the past, and adjusts by taking into consideration current conditions and forward looking factors.

In assessing forward-looking information, the Group considers different macroeconomic scenarios and weights. In 2022, the weights of the three economic scenarios of “baseline”, “unfavourable” and “favourable” are 50%, 40% and 10% respectively (2021: 50%, 40% and 10%). The Group regularly monitors and reviews critical macroeconomic assumptions and parameters related to the measurement of expected credit loss, including the economic policies, macroeconomic indicators, industry risks, and changes in customer conditions, etc. The key macroeconomic parameters applicable to each scenario in 2022 are set out below:

	Scenario		
	Baseline	Unfavourable	Favourable
GDP	5.20%	4.85%	6.01%
Industrial Added Value	5.47%	4.61%	6.82%

In 2021, the key macroeconomic parameters applicable to each scenario are set out below:

	Scenario		
	Baseline	Unfavourable	Favourable
GDP	5.48%	5.10%	5.60%
Industrial Added Value	5.23%	3.93%	6.00%

The details of the expected credit loss of trade receivables and contract assets are set out in Note 33 and Note 34, respectively.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. Critical Accounting Estimates, Assumptions and Judgments (Continued)

#### (b) Critical accounting estimates and assumptions (Continued)

##### (iii) Expected credit losses of debt investments at amortised cost and FVOCI

The Group assesses on a forward looking basis the expected credit losses associated with its debt investments at amortised cost and FVOCI using the risk parameters including exposure at default and expected credit loss rate, which is determined based on probabilities of default and default rates. When measuring expected credit loss, the Group considers its own credit loss incurred in the past, and adjusts by taking into consideration current conditions and forward looking factors.

In assessing forward-looking information, the Group adopted the method consistent with expected credit losses of trade receivables and contract assets.

To assess whether there is a significant increase in credit risks the Group compares the risk of a default occurring on the asset as at the reporting date with the risk of default as at the date of initial recognition. It considers available reasonable and supportive forwarding-looking information. Especially the following indicators are incorporated:

- past due information
- actual or expected significant adverse changes in business, financial or economic conditions that are expected to cause a significant change to the borrower's ability to meet its obligations
- internal and external credit rating
- actual or expected significant changes in the operating results of the borrower
- significant changes in the value of the collateral supporting the obligation or in the quality of third-party guarantees or credit enhancements.

##### (iv) Impairment of properties held for sale and under development for sale

The Group measures properties held for sale and under development for sale at the lower of cost and net realisable value on the balance sheet date. The net realisable value calculation requires the use of assumptions and estimates on the selling price and the costs and expenses that will be incurred until completion. Where the expectation is different from the original estimate, such differences will have an impact on the net realisable value calculation and the provision for inventory impairment in the periods in which such estimate is changed.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. Critical Accounting Estimates, Assumptions and Judgments (Continued)

#### (b) Critical accounting estimates and assumptions (Continued)

##### (v) Fair value of financial instruments

The fair value of financial instruments that are traded in an active market is measured at quoted price. If the market for a financial instrument is not active, the Group determines fair value by using valuation techniques. The Group uses its judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing at each end of the reporting period. For details of the key assumptions used and the impact of changes to these assumptions see Note 3.2.

##### (vi) Income taxes

The Group is subject to income taxes in the PRC and other jurisdictions. Significant judgment is required in determining the worldwide provision for income taxes. There are many transactions and calculations for which the ultimate tax determination is uncertain. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the current income tax and deferred income tax provisions in the period in which such determination are made.

Certain subsidiaries of the Group are qualified as high-tech enterprises and are entitled to the preferential income tax rate of 15%. The qualification is valid 3 years, and upon expiry the subsidiaries are required to submit the application to relevant government authorities to certify the high-tech qualification. If the subsidiaries disqualified from the high-tech certification, they cannot enjoy the preferential income tax, and the change in tax rate will affect the current and deferred income taxes in the period in which the change takes place.

Deferred income tax assets relating to tax losses are recognised as management considers it is probable that future taxable profit will be available against which the tax losses can be utilised. Future taxable profit includes the profit from operating results and taxable profits of future periods reversed of taxable temporary differences. Estimates and judgement are required in determining the timing and amount of future taxable profit generated. In case where the actual future taxable profit generated are less than expected, or change in facts and circumstances which result in revision of future taxable profit estimation, a material reversal or further recognition of deferred tax assets may arise, which will be recognised in the consolidated income statement in the period in which such a reversal or further recognition takes place.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. Critical Accounting Estimates, Assumptions and Judgments (Continued)

#### (b) Critical accounting estimates and assumptions (Continued)

##### (vii) Pension benefits

The present value of the pension obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions. The assumptions used in determining the net cost (income) for pensions include the discount rate. Any changes in these assumptions will impact the carrying amount of pension obligations.

The Group determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the pension obligations. In determining the appropriate discount rate, the Group considers the interest rates of government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension obligation.

Other key assumptions for pension obligations are based in part on current market conditions. Additional information is disclosed in Note 44.

##### (viii) Amortisation of service concession arrangements in relation to toll highways

Amortisation of service concession arrangements in relation to the toll highways operations are calculated to write off their cost, over their expected useful lives or the remaining concession period, whichever is the shorter, commencing from the date of commencement of commercial operation of the toll highways, based on a units-of-usage basis, which is the ratio of actual traffic volume compared to the total expected traffic volume of the toll highways as estimated by the management or by reference to traffic projection reports prepared by independent traffic consultants. Appropriate adjustment will be made should there be any material change.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 5. Segment information

The Directors are the chief operating decision maker. Management has determined the operating segments based on the reports reviewed by the Directors that are used to allocate resources to the segments and assess their performance. The reports reviewed by the Directors are prepared in accordance with the relevant PRC accounting standards, which resulted in the difference in the basis of measurement of segment results, segment assets and segment liabilities, the details of which are shown as reconciling items.

The Directors consider the business from the service and product perspective. Management assesses the performance of the following five operating segments:

- (a) Construction of railways, highways, bridges, tunnels, metropolitan railways (including subways and light railways), buildings, irrigation works, hydroelectricity projects, ports, docks, airports and other municipal works (“Infrastructure construction”);
- (b) Survey, design, consulting, research and development, feasibility study and compliance certification services with respect to infrastructure construction projects (“Survey, design and consulting services”);
- (c) Design, research and development, manufacture and sale of turnouts, bridge steel structures, and other railway related equipment, engineering equipment, component manufacturing and materials (“Engineering equipment and component manufacturing”);
- (d) Development, sale and management of residential and commercial properties (“Property development”); and
- (e) Mining, financial business, operation of service concession arrangements, merchandise trading and other ancillary business (“Other businesses”).

Revenue between segments is carried out at actual transaction prices.

The segment information regarding the Group’s reportable and operating segments is presented below.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

The following is an analysis of the Group's revenue and results by reportable segments:

	For the year ended 31 December 2022						
	Infrastructure construction	Survey, design and consulting services	Engineering equipment and component manufacturing	Property development	Other businesses	Elimination	Total
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
External revenue	983,533	18,616	25,838	53,459	64,918	-	1,146,364
Inter-segment revenue	31,946	978	12,371	-	43,831	(89,126)	-
Other revenue	3,863	201	654	623	2,644	-	7,985
Inter-segment other revenue	388	-	-	-	145	(533)	-
Segment revenue	1,019,730	19,795	38,863	54,082	111,538	(89,659)	1,154,349
<b>Segment results</b>							
Profit before income tax	39,286	1,753	2,375	(1,451)	7,856	(7,235)	42,584
Segment results included:							
Share of (losses)/profits of joint ventures	(1,168)	-	84	(12)	(341)	-	(1,437)
Share of profits/(losses) of associates	1,108	12	67	(48)	3,595	-	4,734
Interest income	1,493	69	107	147	6,085	(721)	7,180
Interest expenses	(2,513)	(160)	(89)	(1,786)	(6,855)	2,033	(9,370)
Losses from derecognition of financial assets at amortised cost	(4,204)	(26)	(121)	-	(169)	-	(4,520)

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

	For the year ended 31 December 2021						
	Infrastructure construction	Survey, design and consulting services	Engineering equipment and component manufacturing	Property development	Other businesses	Elimination	Total
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
External revenue	923,435	17,604	23,831	50,249	51,744	–	1,066,863
Inter-segment revenue	25,855	820	8,864	488	48,175	(84,202)	–
Other revenue	3,356	183	481	563	1,826	–	6,409
Inter-segment other revenue	392	–	–	–	197	(589)	–
Segment revenue	953,038	18,607	33,176	51,300	101,942	(84,791)	1,073,272
<b>Segment results</b>							
Profit before income tax	34,204	1,615	2,029	1,622	5,830	(7,714)	37,586
Segment results included:							
Share of (losses)/profits of joint ventures	(239)	1	104	(13)	(360)	–	(507)
Share of profits of associates	912	17	46	33	2,801	–	3,809
Interest income	1,043	70	94	198	4,264	(627)	5,042
Interest expenses	(2,514)	(37)	(90)	(1,249)	(4,624)	1,124	(7,390)
Losses from derecognition of financial assets at amortised cost	(4,298)	(4)	(117)	–	(176)	–	(4,595)

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

A reconciliation of the amounts presented for reportable segments to the consolidated financial statements is as follows:

	2022 RMB million	2021 RMB million
(i) Segment interest income, before inter-segment elimination	<b>7,901</b>	5,669
Inter-segment elimination	<b>(721)</b>	(627)
	<b>7,180</b>	5,042
Reconciling items:		
Reclassification of interest income obtained from other financial assets at amortised cost ( <i>Note 10</i> )	<b>1,093</b>	1,063
Total consolidated finance income, as reported	<b>8,273</b>	6,105
(ii) Segment interest expenses, before inter-segment elimination	<b>11,403</b>	8,514
Inter-segment elimination	<b>(2,033)</b>	(1,124)
	<b>9,370</b>	7,390
Reconciling item:		
Imputed interest expenses on retention payables ( <i>Note 10</i> )	<b>208</b>	226
Total consolidated finance costs, as reported	<b>9,578</b>	7,616
(iii) Segment results, before inter-segment elimination	<b>49,819</b>	45,300
Inter-segment elimination	<b>(7,235)</b>	(7,714)
	<b>42,584</b>	37,586
Reconciling item:		
Land appreciation tax ( <i>Note (a)</i> )	<b>2,108</b>	2,050
Total consolidated profit before income tax, as reported	<b>44,692</b>	39,636

(a) Land appreciation tax is included as charge to segment results under segment reporting and is classified as income tax expense in the consolidated income statement.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 5. Segment information (Continued)

The following is an analysis of the Group's assets and liabilities by reportable segments:

	As at 31 December 2022						
	Infrastructure construction RMB million	Survey, design and consulting services RMB million	Engineering equipment and component manufacturing RMB million	Property development RMB million	Other businesses RMB million	Elimination RMB million	Total RMB million
Segment assets	922,257	30,215	66,955	277,774	707,986	(406,989)	1,598,198
Investments in joint ventures	42,774	94	423	391	11,440	-	55,122
Investments in associates	38,288	963	686	2,059	12,615	-	54,611
Unallocated assets							14,821
<b>Total assets</b>							<b>1,613,019</b>
Segment liabilities	769,946	14,963	39,301	222,627	539,223	(403,698)	1,182,362
Unallocated liabilities							7,747
<b>Total liabilities</b>							<b>1,190,109</b>



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

	As at 31 December 2021						
	Infrastructure construction	Survey, design and consulting services	Engineering equipment and component manufacturing	Property development	Other businesses	Elimination	Total
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
Segment assets	751,756	27,476	62,116	281,252	559,696	(333,527)	1,348,769
Investments in joint ventures	38,653	171	438	403	10,166	-	49,831
Investments in associates	36,874	888	680	379	7,360	-	46,181
Unallocated assets							12,811
<b>Total assets</b>							<b>1,361,580</b>
Segment liabilities	626,780	12,324	35,318	254,905	392,472	(324,002)	997,797
Unallocated liabilities							5,589
<b>Total liabilities</b>							<b>1,003,386</b>

For the purposes of monitoring segment performances and allocating resources between segments:

- (a) all assets are allocated to operating segments other than deferred tax assets and current income tax recoverable excluding prepaid land appreciation tax which is allocated to operating segments; and
- (b) all liabilities are allocated to operating segments other than deferred tax liabilities and current income tax liabilities excluding land appreciation tax payable which is allocated to operating segments.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

A reconciliation of the amounts presented for reportable segments to the consolidated financial statements is as follows:

	2022 RMB million	2021 RMB million
Segment assets, before inter-segment elimination	<b>2,005,187</b>	1,682,296
Inter-segment elimination	<b>(406,989)</b>	(333,527)
	<b>1,598,198</b>	1,348,769
Reconciling items:		
Deferred tax assets	<b>12,109</b>	10,372
Non-tradable shares reform of subsidiaries (Note (a))	<b>(148)</b>	(148)
Current income tax recoverable	<b>3,849</b>	3,736
Prepaid land appreciation tax included in current income tax recoverable	<b>(989)</b>	(1,149)
	<b>14,821</b>	12,811
Total consolidated assets, as reported	<b>1,613,019</b>	1,361,580
Segment liabilities, before inter-segment elimination	<b>1,586,060</b>	1,321,799
Inter-segment elimination	<b>(403,698)</b>	(324,002)
	<b>1,182,362</b>	997,797
Reconciling items:		
Deferred tax liabilities	<b>3,019</b>	1,647
Current income tax liabilities	<b>8,663</b>	7,100
Land appreciation tax payable included in current income tax liabilities	<b>(3,935)</b>	(3,158)
	<b>7,747</b>	5,589
Total consolidated liabilities, as reported	<b>1,190,109</b>	1,003,386

(a) Losses on non-tradable shares reform of subsidiaries are recorded in segment assets in segment reporting and were adjusted to other gains and losses in consolidated income statement in prior years.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

Other segment information:

	Year ended 31 December 2022					
	Infrastructure construction	Survey, design and consulting services	Engineering equipment and component manufacturing	Property development	Other businesses	Consolidated
	RMB million	RMB million	RMB million	RMB million	RMB Million	RMB million
<b>Capital expenditure:</b>						
Property, plant and equipment	49,822	530	926	2,002	1,059	54,339
Lease prepayments	56	46	12	281	9	404
Investment properties	1,100	200	–	14	433	1,747
Intangible assets	14,837	30	5	20	30,824	45,716
Mining assets	8	–	–	–	–	8
Right-of-use assets	794	26	16	37	159	1,032
<b>Total</b>	<b>66,617</b>	<b>832</b>	<b>959</b>	<b>2,354</b>	<b>32,484</b>	<b>103,246</b>
<b>Depreciation and amortisation:</b>						
Property, plant and equipment	4,893	289	812	373	2,227	8,594
Lease prepayments	125	17	53	78	79	352
Investment properties	71	5	9	342	59	486
Intangible assets	169	28	49	5	843	1,094
Mining assets	98	–	–	–	11	109
Right-of-use assets	534	40	40	21	101	736
Other prepayments	61	–	12	3	51	127
<b>Total</b>	<b>5,951</b>	<b>379</b>	<b>975</b>	<b>822</b>	<b>3,371</b>	<b>11,498</b>
(Gains)/losses on disposal and/or write-off of property, plant and equipment	(414)	(5)	(32)	–	46	(405)
(Gains)/losses on disposal of lease prepayments	(96)	2	(11)	–	–	(105)
Increase in foreseeable losses on contracts	87	–	–	–	–	87
Impairment loss/(reversal of impairment) on trade and other receivables	1,735	(198)	74	398	28	2,037
Impairment loss on other financial assets at amortised cost	190	92	–	57	298	637
Impairment loss on contract assets	669	–	–	–	–	669
Impairment loss on property, plant and equipment	–	–	48	456	–	504
Impairment loss on investment properties	6	–	–	–	–	6

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

Other segment information:

	Year ended 31 December 2021					
	Infrastructure construction RMB million	Survey, design and consulting services RMB million	Engineering equipment and component manufacturing RMB million	Property development RMB million	Other businesses RMB million	Consolidated RMB million
<b>Capital expenditure:</b>						
Property, plant and equipment	8,977	378	1,648	354	1,663	13,020
Lease prepayments	91	–	138	77	16	322
Investment properties	137	–	–	8	130	275
Intangible assets	569	28	149	3,368	47,229	51,343
Mining assets	–	–	–	–	2	2
Right-of-use assets	397	97	37	7	42	580
<b>Total</b>	<b>10,171</b>	<b>503</b>	<b>1,972</b>	<b>3,814</b>	<b>49,082</b>	<b>65,542</b>
<b>Depreciation and amortisation:</b>						
Property, plant and equipment	5,055	288	718	353	1,929	8,343
Lease prepayments	248	16	47	76	72	459
Investment properties	10	5	11	334	35	395
Intangible assets	92	29	43	2	631	797
Mining assets	44	–	–	–	60	104
Right-of-use assets	446	32	55	48	114	695
Other prepayments	84	4	14	1	30	133
<b>Total</b>	<b>5,979</b>	<b>374</b>	<b>888</b>	<b>814</b>	<b>2,871</b>	<b>10,926</b>
Gains on disposal and/or write-off of property, plant and equipment	(269)	(6)	(24)	–	(29)	(328)
Gains on disposal of lease prepayments	(41)	–	(57)	–	–	(98)
Decrease in foreseeable losses on contracts	(329)	–	–	–	–	(329)
Impairment loss/(reversal of impairment) on trade and other receivables	3,940	113	21	375	(755)	3,694
(Reversal of impairment)/impairment loss on other financial assets at amortised cost	(97)	–	–	75	582	560
Impairment loss on contract assets	1,224	–	–	–	–	1,224
Impairment loss on property, plant and equipment	1	–	3	128	–	132
Impairment loss on investment properties	48	–	–	–	–	48

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

## (i) Disaggregation of revenue

Type of services and products	Year ended 31 December 2022					
	Infrastructure construction	Survey, design and consulting services	Engineering equipment and component manufacturing	Property development	Other businesses	Total
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
Infrastructure construction contracts	983,533	-	-	-	-	983,533
Manufacturing and sales of engineering equipment and component	-	-	25,838	-	-	25,838
Rendering of services	-	18,616	-	-	7,292	25,908
Sales of properties	-	-	-	53,459	-	53,459
Sales of goods and others	3,863	201	654	623	60,270	65,611
<b>Total revenue</b>	<b>987,396</b>	<b>18,817</b>	<b>26,492</b>	<b>54,082</b>	<b>67,562</b>	<b>1,154,349</b>
Timing of revenue recognition:						
– At a point of time	3,863	201	17,236	52,687	65,699	139,686
– Over time	983,533	18,616	9,209	1,395	-	1,012,753
<b>Total revenue from contracts with customers</b>	<b>987,396</b>	<b>18,817</b>	<b>26,445</b>	<b>54,082</b>	<b>65,699</b>	<b>1,152,439</b>
Rental income	-	-	47	-	1,863	1,910
<b>Total revenue</b>	<b>987,396</b>	<b>18,817</b>	<b>26,492</b>	<b>54,082</b>	<b>67,562</b>	<b>1,154,349</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

## (i) Disaggregation of revenue (Continued)

Type of services and products	Year ended 31 December 2021					Total RMB million
	Infrastructure construction	Survey, design and consulting services	Engineering equipment and component manufacturing	Property development	Other businesses	
	RMB million	RMB million	RMB million	RMB million	RMB million	
Infrastructure construction contracts	923,435	–	–	–	–	923,435
Manufacturing and sales of engineering equipment and component	–	–	23,831	–	–	23,831
Rendering of services	–	17,604	–	–	5,384	22,988
Sales of properties	–	–	–	50,249	–	50,249
Sales of goods and others	3,356	183	481	563	48,186	52,769
<b>Total revenue</b>	<b>926,791</b>	<b>17,787</b>	<b>24,312</b>	<b>50,812</b>	<b>53,570</b>	<b>1,073,272</b>
Timing of revenue recognition:						
– At a point of time	3,356	183	15,873	49,329	52,256	120,997
– Over time	923,435	17,604	7,900	1,483	–	950,422
<b>Total revenue from contracts with customers</b>	<b>926,791</b>	<b>17,787</b>	<b>23,773</b>	<b>50,812</b>	<b>52,256</b>	<b>1,071,419</b>
Rental income	–	–	539	–	1,314	1,853
<b>Total revenue</b>	<b>926,791</b>	<b>17,787</b>	<b>24,312</b>	<b>50,812</b>	<b>53,570</b>	<b>1,073,272</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 5. Segment information (Continued)

(ii) Revenue from external customers in the Mainland China and other regions is as follows:

	For the year ended 31 December	
	2022	2021
	RMB million	RMB million
Mainland China	<b>1,095,912</b>	1,018,485
Other regions (including Hong Kong and Macau)	<b>58,437</b>	54,787
	<b>1,154,349</b>	1,073,272

(iii) Non-current assets other than trade and other receivables, financial instruments, investments in joint ventures, investments in associates, deposits for investments and deferred tax assets located in the Mainland China and other regions are as follows:

	2022	2021
	RMB million	RMB million
Mainland China	<b>495,949</b>	368,413
Other regions (including Hong Kong and Macau)	<b>17,647</b>	14,492
	<b>513,596</b>	382,905

Other regions primarily include countries and regions in Africa, South America, South East Asia and Oceania.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 6. Other Income and Expenses

	2022	2021
	RMB million	RMB million
Other income from:		
Government subsidies (a)	<b>1,480</b>	1,389
Dividends from financial assets at FVPL	<b>548</b>	603
Compensation and claims	<b>171</b>	224
Dividends from financial assets at FVOCI	<b>135</b>	85
Relocation compensation	<b>13</b>	13
Others	<b>276</b>	422
	<b>2,623</b>	2,736
Other expenses on:		
Lawsuit expenditure	<b>460</b>	95
Penalty cost	<b>214</b>	644
Others	<b>408</b>	1,243
	<b>1,082</b>	1,982

*Notes:*

(a) Government subsidies relating to income include various government subsidies received by the group entities from the relevant government bodies in connection with enterprise expansion, technology advancement, environmental protection measures enhancement, product development, etc. All subsidies were recognised at the time when the Group fulfilled the relevant criteria and the related expenses were incurred.

Government subsidies relating to assets include government subsidies obtained by the group entities in relation to the acquisition of property, plant and equipment, which were included in the consolidated balance sheet as deferred government grants and credited to profit or loss on a straight-line basis over the expected useful lives of the relevant assets.

### 7. Net impairment losses on financial assets and contract assets

	2022	2021
	RMB million	RMB million
Trade and other receivables (excluding advance to suppliers)	<b>2,037</b>	3,694
Contract assets	<b>670</b>	1,224
Other financial assets at amortised cost (Note 30(a))	<b>636</b>	560
	<b>3,343</b>	5,478



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 8. Other gains/(losses), net

	2022	2021
	RMB million	RMB million
Gains/(losses) on disposal and/or write-off of:		
– Interest in subsidiaries	–	72
– Interest in associates	68	14
– Interest in joint ventures	(15)	–
– Lease prepayments	105	98
– Property, plant and equipment	405	328
Gains on disposal of financial assets/liabilities at FVPL	29	47
Deemed disposal gains of interest in associates	483	–
Losses arising on change in fair value of financial assets/liabilities at FVPL ( <i>Note 35(c)</i> )	(563)	(515)
Gains on debt restructurings	114	135
Impairment losses recognised on:		
– Property, plant and equipment ( <i>Note 18</i> )	(504)	(132)
– Advance to suppliers	(2)	(4)
– Investment properties ( <i>Note 22</i> )	(6)	(48)
Foreign exchange gains/(losses), net	566	(80)
Others	(65)	3
	<b>615</b>	<b>(82)</b>

## 9. Losses from derecognition of financial assets at amortised cost

	2022	2021
	RMB million	RMB million
ABN & ABS ( <i>Note 33</i> )	3,578	3,910
Factoring expenses ( <i>Note 33</i> )	801	634
Bills receivables discounted expenses	141	51
	<b>4,520</b>	<b>4,595</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 10. Finance Income and Costs

	2022	2021
	RMB million	RMB million
Finance income from:		
Trade receivables and contract assets	5,779	4,150
Cash and cash equivalents and restricted cash	1,401	892
Other financial assets at amortised cost	1,093	1,063
Total finance income	8,273	6,105
Interest expenses on:		
Bank borrowings	10,828	9,177
Long-term debentures	2,017	1,647
Other long-term borrowings	621	430
Other short-term borrowings	526	411
Total borrowing costs	13,992	11,665
Less: amount capitalised	(5,804)	(4,822)
	8,188	6,843
Lease (Note 19)	53	65
Imputed interest expenses on retention payables	208	226
Imputed interest expenses on defined benefit obligations (Note 44)	67	85
Others	1,062	397
Total finance costs	9,578	7,616

Borrowing costs directly attributable to the construction and acquisition of qualifying assets were capitalised as part of the costs of those assets. Borrowing costs of RMB5,804 million (2021: RMB4,822 million) were capitalised in the year ended 31 December 2022, of which approximately RMB3,219 million was charged to properties under development for sale, approximately RMB480 million was included in cost of property, plant and equipment and approximately RMB2,105 million was included in the cost of intangible assets (2021: RMB2,985 million was charged to properties under development for sale, approximately RMB20 million was included in cost of property, plant and equipment and approximately RMB1,817 million was included in the cost of intangible assets). In 2022, a general capitalisation rate of 2.05%-6.65% per annum (2021: 3.25%-9.50%) was used, representing the costs of the borrowings used to finance the qualifying assets.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 11. Expenses by nature

The additional information of cost of sales and services, selling, research and development expenditures and marketing expenses and administrative expenses is as follows:

	2022	2021
	RMB million	RMB million
Employee benefit expenses & subcontracting costs	<b>479,979</b>	432,359
Raw materials and consumables used	<b>411,905</b>	398,360
Cost of property development	<b>44,336</b>	39,098
Equipment usage costs	<b>39,587</b>	39,113
Depreciation of property, plant and equipment ( <i>Note 18</i> ), lease ( <i>Note 19(b)</i> ) and investment properties ( <i>Note 22</i> )	<b>9,816</b>	9,491
Taxes and surcharges	<b>4,470</b>	3,881
Transportation costs	<b>2,775</b>	2,795
Amortisation of:		
Intangible assets ( <i>Note 23</i> )	<b>1,094</b>	797
Lease prepayments ( <i>Note 20</i> )	<b>352</b>	401
Mining assets ( <i>Note 24</i> )	<b>109</b>	104
Other prepayments	<b>127</b>	133
Advertising and publication costs	<b>1,243</b>	1,401
Auditors' remuneration	<b>43</b>	43

### 12. Employee Benefit Expenses

	2022	2021
	RMB million	RMB million
Salaries, wages and bonuses	<b>53,579</b>	51,148
Welfare, medical and other expenses	<b>22,914</b>	23,328
Pension costs – defined contribution plans ( <i>i</i> )	<b>9,071</b>	8,194
Housing benefits	<b>5,226</b>	4,693
Share-based payment	<b>143</b>	–
	<b>90,933</b>	87,363

(i) The Group did not have any forfeited contribution for the year ended 31 December 2022 in connection with the defined contribution plan operated by local governments.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 13. Income tax expense

	2022	2021
	RMB million	RMB million
Current income tax		
– Enterprise income tax (“EIT”)	<b>8,210</b>	7,931
– Land appreciation tax (“LAT”)	<b>2,108</b>	2,050
– Under provision in prior years	<b>127</b>	51
Deferred income tax	<b>(725)</b>	(866)
Income tax expense	<b>9,720</b>	9,166

The majority of the entities in the Group are located in Mainland China. Pursuant to the relevant laws and regulations, the statutory EIT rate of 25% (2021: 25%) is applied to the Group except for certain subsidiaries which were mainly either exempted from EIT or entitled to the preferential tax rate of 20% and 15% (2021: 20% and 15%) for the year ended 31 December 2022.

Certain of the Group’s overseas entities are located in The Republic of Uganda, Republic of Singapore, The Lao People’s Democratic Republic, Malaysia, Democratic Republic of the Congo, Republic of Indonesia, People’s Republic of Bangladesh, United Republic of Tanzania and Federal Democratic Republic of Ethiopia. Pursuant to the relevant laws and regulations of these jurisdictions, the EIT rates of 30%, 17%, 24%, 24%, 30%, 20%, 25%, 30% and 30% (2021: 30%, 17%, 24%, 24%, 30%, 20%, 25%, 30% and 30%) are applied to these entities respectively.

The provision of LAT is estimated according to the requirements set forth in the relevant PRC tax laws and regulations. LAT has been provided at ranges of progressive rates of the appreciation value, with certain allowable exemptions and deductions.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 13. Income tax expense (Continued)

The tax charge for the year can be reconciled to profit before income tax per the consolidated income statement as follows:

	2022	2021
	RMB million	RMB million
Profit before income tax	<b>44,692</b>	39,636
Tax at PRC EIT rate of 25% (2021: 25%)	<b>11,173</b>	9,909
Tax effect of:		
Non-deductible expenses	<b>263</b>	354
Non-taxable income	<b>(9)</b>	(259)
Share of losses of joint ventures	<b>359</b>	127
Share of profits of associates	<b>(1,183)</b>	(496)
Tax losses/other deductible temporary differences not recognised as deferred tax assets	<b>2,194</b>	2,039
Utilisation of tax losses/other deductible temporary differences previously not recognised as deferred tax assets	<b>(467)</b>	(276)
Preferential tax rates on income of group entities and other income tax credits	<b>(2,733)</b>	(2,384)
Research and development tax credit	<b>(1,169)</b>	(1,036)
LAT	<b>2,108</b>	2,050
Tax effect of LAT	<b>(527)</b>	(513)
Under provision in prior years	<b>127</b>	51
Deductible dividends on perpetual notes	<b>(450)</b>	(493)
Others	<b>34</b>	93
Income tax expense for the year	<b>9,720</b>	9,166

The PRC EIT rate is used as it is the domestic tax rate in the jurisdiction where the operation of the Group is substantially based.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 13. Income tax expense (Continued)

The tax charge relating to components of other comprehensive income is as follows:

	2022			2021		
	Before tax	Tax charge	After tax	Before tax	Tax charge	After tax
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
Actuarial (losses)/gains on retirement and other supplemental benefit obligations	(12)	2	(10)	(78)	13	(65)
Changes in fair value of financial assets at FVOCI	93	(20)	73	57	(19)	38
Share of other comprehensive income/ (expenses) of associates	675	–	675	(106)	–	(106)
Exchange differences	158	–	158	(64)	–	(64)
<b>Other comprehensive Income/(expenses)</b>	<b>914</b>	<b>(18)</b>	<b>896</b>	<b>(191)</b>	<b>(6)</b>	<b>(197)</b>
Current income tax		–			–	
Deferred income tax (Note 46)		(18)			(6)	
		<b>(18)</b>			<b>(6)</b>	

### 14. Profit Attributable to Owners of the Company

The profit attributable to owners of the Company is dealt with in the financial statements of the Company to the extent of RMB24,708 million (2021: RMB18,343 million).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 15. Earnings per Share

## (a) Basic

Basic earnings per share (“EPS”) is calculated by dividing the profit attributable to owners of the Company by the weighted average number of ordinary shares in issue during the year.

For those financial instruments classified as equity, if the distributions are cumulative, the undeclared amount of the cumulative distributions were deducted in arriving at earnings for the purposes of the EPS calculation. On the other hand, if the distributions are non-cumulative, only the amount of dividends declared in respect of the year should be deducted in arriving at the profit attributable to ordinary shareholders.

	2022	2021
Profit attributable to owners of the Company (RMB million)	<b>31,276</b>	27,618
Less: dividends attributable to the perpetual notes (RMB million) ( <i>Note (i)</i> )	<b>1,799</b>	2,149
the effect of 2021 Restricted Share Incentive Scheme (RMB million)	<b>33</b>	–
Profit used to determine basic earnings per share (RMB million)	<b>29,444</b>	25,469
Weighted average number of ordinary shares in issue (RMB millions)	<b>24,571</b>	24,571
Basic earnings per share (RMB per share)	<b>1.198</b>	1.037

(i) The perpetual notes issued by the Company were classified as equity instruments with deferrable cumulative interest distribution and payment. The perpetual notes interests, which was generated and attributable to the year ended 31 December 2022, were deducted from earnings when calculate the earnings per share for the year ended 31 December 2022.

## (b) Diluted

Diluted earnings per share was calculated by dividing the adjusted profit attributable to ordinary equity holders of the Company based on the diluted potential ordinary shares by the weighted average number of shares in issue during the period. For the year of 2022, the Company’s 2021 Restricted Share Incentive Scheme has no diluted effect on earnings per share, therefore, the diluted earnings per share equals basic earnings per share.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 16. Dividends

	2022 RMB million	2021 RMB million
Proposed final dividend of RMB0.200 per ordinary share (2021: RMB0.196)	<b>4,950</b>	4,849

The dividends proposed in 2022 were RMB4,950 million (RMB0.200 per ordinary share) and paid in 2021 were RMB4,849 million (RMB0.196 per ordinary share) respectively. A dividend in respect of the year ended 31 December 2022 of RMB0.200 per ordinary share, amounting to a total dividend of RMB4,950 million, is to be approved at the 2022 annual general meeting of the Company. These financial statements do not reflect this dividend payable.

### 17. Emoluments of Directors, Chief Executive, Supervisors and Employees

#### (a) Directors', Chief Executives and Supervisors' Emoluments

	2022 RMB'000	2021 RMB'000
Directors, chief executives and supervisors		
– Basis salaries, housing allowances and other allowances	<b>3,635</b>	4,150
– Fees	<b>250</b>	295
– Contributions to pension plans	<b>464</b>	423
– Discretionary bonuses ( <i>note</i> )	<b>5,959</b>	4,141
	<b>10,308</b>	9,009



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 17. Emoluments of Directors, Chief Executive, Supervisors and Employees (Continued)

## (a) Directors', Chief Executives and Supervisors' Emoluments (Continued)

The emoluments of every director and supervisor for the year ended 31 December 2022 are set out below:

Name	Basis salaries, housing allowances and other allowances RMB'000	Fees RMB'000	Contributions to pension plans RMB'000	Discretionary bonuses RMB'000	Total RMB'000
<b>Executive directors</b>					
Chen Yun	393	–	58	1,294	1,745
Wang Shiqi	367	–	58	1,298	1,723
Chen Wenjian	389	–	58	931	1,378
<b>Independent directors</b>					
Chung Shui Ming Timpson	–	100	–	50	150
Zhang Cheng	–	75	–	–	75
Xiu Long	–	75	–	–	75
<b>Non-executive director</b>					
Wen Limin	–	–	–	–	–
Directors' remunerations	1,149	250	174	3,573	5,146
<b>Supervisors</b>					
Jia Huiping	363	–	58	744	1,165
Li Xiaosheng	542	–	58	416	1,016
Wang Xinhua	520	–	58	434	1,012
Wan Ming	527	–	58	348	933
Yuan Baoyin	534	–	58	444	1,036
Supervisors' remunerations	2,486	–	290	2,386	5,162
<b>Total</b>	<b>3,635</b>	<b>250</b>	<b>464</b>	<b>5,959</b>	<b>10,308</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 17. Emoluments of Directors, Chief Executive, Supervisors and Employees (Continued)

## (a) Directors', Chief Executives and Supervisors' Emoluments (Continued)

The emoluments of every director and supervisor for the year ended 31 December 2021 are set out below:

Name	Basis salaries, housing allowances and other allowances RMB'000	Fees RMB'000	Contributions to pension plans RMB'000	Discretionary bonuses RMB'000 <i>(note)</i>	Total RMB'000
<b>Executive directors</b>					
Chen Yun	430	–	53	676	1,159
Wang Shiqi	402	–	53	607	1,062
Chen Wenjian	432	–	53	352	837
<b>Independent directors</b>					
Guo Peizhang	–	35	–	–	35
Wen Baoman	–	35	–	–	35
Zheng Qingzhi	–	35	–	–	35
Chung Shui Ming Timpson	–	100	–	57	157
Zhang Cheng	–	45	–	–	45
Xiu Long	–	45	–	–	45
<b>Non-executive director</b>					
Wen Limin	–	–	–	–	–
Directors' remunerations	1,264	295	159	1,692	3,410

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 17. Emoluments of Directors, Chief Executive, Supervisors and Employees (Continued)

## (a) Directors', Chief Executives and Supervisors' Emoluments (Continued)

Name	Basis salaries, housing allowances and other allowances RMB'000	Fees RMB'000	Contributions to pension plans RMB'000	Discretionary bonuses RMB'000 <i>(note)</i>	Total RMB'000
<b>Supervisors</b>					
Zhang Huijia	148	–	13	237	398
Liu Jianyuan	89	–	4	194	287
Chen Wenxin	159	–	13	113	285
Fan Jinghua	55	–	4	41	100
Jia Huiping	334	–	40	264	638
Li Xiaosheng	614	–	53	407	1,074
Wang Xinhua	521	–	53	472	1,046
Wan Ming	183	–	18	63	264
Hou Shezhong	181	–	13	230	424
Yuan Baoyin	602	–	53	428	1,083
Supervisors' remunerations	2,886	–	264	2,449	5,599
<b>Total</b>	<b>4,150</b>	<b>295</b>	<b>423</b>	<b>4,141</b>	<b>9,009</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 17. Emoluments of Directors, Chief Executive, Supervisors and Employees (Continued)

## (b) Five Highest Paid Individuals

None of the directors and supervisors was amongst the five highest paid individuals during both years. The emoluments of the five highest paid individuals in the Group during the year are as follows:

	2022 RMB'000	2021 RMB'000
Basic salaries, housing allowances, and other allowances and benefits in kind	<b>8,598</b>	8,713
Contributions to pension plans	<b>215</b>	206
Discretionary bonuses (note)	<b>15,775</b>	14,634
	<b>24,588</b>	23,553

The emoluments of the above individuals fall within the following bands:

	2022	2021
– HKD3,500,000 to HKD4,000,000 (equivalent to approximately RMB3,126,446 to RMB3,573,080)	<b>1</b>	–
– HKD4,000,001 to HKD4,500,000 (equivalent to approximately RMB3,573,081 to RMB4,019,715)	<b>1</b>	–
– HKD4,500,001 to HKD5,000,000 (equivalent to approximately RMB4,019,716 to RMB4,466,350)	<b>1</b>	2
– HKD5,000,001 to HKD6,000,000 (equivalent to approximately RMB4,912,986 to RMB5,359,620)	–	2
– HKD6,000,001 to HKD6,500,000 (equivalent to approximately RMB5,359,621 to RMB5,806,255)	<b>1</b>	–
– HKD7,500,001 to HKD8,000,000 (equivalent to approximately RMB6,699,526 to RMB7,146,160)	–	1
– HKD8,500,001 to HKD9,000,000 (equivalent to approximately RMB7,592,796 to RMB8,039,430)	<b>1</b>	–

Note: The discretionary bonus is determined by the remuneration committee in accordance with the relevant human resources policies.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 18. Property, Plant and Equipment

	Buildings RMB million	Infra-structure construction equipment RMB million	Transportation equipment RMB million	Manufacturing equipment RMB million	Testing equipment and instruments RMB million	Other equipment RMB million	Construction in progress RMB million	Total RMB million
At 1 January 2021								
Cost	42,554	52,317	14,353	11,135	4,124	6,292	6,494	137,269
Accumulated depreciation and impairment	(10,113)	(31,331)	(10,502)	(5,734)	(2,914)	(4,162)	(596)	(65,352)
<b>Net book amount</b>	<b>32,441</b>	<b>20,986</b>	<b>3,851</b>	<b>5,401</b>	<b>1,210</b>	<b>2,130</b>	<b>5,898</b>	<b>71,917</b>
Year ended 31 December 2021								
<b>Opening net book amount</b>	<b>32,441</b>	<b>20,986</b>	<b>3,851</b>	<b>5,401</b>	<b>1,210</b>	<b>2,130</b>	<b>5,898</b>	<b>71,917</b>
Additions	666	3,710	1,193	451	400	1,000	5,492	12,912
Transfers	1,794	1,152	7	329	13	352	(3,647)	-
Transferred from investment properties ( <i>Note 22</i> )	606	-	-	-	-	-	-	606
Transferred from properties under development for sale and properties held for sale ( <i>Note 31</i> )	639	-	-	-	-	-	314	953
Transferred from inventories	-	214	-	-	1	-	-	215
Acquisition of subsidiaries	52	-	2	-	-	1	286	341
Disposals	(181)	(1,249)	(46)	(14)	(11)	(10)	(1,184)	(2,695)
Transferred to investment properties ( <i>Note 22</i> )	(164)	-	-	-	-	-	(218)	(382)
Transferred to intangible assets	-	-	-	-	-	-	(117)	(117)
Depreciation charge ( <i>Note 11</i> )	(1,434)	(3,814)	(1,021)	(909)	(386)	(779)	-	(8,343)
Impairment losses recognised ( <i>Note 8</i> )	(128)	(1)	-	(2)	-	(1)	-	(132)
Exchange differences	(23)	(69)	(9)	(18)	(1)	(5)	(16)	(141)
<b>Closing net book amount</b>	<b>34,268</b>	<b>20,929</b>	<b>3,977</b>	<b>5,238</b>	<b>1,226</b>	<b>2,688</b>	<b>6,808</b>	<b>75,134</b>
At 31 December 2021								
Cost	45,671	52,688	14,955	11,580	4,376	7,439	7,361	144,070
Accumulated depreciation and impairment	(11,403)	(31,759)	(10,978)	(6,342)	(3,150)	(4,751)	(553)	(68,936)
<b>Net book amount</b>	<b>34,268</b>	<b>20,929</b>	<b>3,977</b>	<b>5,238</b>	<b>1,226</b>	<b>2,688</b>	<b>6,808</b>	<b>75,134</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 18. Property, Plant and Equipment (Continued)

	Buildings	Infra-structure construction equipment	Transportation equipment	Manufacturing equipment	Testing equipment and instruments	Other equipment	Construction in progress	Total
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
Year ended 31 December 2022								
<b>Opening net book amount</b>	<b>34,268</b>	<b>20,929</b>	<b>3,977</b>	<b>5,238</b>	<b>1,226</b>	<b>2,688</b>	<b>6,808</b>	<b>75,134</b>
Additions	251	3,087	1,235	517	435	1,468	18,436	25,429
Transfers	2,007	427	36	273	15	160	(2,918)	-
Transferred from investment properties (Note 22)	384	-	-	-	-	-	-	384
Transferred from properties under development for sale and properties held for sale (Note 31)	124	-	-	-	-	-	-	124
Acquisition of subsidiaries	6	-	13	-	-	7	28,884	28,910
Disposal of subsidiaries	(4)	-	-	-	-	-	-	(4)
Disposals	(210)	(976)	(74)	(63)	(18)	(723)	(521)	(2,585)
Transferred to investment properties (Note 22)	(149)	-	-	-	-	-	(6)	(155)
Depreciation charge (Note 11)	(1,626)	(3,628)	(1,040)	(978)	(405)	(917)	-	(8,594)
Impairment losses recognised (Note 8)	(459)	-	-	(32)	-	-	(13)	(504)
Exchange differences	30	15	4	63	-	5	(6)	111
<b>Closing net book amount</b>	<b>34,622</b>	<b>19,854</b>	<b>4,151</b>	<b>5,018</b>	<b>1,253</b>	<b>2,688</b>	<b>50,664</b>	<b>118,250</b>
At 31 December 2022								
Cost	48,257	52,518	15,599	12,255	4,641	8,194	51,230	192,694
Accumulated depreciation and impairment	(13,635)	(32,664)	(11,448)	(7,237)	(3,388)	(5,506)	(566)	(74,444)
<b>Net book amount</b>	<b>34,622</b>	<b>19,854</b>	<b>4,151</b>	<b>5,018</b>	<b>1,253</b>	<b>2,688</b>	<b>50,664</b>	<b>118,250</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 18. Property, Plant and Equipment (Continued)

- (a) Depreciation of the Group's property, plant and equipment of RMB7,211 million (2021: RMB6,874 million) has been charged to cost of sales, RMB192 million (2021: RMB289 million) to research and development expenditures, RMB1,129 million (2021: RMB1,120 million) to administrative expenses, and RMB62 million (2021: RMB60 million) to selling and marketing expenses.
- (b) As at 31 December 2022, bank borrowings amounting to RMB2,205 million (2021: RMB295 million) are secured by certain property, plant and equipment with an aggregate book carrying amount of approximately RMB3,878 million (2021: RMB1,715 million) (Note 43).
- (c) As at 31 December 2022, the Group is in the process of applying for registration of the ownership certificates for certain of its properties with an aggregate book carrying amount of approximately RMB2,023 million (2021: RMB2,657 million). The Directors of the Company are of the opinion that the Group is entitled to lawfully and validly occupy or use these properties.
- (d) The category of infrastructure construction equipment, transportation equipment, manufacturing equipment, testing equipment and instruments and other equipment leased by the Group to third parties under operating leases with the following carrying amounts:

	2022	2021
	RMB million	RMB million
Cost	<b>1,769</b>	445
Accumulated depreciation	<b>(244)</b>	(130)
Net book amount	<b>1,525</b>	315

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 19. Lease

This note provides information for leases where the Group is a lessee.

#### (a) Amounts recognised in the consolidated balance sheet

The consolidated balance sheet shows the following amounts relating to leases:

Right-of-use assets	2022	2021
	RMB million	RMB million
Buildings	1,051	1,074
Infrastructure construction equipment	529	441
Transportation equipment	29	47
Manufacturing equipment	8	1
Other equipment	137	96
	<b>1,754</b>	1,659

Lease liabilities	2022	2021
	RMB million	RMB million
Current	343	360
Non-current	1,139	972
	<b>1,482</b>	1,332

Additions to the right-of-use assets during the year ended 31 December 2022 were RMB1,032 million. Maturity and modification to the right-of-use assets during the year ended 31 December 2022 were RMB609 million.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 19. Lease (Continued)

## (b) Amounts recognised in the consolidated income statement

The consolidated income statement shows the following amounts relating to leases:

Depreciation charge of right-of-use assets	2022	2021
	RMB million	RMB million
Buildings	464	382
Infrastructure construction equipment	222	240
Transportation equipment	12	50
Manufacturing equipment	1	1
Other equipment	37	22
	<b>736</b>	695
Interest expenses (included in finance cost) ( <i>Note 10</i> )	53	65
Expenses relating to leases of low-value assets that are not shown above as short-term leases (included in cost of sales and services and administrative expenses)	<b>19,269</b>	24,644

The total cash outflow for leases in the year ended 31 December 2022 was RMB20,073 million (2021: RMB25,010 million).

## (c) The Group's leasing activities and how these are accounted for

The Group leases buildings, infrastructure construction equipment, transportation equipment, manufacturing equipment and other equipment. Rental contracts are made for fixed periods, but may have extension options as described in (d) below.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

## (d) Extension and termination options

Extension and termination options are included in a number of property and equipment leases across the Group. These are used to maximise operational flexibility in terms of managing the assets used in the Group's operations. The majority of extension and termination options held are exercisable only by the Group and not by the respective lessor.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 20. Lease prepayments

	2022	2021
	RMB million	RMB million
At 1 January		
Cost	<b>16,201</b>	15,518
Accumulated amortisation and impairment	<b>(3,322)</b>	(2,878)
<b>Net book amount</b>	<b>12,879</b>	12,640
For the year ended 31 December		
Opening net book amount	<b>12,879</b>	12,640
Additions	<b>360</b>	779
Transferred from properties held for sale ( <i>Note 31(b)</i> )	–	362
Acquisition of subsidiaries	<b>44</b>	5
Disposals	<b>(82)</b>	(506)
Amortisation charge ( <i>Note 11</i> )	<b>(352)</b>	(401)
<b>Closing net book amount</b>	<b>12,849</b>	12,879
At 31 December		
Cost	<b>16,411</b>	16,201
Accumulated amortisation and impairment	<b>(3,562)</b>	(3,322)
<b>Net book amount</b>	<b>12,849</b>	12,879
Analysed for reporting purpose as:		
– Non-current	<b>12,637</b>	12,656
– Current	<b>212</b>	223
	<b>12,849</b>	12,879

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 20. Lease prepayments (Continued)

- (a) Amortisation of the Group's lease prepayments of RMB178 million (2021: RMB244 million) has been charged to cost of sales and services, and RMB174 million (2021: RMB215 million) to administrative expenses.
- (b) As at 31 December 2022, the Group is in the process of applying for registration of the title certificates for certain of its leasehold land with an aggregate carrying value of approximately RMB83 million (2021: RMB175 million). The Directors of the Company are of the opinion that the Group is entitled to lawfully and validly occupy or use these leasehold land.
- (c) As at 31 December 2022, no bank borrowings were secured by lease prepayments (As at 31 December 2021: nil).

### 21. Deposits for Investments

	2022	2021
	RMB million	RMB million
Deposits for investments accounted for using the equity method	<b>668</b>	441

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 22. Investment Properties

	2022	2021
	RMB million	RMB million
At 1 January		
Cost	<b>16,853</b>	16,889
Accumulated depreciation and impairment	<b>(2,837)</b>	(2,385)
<b>Net book amount</b>	<b>14,016</b>	14,504
For the year ended 31 December		
Opening net book amount	<b>14,016</b>	14,504
Additions	<b>1,746</b>	304
Acquisition of subsidiaries	<b>1</b>	19
Transferred from property, plant and equipment ( <i>Note 18</i> )	<b>155</b>	382
Transfer from properties held for sale ( <i>Note 31(b)</i> )	<b>475</b>	679
Transfer to property, plant and equipment ( <i>Note 18</i> )	<b>(384)</b>	(606)
Transfer to properties held for sale ( <i>Note 31(b)</i> )	<b>(267)</b>	(274)
Disposals	<b>(45)</b>	(483)
Depreciation charge ( <i>Note 11</i> )	<b>(486)</b>	(453)
Impairment losses recognised ( <i>Note 8</i> )	<b>(6)</b>	(48)
Exchange difference	<b>19</b>	(8)
<b>Closing net book amount</b>	<b>15,224</b>	14,016
At 31 December		
Cost	<b>18,253</b>	16,853
Accumulated depreciation and impairment	<b>(3,029)</b>	(2,837)
<b>Net book amount</b>	<b>15,224</b>	14,016
Fair value at end of the year ( <i>a</i> )	<b>23,259</b>	22,502

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 22. Investment Properties (Continued)

- (a) As at 31 December 2022, the fair value of the Group's investment properties is based on valuations performed by China United Assets Appraisal Group Co., Ltd, a firm of independent and professionally qualified valuers. The investment properties, mainly located in the Mainland China, are valued by the income approach by taking into account the net rental income of the properties derived from the existing leases and/or achievable in the existing market with due allowance for the reversionary income potential of the leases, which have been then capitalised to determine the fair value at an appropriate capitalisation rate, or by the comparison approach by making reference to comparable market transactions, which rests on the wide acceptance of the market transactions as the best indicator and pre-supposes that evidence of relevant transactions in the market place can be extrapolated to similar properties, subject to allowances for variable factors. The fair value falls into the category of fair value measurements using significant unobservable inputs (level 3) including future rental cash inflows, capitalisation rate and current prices in an active market for similar properties.
- (b) Rental income and depreciation of the Group's investment properties of RMB870 million and RMB486 million (2021: RMB890 million and RMB395 million), respectively, was recognised as "revenue" and "cost of sales and services" in the consolidated income statement for the year ended 31 December 2022.
- (c) As at 31 December 2022, the Group had no unprovided contractual obligations for future repairs and maintenance (2021: nil).
- (d) The Group is in the process of applying for the title certificates for certain of its investment properties with an aggregate carrying value of RMB2,545 million as at 31 December 2022 (31 December 2021: RMB1,715 million). The Directors are of the opinion that the Group is entitled to lawfully and validly occupy or use these investment properties.
- (e) Minimum lease payments receivable on leases of investment properties are as follows:

	2022	2021
	RMB million	RMB million
Within 1 year	<b>897</b>	579
Between 1 and 2 years	<b>665</b>	404
Between 2 and 3 years	<b>528</b>	348
Between 3 and 4 years	<b>290</b>	228
Between 4 and 5 years	<b>202</b>	152
Later than 5 years	<b>278</b>	369
	<b>2,860</b>	2,080

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 23. Intangible Assets

	Service concession arrangements RMB million	Non- patented technologies RMB million	Patents RMB million	Computer software RMB million	Others RMB million	Total RMB million
At 1 January 2021						
Cost	61,305	666	23	1,109	911	64,014
Accumulated amortisation and impairment	(430)	(279)	(14)	(546)	(146)	(1,415)
<b>Net book amount</b>	<b>60,875</b>	<b>387</b>	<b>9</b>	<b>563</b>	<b>765</b>	<b>62,599</b>
Year ended at 31 December 2021						
Opening net book amount	60,875	387	9	563	765	62,599
Additions	50,799	106	4	415	18	51,342
Acquisition of subsidiaries	-	-	-	1	-	1
Disposals	-	-	-	(10)	(7)	(17)
Disposals of subsidiaries	(2,620)	-	-	-	-	(2,620)
Amortisation charge ( <i>Note 11</i> )	(484)	(52)	(2)	(142)	(117)	(797)
Exchange differences	(12)	-	-	-	-	(12)
<b>Closing net book amount</b>	<b>108,558</b>	<b>441</b>	<b>11</b>	<b>827</b>	<b>659</b>	<b>110,496</b>
At 31 December 2021						
Cost	109,471	771	22	1,503	911	112,678
Accumulated amortisation and impairment	(913)	(330)	(11)	(676)	(252)	(2,182)
<b>Net book amount</b>	<b>108,558</b>	<b>441</b>	<b>11</b>	<b>827</b>	<b>659</b>	<b>110,496</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 23. Intangible Assets (Continued)

	Service concession arrangements	Non- patented technologies	Patents	Computer software	Others	Total
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
Year ended at 31 December 2022						
Opening net book amount	108,558	441	11	827	659	110,496
Additions	45,433	-	3	271	8	45,715
Acquisition of subsidiaries (Note 48)	-	-	-	1	-	1
Disposals	(1)	-	-	(25)	-	(26)
Amortisation charge (Note 11)	(751)	(55)	(2)	(172)	(114)	(1,094)
Exchange differences	45	-	-	-	-	45
<b>Closing net book amount</b>	<b>153,284</b>	<b>386</b>	<b>12</b>	<b>902</b>	<b>553</b>	<b>155,137</b>
At 31 December 2022						
Cost	154,952	771	25	1,747	908	158,403
Accumulated amortisation and impairment	(1,668)	(385)	(13)	(845)	(355)	(3,266)
<b>Net book amount</b>	<b>153,284</b>	<b>386</b>	<b>12</b>	<b>902</b>	<b>553</b>	<b>155,137</b>

- (a) The Group has entered into a number of service concession arrangements with certain government authorities in the PRC in respect of its toll road operations, sewage plants and other constructions in exchange for a right for the Group to operate the asset. The assets are classified as intangible assets if the operator receives a right to charge users of the public service and this right is not an unconditional contractual right to receive cash. Pursuant to the service concession arrangement contracts, the Group is responsible for the construction of toll roads, sewage plants and other constructions, and the acquisition of the related facilities and equipment, and is entitled to operate the toll roads, the sewage plants and other construction upon completion for a specified remaining concession period from 12 to 40 years (2021: from 12 to 40 years) by charging users of the public service, which amounts are contingent on the extent that the public uses the service. The Group will not hold any residual interest in the toll roads, the sewage plants and other constructions upon expiration of the concession period. As such, the service concession arrangement contracts are accounted for as service concession arrangements and an intangible asset was recognised at an amount equals to the fair value of the consideration for provision of construction service upon initial recognition.
- (b) As at 31 December 2022, the cost of service concession arrangements have been put into operations amounted to RMB88,214 million (2021: RMB26,772 million). The cost of service concession arrangements where the related projects were under construction amounted to RMB66,738 million (2021: RMB82,699 million).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 23. Intangible Assets (Continued)

- (c) Amortisation of the Group's intangible assets of RMB916 million (2021: RMB633 million) has been charged to cost of sales and services, and RMB178 million (2021: RMB164 million) to administrative expenses.
- (d) As at 31 December 2022, bank borrowings amounting to RMB75,252 million (2021: RMB45,894 million) are secured by concession assets with carrying amount of approximately RMB96,955 million (2021: RMB64,728 million) (Note 43).

### 24. Mining Assets

	Mining rights RMB million	Exploration and evaluation assets RMB million	Total RMB million
At 1 January 2021			
Cost	5,379	134	5,513
Accumulated amortisation and impairment	(1,810)	(121)	(1,931)
<b>Net book amount</b>	<b>3,569</b>	<b>13</b>	<b>3,582</b>
Year ended at 31 December 2021			
Opening net book amount	3,569	13	3,582
Additions	2	–	2
Amortisation charge ( <i>Note 11</i> )	(104)	–	(104)
Exchange differences	(1)	–	(1)
<b>Closing net book amount</b>	<b>3,466</b>	<b>13</b>	<b>3,479</b>
At 31 December 2021			
Cost	5,380	134	5,514
Accumulated amortisation and impairment	(1,914)	(121)	(2,035)
<b>Net book amount</b>	<b>3,466</b>	<b>13</b>	<b>3,479</b>



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 24. Mining Assets (Continued)

	Mining rights RMB million	Exploration and evaluation assets RMB million	Total RMB million
Year ended at 31 December 2022			
Opening net book amount	3,466	13	3,479
Additions	8	–	8
Disposals	(2)	–	(2)
Amortisation charge ( <i>Note 11</i> )	(109)	–	(109)
<b>Closing net book amount</b>	<b>3,363</b>	<b>13</b>	<b>3,376</b>
At 31 December 2022			
Cost	5,386	134	5,520
Accumulated amortisation and impairment	(2,023)	(121)	(2,144)
<b>Net book amount</b>	<b>3,363</b>	<b>13</b>	<b>3,376</b>

The exploration and evaluation assets represent the expenditure on exploration and evaluation of mine projects at Australia and Heilongjiang.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 25. Subsidiaries

(a) Details of the principal subsidiaries as at 31 December 2022 are shown in Note 52.

(b) **Material non-controlling interests**

The table below shows the details of a non-wholly-owned subsidiary acquired in 2022 of the Group that have material non-controlling interests.

Name of subsidiary	中鐵雲南建設投資有限公司 China Railway Yunnan Construction Investment Co., Ltd
Principal activities	Project construction, asset management, water conservancy administration
Country/place of establishment and operation	PRC

	2022 RMB million
Particulars of paid in capital	<b>36,393</b>
Proportion of interest and voting power held by non-controlling interests	<b>29.49%</b>
Accumulated non-controlling interests	<b>36,854</b>
Total comprehensive income allocated to non-controlling interests	<b>145</b>

On 8 October 2022, China Railway Yunnan Construction Investment Co., Ltd., (“CREC Yunnan Investment”) was established, and on 30 November 2022, the Company and the other non-controlling shareholders completed the capital injection. The Company and the other non-controlling shareholders held the interests in CREC Yunnan Investment by 70.51% and 29.49% respectively and CREC Yunnan Investment has been consolidated as a subsidiary in the Group’s consolidated financial statements. At the same time, the Company transferred 53.37% equity shares of Dianzhong Water Diversion Engineering and 100% equity shares of China Railway Development and Investment Group Co., Ltd. (a subsidiary of the Group, “CREC Development”), and the other non-controlling shareholders transferred 34.79% equity shares of Dianzhong Water Diversion Engineering to CREC Yunnan Investment respectively. Pursuant to the capital injection, Dianzhong Water Diversion Engineering and CREC Development became the subsidiaries of CREC Yunnan Investment.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 25. Subsidiaries (Continued)

## (b) Material non-controlling interests (Continued)

## Financial information on subsidiaries with material non-controlling interests

Set out below is summarised financial information for China Railway Yunnan Construction Investment Co., Ltd. in which there is non-controlling interests that are material to the Group. The amounts disclosed are before inter-company eliminations.

Summarised consolidated balance sheet		2022
		RMB million
<b>Current</b>		
Assets		34,708
Liabilities		28,892
<b>Total current net assets</b>		<b>5,816</b>
<b>Non-current</b>		
Assets		108,848
Liabilities		47,303
<b>Total non-current net assets</b>		<b>61,545</b>
<b>Net assets</b>		<b>67,361</b>
Summarised consolidated income statement and comprehensive income		2022
		RMB million
Revenue		28,126
Profit for the year attributable to owners of the Company		3,079
Total comprehensive income attributable to owners of the Company		3,079
Total comprehensive income attributable to non-controlling interests		145

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 25. Subsidiaries (Continued)

#### (b) Material non-controlling interests (Continued)

Summarised consolidated cash flows	2022
	RMB million
Net cash generated from operating activities	7,225
Net cash used in investing activities	(12,842)
Net cash generated from financing activities	15,225
Net increase in cash and cash equivalents	9,608

#### (c) Consolidation of the structured entities

To determine whether to consolidate the structured entities (mainly the unlisted entrust products) or not, the main factor considered by the Group is the ability to control these structured entities. For those structured entities managed and invested by China Railway Trust Co., Ltd. ("China Railway Trust"), the directly owned subsidiary of the Company, the Group consolidated those structured entities when the Group is exposed to significant variable returns and has the ability to affect the variable returns, including the returns of its interests in these structured entities as investor and trust commission fee earned from these structured entities as manager.

As at 31 December 2022, the total assets of the consolidated structured entities amounted to RMB12,614 million (31 December 2021: RMB11,947 million), and the interests of other investors in these structured entities amounted to RMB1,760 million (31 December 2021: RMB2,162 million).

As at 31 December 2022 and 2021, there was no contractual liquidity arrangements, guarantees or other commitments between the Group and the consolidated structured entities.

#### (d) Interests in unconsolidated structured entities

(i) China Railway Trust serves as manager of unconsolidated structured entities (mainly the unlisted entrust products) and earns trust commission fee. In the opinion of the Directors, the Group did not consolidate these structured entities that it has no control over these structured entities.

As at 31 December 2022, the scale of the unconsolidated structured entities established with interest held by the Group amounted to RMB41,505 million (31 December 2021: RMB51,815 million). As at 31 December 2022, the maximum exposure to the loss of the Group's investments and the amount recognised as financial assets at fair value through profit or loss in the consolidated financial statements over these unconsolidated structured entities which the Group has interests in amounted to RMB1,330 million (31 December 2021: RMB1,142 million).

As at 31 December 2022, the scale of the unconsolidated structured entities established with no interest held by the Group amounted to RMB392,455 million (31 December 2021: RMB336,602 million).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 25. Subsidiaries (Continued)

#### (d) Interests in unconsolidated structured entities (Continued)

- (ii) The Group and several unlisted entrust products (“Investee Entrust Products”), which the Group has interests in, invested in certain limited liability partnership funds (the “Funds”). The Funds are mainly engaged in infrastructure activities. Some asset managers (related parties of the Group), or together with the Group, acted as general partners of the Fund, and applied various investment strategies to accomplish the respective investment objectives of the Funds. A number of Investee Entrust Products acted as limited partners of the Funds to finance the operation activities of the Funds.

The Directors are of the opinion that the Group did not have control over Investee Entrust Products and the Funds and therefore, these Investee Entrust Products and the Funds were deemed as structured entities and were not consolidated by the Group.

As at 31 December 2022, the scale of these unconsolidated structured entities amounted to RMB26,813 million (31 December 2021: RMB24,724 million).

The maximum exposure to the loss of the Group’s investments in the unconsolidated structured entities as at 31 December 2022 is disclosed in the following table.

	2022 RMB million	2021 RMB million
Investments in joint ventures	<b>8,790</b>	7,166
Financial assets at fair value through profit or loss	<b>619</b>	1,099
	<b>9,409</b>	8,265

As at 31 December 2022 and 2021, there was no contractual liquidity arrangements, guarantees or other commitments between the Group and the unconsolidated structured entities.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 26. Investments accounted for using the equity method

The amounts recognised in the consolidated balance sheet are as follows:

	2022 RMB million	2021 RMB million
Associates	54,611	46,181
Joint ventures	55,122	49,831
	<b>109,733</b>	96,012

The amounts recognised in the consolidated income statement are as follows:

	2022 RMB million	2021 RMB million
Associates	4,734	3,809
Joint ventures	(1,437)	(507)
	<b>3,297</b>	3,302

#### (a) Investments in associates

	2022 RMB million	2021 RMB million
At 1 January	46,181	38,133
Additions	10,256	7,932
Disposals	(6,612)	(2,702)
Share of profit or loss, net	4,734	3,809
Dividend distribution	(366)	(488)
Share of other comprehensive income of associates	675	(106)
Share of other reserves of associates	(257)	(397)
At 31 December	<b>54,611</b>	46,181

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 26. Investments accounted for using the equity method (Continued)

#### (a) Investments in associates (Continued)

- (i) All of the associates of the Group are unlisted and there is no quoted market price available for their shares.
- (ii) In 2022, the Group acts as the guarantors for various external borrowings made by certain associates amounted to RMB1,816 million (2021: RMB4,730 million).
- (iii) Details of Group's material associates as at 31 December 2022 and 2021 are as follows:

Name of associate	Country/ place of establishment/ operations	Proportion of ownership interest held by the Group		Principal activities
		2022	2021	
華剛礦業股份有限公司 LA Sino-Congolaise Des Mines S.A. ("SICOMINGS S.A.")	Democratic Republic of the Congo	<b>41.72%</b>	41.72%	Mining
中鐵京西(北京)高速公路發展有限公司 China Railway Jingxi (Beijing) Expressway Development Co., Ltd. ("Jingxi Expressway")	PRC	<b>45.00%</b>	45.00%	Expressway construction management

Summarised financial information in respect of each of the Group's material associates is set out below. The summarised financial information below represents amounts shown in the associates financial statements prepared in accordance with IFRSs.

All of these associates are accounted for using the equity method in the consolidated financial statements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 26. Investments accounted for using the equity method (Continued)

## (a) Investments in associates (Continued)

	2022		2021	
	SICOMINGS S.A. RMB million (Unaudited)	Jingxi Expressway RMB million (Unaudited)	SICOMINGS S.A. RMB million (Unaudited)	Jingxi Expressway RMB million (Unaudited)
Current assets	16,881	1,763	11,016	2,500
Non-current assets	26,420	13,157	20,768	7,369
Current liabilities	5,113	600	2,545	978
Non-current liabilities	15,034	6,123	15,411	3,978
Revenue	15,103	–	10,411	–
Profit/(losses) for the year	7,542	(24)	6,586	(18)
Other comprehensive income for the year	1,550	–	(259)	–
Total comprehensive income for the year	9,092	(24)	6,327	(18)
Dividends received	–	–	402	–

Reconciliation of the above summarised financial information to the carrying amount of the interests in associates recognised in the consolidated financial statements:

	2022		2021	
	SICOMINGS S.A. RMB million (Unaudited)	Jingxi Expressway RMB million (Unaudited)	SICOMINGS S.A. RMB million (Unaudited)	Jingxi Expressway RMB million (Unaudited)
Net assets of associates	23,154	8,197	13,828	4,913
Proportion of the Group's ownership in associates	41.72%	45.00%	41.72%	45.00%
Other adjustments	(1,318)	–	(977)	1
Carrying amount of the Group's interests in associates	8,342	3,689	4,792	2,212



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 26. Investments accounted for using the equity method (Continued)

## (a) Investments in associates (Continued)

In addition to the interests in associates disclosed above, the Group also has interests in a number of individually immaterial associates that are accounted for using the equity method.

	2022	2021
	RMB million	RMB million
Aggregate carrying amount of the Group's interests in these associates	42,580	39,177
The Group's share of profits	1,599	1,061
The Group's share of other comprehensive income	28	1
The Group's share of total comprehensive income	1,627	1,062

## (b) Investments in joint ventures

	2022	2021
	RMB million	RMB million
<b>At 1 January</b>	<b>49,831</b>	40,216
Additions	7,463	12,171
Disposals	(403)	(1,780)
Share of profit or loss, net	(1,437)	(507)
Dividend distribution	(357)	(246)
Share of other reserves of joint ventures	25	(23)
<b>At 31 December</b>	<b>55,122</b>	49,831

(i) All of the joint ventures of the Group are unlisted and there is no quoted market price available for their shares.

(ii) In 2022, the Group acts as the guarantor for external borrowing made by certain joint ventures amounted to RMB5,139 million (2021: RMB2,969 million).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 26. Investments accounted for using the equity method (Continued)

#### (b) Investments in joint ventures (Continued)

(iii) Details of Group's material joint ventures as at 31 December 2022 and 2021 are as follows:

Name of joint venture	Country/ place of establishment/ operations	Proportion of ownership interest held by the Group		Principal activities
		2022	2021	
招商中鐵控股有限公司 China Merchants Railway Co., Ltd. (Formerly "Guangxi China Railway Expressway Management Co., Ltd.")	PRC	<b>49.00%</b>	49.00%	Build-operate-transfer service concession arrangement
昆明軌道交通四號線土建項目建設管理 有限公司 Kunming Rail Transit Line 4 Construction Management Co., Ltd. ("Kunming Line 4")	PRC	<b>75.73%</b>	75.73%	Subway construction management

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 26. Investments accounted for using the equity method (Continued)

## (b) Investments in joint ventures (Continued)

Summarised financial information in respect of each of the Group's material joint venture is set out below. The summarised financial information below represents amounts shown in the joint ventures financial statements prepared in accordance with IFRSs.

The joint ventures are accounted for using the equity method in the consolidated financial statements.

	2022		2021	
	China Merchants Railway Co., Ltd. RMB million (Unaudited)	Kunming Line 4 RMB million (Unaudited)	China Merchants Railway Co., Ltd. RMB million (Unaudited)	Kunming Line 4 RMB million (Unaudited)
Current assets	<b>993</b>	<b>2,145</b>	2,318	1,136
Including: cash and cash equivalents	<b>829</b>	<b>11</b>	2,120	55
Non-current assets	<b>38,257</b>	<b>15,670</b>	39,516	16,334
Current liabilities	<b>8,152</b>	<b>596</b>	9,287	764
Non-current liabilities	<b>18,341</b>	<b>10,984</b>	19,351	10,583
Revenue	<b>3,270</b>	<b>436</b>	3,290	436
Interest expenses	<b>1,069</b>	<b>490</b>	(1,168)	(646)
Total comprehensive (expenses)/ income for the year	<b>(129)</b>	<b>59</b>	(101)	(4)
Dividends received	<b>135</b>	<b>–</b>	127	–

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 26. Investments accounted for using the equity method (Continued)

#### (b) Investments in joint ventures (Continued)

Reconciliation of the above summarised financial information to the carrying amount of the interests in joint ventures recognised in the consolidated financial statements:

	2022		2021	
	China Merchants Railway Co., Ltd. RMB million (Unaudited)	Kunming Line 4 RMB million (Unaudited)	China Merchants Railway Co., Ltd. RMB million (Unaudited)	Kunming Line 4 RMB million (Unaudited)
Net assets of joint ventures	10,211	6,235	10,615	6,123
Proportion of the Group's ownership in joint ventures	49.00%	75.73%	49.00%	75.73%
Other adjustments	–	–	–	40
Carrying amount of the Group's interests in joint ventures	5,003	4,722	5,201	4,677

In addition to the interests in joint ventures disclosed above, the Group also has interests in a number of individually immaterial joint ventures that are accounted for using the equity method.

	2022 RMB million	2021 RMB million
Aggregate carrying amount of the Group's interests in these joint ventures	45,397	39,953
The Group's share of losses	(1,418)	(455)
The Group's share of total comprehensive income	(1,418)	(455)

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 27. Joint operations

In 2022, the Group has no joint operation (2021: one and 30% share). The Group is entitled to a proportionate share of the assets, the liabilities and the construction revenue, and bears a proportionate share of the joint operation's expenses.

### 28. Goodwill

	2022	2021
	RMB million	RMB million
<b>Cost</b>		
At beginning of year	1,596	1,440
Addition	536	156
Disposal	(333)	–
At end of year	1,799	1,596
<b>Impairment</b>		
At beginning of year	(28)	(28)
Change	–	–
At end of year	(28)	(28)
<b>Net book amount</b>		
At beginning of year	1,568	1,412
At end of year	1,771	1,568

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 28. Goodwill (Continued)

The carrying amount of goodwill at the end of the reporting period is attributable to acquisition of subsidiaries in the following subsidiaries (whose principal activities are disclosed in Note 52) and sub-groups headed by these subsidiaries:

	2022 RMB million	2021 RMB million
China Railway No.1 Engineering Group Co., Ltd.	64	64
China Railway No.2 Engineering Group Co., Ltd.	77	77
China Railway No.3 Engineering Group Co., Ltd.	51	51
China Railway No.4 Engineering Group Co., Ltd.	195	195
China Railway No.5 Engineering Group Co., Ltd.	82	82
China Railway No.6 Engineering Group Co., Ltd.	12	12
China Railway No.8 Engineering Group Co., Ltd.	26	26
China Railway No.9 Engineering Group Co., Ltd.	48	48
China Railway No.10 Engineering Group Co., Ltd.	26	26
China Railway Major Bridge Engineering Group Co., Ltd.	28	28
China Railway Electrification Engineering Group Co., Ltd.	100	100
China Railway Construction Group Co., Ltd.	551	218
China Railway Tunnel Group Co., Ltd.	19	19
China Railway Trust	206	206
China Railway No.6 Survey and Design Institute Group Co., Ltd.	24	24
China Railway Prefabricate Construction Co., Ltd.	–	333
China Railway Changjiang Transport Design Group Co., Ltd.	36	36
China Railway Water Conservancy & Hydropower Planning and Design Group Co.,Ltd.	5	5
China Railway Yunnan Construction Investment Co., Ltd.	203	–
Other Subsidiaries	18	18
	<b>1,771</b>	1,568

The basis of determining the recoverable amounts of the above subsidiaries and their major underlying assumptions are summarised below:

China Railway Trust, which is included in other businesses of the Group, is principally engaged in financial trust management. The recoverable amount in respect of this subsidiary has been determined based on fair value less costs of disposal. The key assumptions in determining the fair value is the publicly disclosed value ratio of comparable transactions and estimated costs of disposal. Management believes that any reasonably possible change in the assumptions would not cause the carrying amount of this subsidiary to exceed its recoverable amount.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 28. Goodwill (Continued)

The recoverable amounts in respect of subsidiaries, which are principally engaged in infrastructure construction, survey, design and consulting services and engineering equipment and component manufacturing, other than China Railway Trust, have been determined based on a value in use calculation. That calculation uses cash flow projections based on the most recent financial budgets of five years approved by management and an extrapolated financial budget for the following five years, and a discount rate of 10% (2021: 10%). One of the key assumptions in preparing cash flow projections is annual growth rates in revenue which vary among different subsidiaries for the most recent financial budgets period and a nil growth rate for the extrapolation period. The growth rates are based on the relevant industry growth forecasts and do not exceed the average long-term growth rate for the relevant industry. Another key assumption for the cash flow projections is the stable budgeted gross margin, which is determined based on the subsidiaries' past performance. Management believes that any reasonably possible change in any of these assumptions would not cause the carrying amounts of the subsidiaries to exceed its recoverable amounts.

### 29. Financial assets at fair value through other comprehensive income

Financial assets at FVOCI comprise:

- Equity securities which are not held for trading, and which the Group has irrevocably elected at initial recognition to recognise in this category. These are strategic investments and the Group considers this classification to be more relevant.
- Debt securities where the contractual cash flows are solely payments of principal and interest and the objective of the Group's business model is achieved both by collecting contractual cash flows and selling financial assets.
- Bills receivables where the contractual cash flows are achieved both by collecting contractual cash flows and selling financial assets.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 29. Financial assets at fair value through other comprehensive income (Continued)

(a) Financial assets at FVOCI include the following:

	2022 RMB million	2021 RMB million
<b>Non-current assets</b>		
Unlisted equity investments	<b>14,238</b>	11,354
Listed equity securities		
– Mainland China	<b>427</b>	522
– Hong Kong	<b>280</b>	288
	<b>14,945</b>	12,164
<b>Current assets</b>		
Bills receivables	<b>766</b>	526

On disposal of these equity instruments and bills receivables, any related balance within the FVOCI reserve is reclassified to retained earnings.

In 2022, the Group disposed certain listed equity securities and unlisted equity investments at a fair value of RMB48 million (2021: RMB79 million). The Group realised a gain of RMB27 million in 2022 (2021: nil), which had already been included in other comprehensive income before disposal. The gain has been transferred to retained earnings.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 29. Financial assets at fair value through other comprehensive income (Continued)

## (b) Amounts recognised in profit or loss and other comprehensive income

During the year, the following gains were recognised in profit or loss and other comprehensive income:

	2022	2021
	RMB million	RMB million
Gains recognised in other comprehensive income	120	57
Gains reclassified from other comprehensive income to retained earnings upon disposal of financial assets at FVOCI	(27)	–
Dividends from equity instruments held at FVOCI recognised in profit or loss in Other income (Note 6):		
– Related to instruments held at the end of the year	135	84
– Related to instruments derecognised during the year	–	1

## (c) Fair value, impairment and risk exposure

Information about the methods and assumptions used in determining fair value is provided in Note 3.2.

The loss allowance for debt instruments at FVOCI as a result of applying the expected credit risk model is immaterial.

Financial assets at FVOCI are denominated in the following currencies:

	2022	2021
	RMB million	RMB million
RMB	15,431	12,402
HKD	280	288
	15,711	12,690

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 30. Other financial assets at amortised cost

	2022	2021
	RMB million	RMB million
Debt investments		
– Short-term	<b>15,978</b>	9,369
– Long-term	<b>23,971</b>	27,541
	<b>39,949</b>	36,910
Less: loss allowance for debt investments (a)	<b>(6,033)</b>	(5,397)
<b>Total other financial assets at amortised cost</b>	<b>33,916</b>	31,513
Less: amount due within one year included in current assets	<b>(14,777)</b>	(8,553)
Amount due after one year	<b>19,139</b>	22,960

(a) Movements in impairment on debt instruments are as follows:

	2022	2021
	RMB million	RMB million
<b>At 31 December in prior year</b>	<b>5,397</b>	5,428
Impairment losses recognised during the year ( <i>Note 7</i> )	<b>636</b>	560
Write off	–	(591)
<b>At 31 December</b>	<b>6,033</b>	5,397

(b) The other financial assets at amortised cost carry fixed-rate interests within a range of 1.25% to 24.00% (31 December 2021: 1.25% to 24.00%) per annum.

(c) As at 31 December 2022, other financial assets at amortised cost amounting to RMB4,694 million (31 December 2021: RMB4,881 million) are secured by property, plant and equipment, investment properties or guaranteed by a third party.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 30. Other financial assets at amortised cost (Continued)

(d) Other financial assets at amortised cost are denominated in the following currencies:

	2022	2021
	RMB million	RMB million
RMB	33,370	31,016
USD	546	497
	<b>33,916</b>	<b>31,513</b>

## 31. Properties Held for Sale/Properties Under Development for Sale

(a) Properties under development for sale

	2022	2021
	RMB million	RMB million
<b>As at 1 January</b>	<b>112,192</b>	121,171
Additions	45,392	46,772
Properties completed during the year	(53,711)	(55,320)
Transfers to property, plant and equipment ( <i>Note 18</i> )	–	(314)
Disposal of subsidiaries	–	(117)
	<b>103,873</b>	112,192
Less: provision for impairment	(2,179)	(2,862)
<b>As at 31 December</b>	<b>101,694</b>	109,330

	2022	2021
	RMB million	RMB million
Properties under development for sale comprise:		
Land use rights	91,129	84,383
Construction cost	5,331	17,531
Borrowing costs capitalised	7,413	10,278
	<b>103,873</b>	112,192

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 31. Properties Held for Sale/Properties Under Development for Sale (Continued)

#### (b) Properties held for sale

	2022 RMB million	2021 RMB million
<b>As at 1 January</b>	<b>53,154</b>	36,789
Additions	<b>53,711</b>	55,320
Transferred from investment properties (Note 22)	<b>267</b>	274
Properties sold during the year	<b>(43,758)</b>	(37,334)
Transferred to investment properties (Note 22)	<b>(475)</b>	(679)
Transferred to lease prepayments (Note 20)	–	(362)
Transferred to property, plant and equipment (Note 18)	<b>(124)</b>	(854)
	<b>62,775</b>	53,154
Less: provision for impairment	<b>(5,796)</b>	(4,409)
<b>As at 31 December</b>	<b>56,979</b>	48,745

Properties under development for sale amounting to RMB13,420 million (31 December 2021: RMB30,698 million) have been pledged to secure bank borrowings amounting to RMB5,013 million (31 December 2021: RMB7,699 million) granted to the Group (Note 43).

Properties under development for sale amounting to RMB1,519 million (31 December 2021: nil) have been pledged to secure trade and other payables to RMB1,333 million (31 December 2021: nil) granted to the Group.

All of the properties under development are expected to be completed within the Group's normal operating cycle and are included under current assets.

The Group's properties held for sale and properties under development for sale at the end of the reporting period are stated at the lower of cost and net realisable value.

### 32. Inventories

	2022 RMB million	2021 RMB million
Raw materials and consumables	<b>31,598</b>	29,444
Work in progress	<b>9,909</b>	8,222
Finished goods	<b>7,691</b>	7,705
	<b>49,198</b>	45,371

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 33. Trade and Other Receivables

	2022	2021
	RMB million	RMB million
Trade and bills receivables	<b>160,574</b>	157,025
Less: loss allowance	<b>(15,102)</b>	(13,935)
Trade and bills receivables – net	<b>145,472</b>	143,090
Other receivables (net of impairment)	<b>89,381</b>	81,688
Advance to suppliers (net of impairment)	<b>48,327</b>	47,765
	<b>283,180</b>	272,543
Less: amount due after one year included in non-current assets	<b>(30,508)</b>	(23,374)
Amount due within one year included in current assets	<b>252,672</b>	249,169

(a) Ageing analysis of trade and bills receivables, based on invoice date, is as follows:

	2022	2021
	RMB million	RMB million
Less than 1 year	<b>116,291</b>	118,517
1 year to 2 years	<b>19,811</b>	14,919
2 years to 3 years	<b>7,853</b>	10,297
3 years to 4 years	<b>5,587</b>	4,562
4 years to 5 years	<b>3,245</b>	1,407
More than 5 years	<b>7,787</b>	7,323
<b>Total</b>	<b>160,574</b>	157,025

Majority of the Group's revenues are generated through infrastructure construction, survey, design and consulting, engineering equipment and component manufacturing contracts. The settlements are made in accordance with the terms specified in the contracts governing the relevant transactions.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 33. Trade and Other Receivables (Continued)

- (b) Trade and bills receivables of RMB319 million (31 December 2021: RMB221 million) were pledged to secure borrowings amounting to RMB319 million (31 December 2021: RMB221 million) (Note 43).
- (c) As at 31 December 2022, trade receivables of RMB68,033 million (31 December 2021: RMB85,945 million) had been transferred in accordance with relevant ABN and ABS issuance, and trade receivables of RMB16,908 million (31 December 2021: RMB14,971 million) had been transferred to financial institutions in accordance with relevant non-recourse factoring agreements. Relevant trade receivables were derecognised as the Directors are of the opinion that the substantial risks and rewards associated with the trade receivables have been transferred and therefore qualified for derecognition.
- (d) As at 31 December 2022, bills receivables – bank acceptance and commercial acceptance notes of RMB336 million (31 December 2021: RMB310 million) were endorsed to suppliers, and RMB312 million (31 December 2021: RMB46 million) were discounted with banks. In the opinion of the Directors, as the counter party bears higher credit risk, such transactions did not qualify for derecognition. In addition, as at 31 December 2022, bills receivables – bank acceptance notes of RMB307 million (31 December 2021: RMB670 million) were endorsed to suppliers, and RMB37 million (31 December 2021: RMB119 million) were discounted with banks. Relevant bills receivables were derecognised as the Directors are of the opinion that the substantial risks and rewards associated with those bank acceptance notes have been transferred and therefore qualified for derecognition.
- (e) As at 31 December 2022, trade receivables net of credit loss allowance, which were collectively assessed for impairment, are as follows:

#### Central-governmental enterprises

	As at	
	31 December 2022 RMB million	31 December 2021 RMB million
Less than 1 year	8,690	8,165
1 year to 2 years	1,145	970
2 years to 3 years	535	438
3 years to 4 years	226	195
4 years to 5 years	109	134
More than 5 years	115	123
Total	10,820	10,025

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 33. Trade and Other Receivables (Continued)

- (e) As at 31 December 2022, trade receivables net of credit loss allowance, which were collectively assessed for impairment, are as follows: Locally-administrated state-owned enterprises (Continued)

## Locally-administrated state-owned enterprises

	As at	
	31 December 2022	31 December 2021
	RMB million	RMB million
Less than 1 year	50,357	53,164
1 year to 2 years	9,481	8,511
2 years to 3 years	4,318	2,975
3 years to 4 years	1,592	1,195
4 years to 5 years	898	444
More than 5 years	739	662
Total	67,385	66,951

## China State Railway Group Co.,Ltd.

	As at	
	31 December 2022	31 December 2021
	RMB million	RMB million
Less than 1 year	7,614	9,522
1 year to 2 years	1,330	780
2 years to 3 years	340	703
3 years to 4 years	397	167
4 years to 5 years	81	89
More than 5 years	158	155
Total	9,920	11,416

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 33. Trade and Other Receivables (Continued)

- (e) As at 31 December 2022, trade receivables net of credit loss allowance, which were collectively assessed for impairment, are as follows: Locally-administrated state-owned enterprises (Continued)

## Overseas enterprises

	As at	
	31 December 2022	31 December 2021
	RMB million	RMB million
Less than 1 year	<b>1,273</b>	1,723
1 year to 2 years	<b>135</b>	56
2 years to 3 years	<b>11</b>	12
3 years to 4 years	<b>1</b>	230
4 years to 5 years	<b>174</b>	25
Total	<b>1,594</b>	2,046

## Other entities

	As at	
	31 December 2022	31 December 2021
	RMB million	RMB million
Less than 1 year	<b>17,874</b>	17,339
1 year to 2 years	<b>2,585</b>	1,908
2 years to 3 years	<b>996</b>	1,345
3 years to 4 years	<b>570</b>	835
4 years to 5 years	<b>485</b>	207
More than 5 years	<b>222</b>	288
Total	<b>22,732</b>	21,922



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 33. Trade and Other Receivables (Continued)

- (e) As at 31 December 2022, trade receivables net of credit loss allowance, which were collectively assessed for impairment, are as follows: Locally-administrated state-owned enterprises (Continued)

As at 31 December 2022, the amount of individually impaired trade receivables was RMB16,884 million (31 December 2021: RMB15,884 million) with the provision for loss allowance of RMB7,098 million (31 December 2021: RMB6,123 million).

As at 31 December 2022, bills receivables – bank acceptance notes of RMB794 million (31 December 2021: RMB1,108 million) were not impaired. Commercial acceptance notes, which were collectively assessed for impairment, were RMB1,543 million (31 December 2021: RMB1,480 million) with the provision for credit loss allowance of RMB5 million (31 December 2021: RMB4 million).

As at 31 December 2022, the amount of collectively impaired long-term trade receivables was RMB19,838 million (31 December 2021: RMB16,041 million) with the provision for loss allowance of RMB74 million (31 December 2021: RMB44 million). The amount of individually impaired long-term trade receivables was RMB4,529 million (31 December 2021: RMB3,291 million) with the provision for loss allowance of RMB3,390 million (31 December 2021: RMB3,268 million).

- (f) Movements on loss allowance of trade and other receivables are as follows:

	2022 RMB million	2021 RMB million
<b>At 31 December in prior year</b>	<b>26,725</b>	24,272
Increase in loss allowance recognised in profit or loss during the year	<b>4,857</b>	5,930
Amount reversed	<b>(2,817)</b>	(2,231)
Receivables written off during the year as non-collectible	<b>(17)</b>	(1,226)
Others	<b>4</b>	(20)
<b>At 31 December</b>	<b>28,752</b>	26,725

The increase and reversal in loss allowance of trade and other receivables have been included in net impairment losses on financial assets and other gains in the consolidated income statement. Amounts charged to the allowance account are generally written off when there is no expectation of recovering additional cash.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 33. Trade and Other Receivables (Continued)

(g) The carrying amount of trade and other receivables are denominated in the following currencies:

	2022	2021
	RMB million	RMB million
RMB	<b>272,832</b>	264,239
USD	<b>6,331</b>	4,531
West African CFA Franc	<b>249</b>	318
Ethiopian Birr	<b>240</b>	108
HKD	<b>145</b>	82
EUR	<b>97</b>	98
Other currencies	<b>3,286</b>	3,167
	<b>283,180</b>	272,543

As at 31 December 2022, other currencies mainly comprised of Bangladesh Taka, Malaysian Ringgit and South African Rand.

(h) The maximum exposure to credit risk at the reporting date is the carrying amounts of each class of receivables mentioned above.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 34. Assets and liabilities related to contracts with customers

The Group has recognised the following assets and liabilities related to contracts with customers:

	2022 RMB million	2021 RMB million
<b>Contract assets</b>		
– Amount due from contract customers for contract work and Retentions	<b>226,443</b>	197,140
– Financial assets under concession arrangements (a)	<b>142,916</b>	109,694
– Primary land development	<b>7,519</b>	7,024
	<b>376,878</b>	313,858
Less: loss allowance (b)	<b>(4,011)</b>	(3,339)
	<b>(203,132)</b>	(161,377)
Less: amount due after one year included in non-current assets	<b>(203,132)</b>	(161,377)
Amount due within one year included in current assets	<b>169,735</b>	149,142
<b>Contract liabilities</b>		
– Infrastructure construction and engineering contracts	<b>51,614</b>	43,668
– Sale of properties	<b>43,992</b>	56,551
– Amount due to contract customers for contract work	<b>23,055</b>	27,801
– Sales of manufacturing products	<b>7,441</b>	7,049
– Design and consulting services	<b>4,898</b>	4,253
– Sales of materials	<b>2,000</b>	1,263
– Others	<b>3,937</b>	3,510
Total current contract liabilities	<b>136,937</b>	144,095

- (a) Financial assets under concession arrangements represent the contract assets recognised when the related projects were under construction or have been put into operations before the Group has an unconditional contractual right to receive cash from or at the direction of the granting authority.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 34. Assets and liabilities related to contracts with customers (Continued)

(b) As at 31 December 2022, the impairment of contract assets is determined as follows:

Contract assets	Expected loss rate	Gross carrying amount RMB million	Loss allowance RMB million
Amounts due from customers for contract work	<b>1.16%</b>	<b>134,445</b>	<b>1,563</b>
Retentions	<b>0.50%</b>	<b>86,413</b>	<b>432</b>
Financial assets under concession arrangements	<b>0.50%</b>	<b>142,916</b>	<b>715</b>
Total		<b>363,774</b>	<b>2,710</b>

The amount of individually impaired contract assets was RMB13,104 million (31 December 2021: RMB12,495 million) with the provision of RMB1,301 million (31 December 2021: RMB1,245 million).

(c) As at 31 December 2022, borrowings amounting to RMB39,541 million (31 December 2021: RMB29,825 million) are secured by contract assets with carrying amount of approximately RMB63,529 million (31 December 2021: RMB48,320 million) (Note 43).

### 35. Financial assets/(liabilities) at fair value through profit or loss

The Group classifies the following financial assets at FVPL:

- Debt investments that do not qualify for measurement at either amortised cost or FVOCI (Note 29);
- Equity investments that are held for trading, and
- Equity investments for which the entity has not elected to recognise fair value gains and losses through other comprehensive income.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 35. Financial assets/(liabilities) at fair value through profit or loss (Continued)

(a) Financial assets at FVPL include the following:

	2022 RMB million	2021 RMB million
<b>Non-current assets</b>		
Equity instruments		
Equity securities listed in Mainland China	7	51
Unlisted equity investments	6,846	5,066
	<b>6,853</b>	5,117
Debt instruments		
Unlisted entrusted products	3,308	2,712
Unlisted open-end equity funds	2,015	1,642
Others	1,367	2,823
	<b>6,690</b>	7,177
	<b>13,543</b>	12,294
<b>Current assets</b>		
Equity instruments		
Listed equity securities		
– Mainland China	796	1,039
Debt instruments		
Money-market securities investment funds	6,716	4,768
Unlisted open-end equity funds	1,151	624
Unlisted entrusted products	1,323	413
Others	192	311
	<b>9,382</b>	6,116
Derivative financial instruments		
– Option contract	134	149
	<b>10,312</b>	7,304
<b>Total</b>	<b>23,855</b>	19,598

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 35. Financial assets/(liabilities) at fair value through profit or loss (Continued)

(b) Financial liabilities at FVPL include the following:

	2022	2021
	RMB million	RMB million
<b>Current liabilities</b>		
Unlisted open-end equity funds	<b>96</b>	122

(c) Amounts recognised in profit or loss

	2022	2021
	RMB million	RMB million
Fair value losses on financial assets at FVPL	<b>(589)</b>	(442)
Fair value gains/(losses) on financial liabilities at FVPL	<b>26</b>	(73)
	<b>(563)</b>	(515)

(d) Risk exposure and fair value measurements

Information about the Group's exposure to price risk is provided in Note 3.1.

For information about the methods and assumptions used in determining fair value refer to Note 3.2.

### 36. Restricted cash and term deposit with maturity over three months

	2022	2021
	RMB million	RMB million
Restricted bank deposits	<b>31,138</b>	29,255
Term deposits with initial term of over three months	<b>2,459</b>	1,542
	<b>33,597</b>	30,797

As at 31 December 2022, restricted bank deposits mainly included deposits for issuance of bank acceptance notes, performance bonds, letters of credit to customers, and mandatory reserve deposits placed with People's Bank of China.

Term deposits with initial term of over three months are excluded from cash and cash equivalents, as management are of the opinion that these term deposits are not readily convertible to known amounts of cash without significant risk of changes in value.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 36. Restricted cash and term deposit with maturity over three months (Continued)

The carrying amount of restricted cash are denominated in the following currencies:

	2022 RMB million	2021 RMB million
RMB	<b>33,539</b>	30,712
USD	<b>7</b>	13
Other currencies	<b>51</b>	72
	<b>33,597</b>	30,797

### 37. Cash and Cash Equivalents

	2022 RMB million	2021 RMB million
Cash on hand	<b>36</b>	46
Bank deposits	<b>204,951</b>	148,070
Cash and cash equivalents	<b>204,987</b>	148,116

The maximum exposure to credit risk approximates the carrying amounts of the Group's cash and cash equivalents at the end of the reporting period.

The weighted average effective interest rate on bank deposits was 0.59% per annum as at 31 December 2022 (31 December 2021: 0.50% per annum).

The carrying amount of cash and cash equivalents are denominated in the following currencies:

	2022 RMB million	2021 RMB million
RMB	<b>184,941</b>	132,167
USD	<b>16,816</b>	13,067
Others	<b>3,230</b>	2,882
	<b>204,987</b>	148,116

The Group's cash and bank balances denominated in RMB are deposited with banks in the PRC. The conversion of these RMB denominated balances into foreign currencies is subject to the rules and regulation of foreign exchange control promulgated by the PRC Government.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 37. Cash and Cash Equivalents (Continued)

As at 31 December 2022, less than 0.76% (31 December 2021: less than 0.83%) of the cash and cash equivalents balances denominated in currencies other than RMB was deposited in banks in certain countries which are subject to foreign exchange control and the currencies are not freely convertible into other currencies or remitted out of those countries.

### 38. Share capital and premium

	Number of shares		Nominal value	
	2022 (thousands)	2021 (thousands)	2022 RMB million	2021 RMB million
A shares of RMB1.00 each				
At beginning of year	<b>20,363,540</b>	20,363,540	<b>20,364</b>	20,364
Registered, issued and fully paid (i)	<b>181,266</b>	–	<b>181</b>	–
At end of year	<b>20,544,806</b>	20,363,540	<b>20,545</b>	20,364
H shares of RMB1.00 each				
At beginning and end of year	<b>4,207,390</b>	4,207,390	<b>4,207</b>	4,207
	<b>24,752,196</b>	24,570,930	<b>24,752</b>	24,571

As at 31 December 2022, the A Shares (20,544,806 thousands shares) and H Shares (4,207,390 thousands shares) issued are the ordinary shares in the share capital of the Company. All cash dividends in respect of the H Shares are to be declared in Renminbi and paid by the Company in Hong Kong dollars whereas all cash dividends in respect of A Shares are to be paid by the Company in Renminbi.

In addition, A Shares and H Shares are regarded as different classes of shares under the Company's Articles of Association. The differences between the two classes of shares, including provisions on class rights, the dispatch of notices and financial reports to shareholders, dispute resolution, registration of shares on different branches of the registers of shareholders, the method of share transfer and appointment of dividend receiving agents are set out in the Company's Articles of Association.

A Shares and H Shares however rank *pari passu* with each other in all other respects.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 38. Share capital and premium (Continued)

- (i) 2021 Restricted Share Incentive Scheme were approved at the Extraordinary General Meeting, the A Share Class Meeting and the H Share Class Meeting (together, the "Meetings") held by the Company on 30 December 2021 and 12 January 2022, respectively. On 17 January 2022 and 28 October 2022, the Board approved the grant of 2021 Restricted Share Incentive Scheme to the participants who have met the prerequisite criteria at the grant price of RMB3.55 per share and RMB3.68 per share, respectively in accordance with the terms of 2021 Restricted Share Incentive Scheme as approved by the Meetings. A total of 747 participants were actually granted, and the total number of shares granted was 182,646,400 shares. On 23 February 2022 and 30 November 2022, the share registrations were completed in Shanghai Branch of China Securities Depository and Clearing Corporation Limited. As a result, the total amount of capital contributions received from the 747 participants for the restricted shares was RMB650 million of which approximately RMB183 million has been credited to share capital and approximately RMB467 million has been credited to share premium. Lock-up period of the restricted shares granted under 2021 Restricted Share Incentive Scheme shall be 24 months, 36 months and 48 months from the relevant completion date of registration of the restricted shares under the corresponding grant.

On 28 October 2022, the Board of Directors of the Company approved the repurchase and cancellation of 1,379,700 restricted shares in total which were granted but not yet unlocked of 5 participants. The repurchase price of the restricted shares repurchased from 3 participants was RMB3.354 per share. The repurchase price of the restricted shares repurchased from 2 participants was RMB3.354 per share, plus interests calculated according to the benchmark deposit interest rate published by the People's Bank of China for the same period. On 28 December 2022, the repurchase cancellation has been completed in Shanghai Branch of China Securities Depository and Clearing Corporation Limited. The share capital and share premium have been debited with approximately RMB2 million and RMB3 million of the Company, respectively.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 39. Shares held for 2021 Restricted Share Incentive Scheme

	Number of shares		Nominal value	
	Year ended 31 December 2022 (thousands)	Year ended 31 December 2021 (thousands)	Year ended 31 December 2022 RMB million	Year ended 31 December 2021 RMB million
At beginning of year	–	–	–	–
Issuance of shares for 2021 Restricted Share Incentive Scheme	<b>649,945</b>	–	<b>650</b>	–
Amount recorded in				
– dividends paid during the year	<b>(33,462)</b>	–	<b>(33)</b>	–
– repurchase of restricted shares	<b>(4,628)</b>	–	<b>(5)</b>	–
At end of year	<b>611,855</b>	–	<b>612</b>	–

In accordance with the 2021 Restricted Share Incentive Scheme, the Company is responsible to purchase the restricted shares if certain service and performance conditions are not met. Therefore, the Company recognised the shares held for 2021 Restricted Share Incentive Scheme repurchase obligation of RMB606 million and RMB12 million on 23 February 2022 and 30 November 2022, respectively. On 22 June 2022, pursuant to the resolution of the 2021 annual general meeting of shareholders, the 2021 Restricted Share Incentive Scheme participants received cash dividends, resulting in the reduction of shares held for 2021 Restricted Share Incentive Scheme repurchase obligation of RMB33 million. On 28 October 2022, the Board of Directors of the Company approved the repurchase and cancellation some of the restricted shares which were granted but not yet unlocked, resulting in the reduction of shares held for 2021 Restricted Share Incentive Scheme repurchase obligation of RMB5 million (Note 38).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 40. Statutory reserves

The statutory reserves comprise the statutory surplus reserve, trust compensation reserve and general risk reserve.

According to the PRC Company Law and the Company's article of association, the Company is required to make an appropriation at 10 percent of the profit for the year as shown in the PRC statutory financial statements, prepared in accordance with the relevant PRC accounting standards, to the statutory surplus reserve fund until the balance reached 50 percent of the registered capital of the Company. The statutory surplus reserve can only make up losses or use to increase the registered capital of the Company and is not distributable.

According to the relevant laws and regulations for financial institutions and trust management entities in the PRC, certain subsidiaries of the Company are required to set aside certain amounts to trust compensation reserve and general risk reserve to address unidentified potential impairment risks.

### 41. Perpetual Notes

	2021	Additions	Redemption/ Declaration	2022
	RMB million	RMB million	RMB million	RMB million
Public medium notes <i>(Note (a))</i>	9,725	–	(4,398)	<b>5,327</b>
Public renewable corporate bonds <i>(Note (b))</i>	35,643	8,394	(3,999)	<b>40,038</b>
Dividends <i>(Note (c))</i>	256	1,799	(1,799)	<b>256</b>
Total	45,624	10,193	(10,196)	<b>45,621</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 41. Perpetual Notes (Continued)

- (a) In November and December 2022, the Company redeemed the public medium notes (“Medium Notes”) (category one) issued from 21 November 2019 to 22 November 2019 and issued from 29 December 2020 to 30 December 2020 in cash consideration of RMB1.9 billion and RMB2.5 billion, respectively.

From 26 November 2018 to 27 November 2018, 11 December 2018 to 12 December 2018 and on 17 December 2018, the Company issued three tranches of Medium Notes (category two) with an aggregate principal amount of RMB1.4 billion, RMB1 billion and RMB0.8 billion, respectively. The Medium Notes are unsecured or unguaranteed. Pursuant to the terms and conditions of the Medium Notes, the Medium Notes bear the initial interest rate of 4.8%, 4.8% and 4.8% per annum, respectively and has no maturity date. The interest rate will be reset every five years from issuance date. The interest is payable annually in arrears. As long as the compulsory interest payment events have not occurred, the Company may, at its sole discretion, elect to defer the distribution of interest, and is not subject to any restriction as to the number of times the distribution can be deferred. The Medium Notes are subject to redemption in whole, at the option of the Company, five years after the issue date, at their principal amount together with accrued interest. The Directors of the Company are of the opinion that the Group has no contractual obligation to repay the principal or to pay the distribution for the Medium Notes, the Medium Notes should be classified as equity.

From 21 November 2019 to 22 November 2019, the Company issued one tranche of Medium Notes (category two) with an aggregate principal amount of RMB2.5 billion. The Medium Notes are unsecured or unguaranteed. Pursuant to the terms and conditions of the Medium Notes, the Medium Notes bear the initial interest rate of 4.41% per annum, and has no maturity date. The interest rate will be reset every five years from issuance date. The interest is payable annually in arrears. As long as the compulsory interest payment events have not occurred, the Company may, at its sole discretion, elect to defer the distribution of interest, and is not subject to any restriction as to the number of times the distribution can be deferred. The Medium Notes are subject to redemption in whole, at the option of the Company, five years after the issue date, at their principal amount together with accrued interest. The Directors of the Company are of the opinion that the Group has no contractual obligation to repay the principal or to pay the distribution for the Medium Notes, the Medium Notes should be classified as equity.

On 16 September 2020, the Company issued one tranche of Medium Notes with an aggregate principal amount of RMB1.5 billion. The Medium Notes are unsecured or unguaranteed. Pursuant to the terms and conditions of the Medium Notes, the Medium Notes bear the initial interest rate of 4.45% per annum, and has no maturity date. The interest rate will be reset every three years from issuance date. The interest is payable annually in arrears. As long as the compulsory interest payment events have not occurred, the Company may, at its sole discretion, elect to defer the distribution of interest, and is not subject to any restriction as to the number of times the distribution can be deferred. The Medium Notes are subject to redemption in whole, at the option of the Company, three years after the issue date, at their principal amount together with accrued interest. The Directors of the Company are of the opinion that the Group has no contractual obligation to repay the principal or to pay the distribution for the Medium Notes, the Medium Notes should be classified as equity.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 41. Perpetual Notes (Continued)

- (b) In October 2022, the Company redeemed two tranches of the public renewable corporate bonds (“Renewable Bonds”) (category one) issued on 16 October 2020 and (category two) issued on 28 October 2020 in cash consideration of RMB2.0 billion, respectively.

On 5 November 2018, 14 November 2018, 26 November 2018 and 17 December 2018, the Company issued four tranches of Renewable Bonds (category two) with an aggregate principal amount of RMB0.7 billion, RMB1.8 billion, RMB1.4 billion and RMB0.8 billion, respectively. The Renewable Bonds are unsecured or unguaranteed and listed on the Shanghai Stock Exchange by way of bond issues to qualified investors. Pursuant to the terms and conditions of the Renewable Bonds, the Renewable Bonds bear the initial interest rate of 4.99%, 4.90%, 4.80% and 4.78% per annum, respectively, and has no maturity date. The interest rate will be reset every five years from the issuance date. The interest is payable annually in arrears. As long as the compulsory interest payment events have not occurred, the Company may, at its sole discretion, elect to defer the distribution of interest, and is not subject to any restriction as to the number of times the distribution can be deferred. The Renewable Bonds are subject to redemption in whole, at the option of the Company, five years after the issue date, at their principal amount together with accrued interest. The Directors of the Company are of the opinion that the Group has no contractual obligation to repay the principal or to pay the distribution for the Renewable Bonds, the Renewable Bonds should be classified as equity.

On 26 May 2020, 23 June 2020, 23 July 2020 and 18 August 2020, the Company issued four tranches of Renewable Bonds with an aggregate principal amount of RMB2.6 billion, RMB1 billion, RMB3.5 billion, RMB3.5 billion, respectively. The Renewable Bonds are unsecured or unguaranteed and listed on the Shanghai Stock Exchange by way of bond issues to qualified investors. Pursuant to the terms and conditions of the Renewable Bonds, the Renewable Bonds bear the initial interest rate of 3.11%, 3.60%, 3.95% and 3.95% per annum, respectively, and has no maturity date. The interest rate will be reset every three years from the issuance date. The interest is payable annually in arrears. As long as the compulsory interest payment events have not occurred, the Company may, at its sole discretion, elect to defer the distribution of interest, and is not subject to any restriction as to the number of times the distribution can be deferred. The Renewable Bonds are subject to redemption in whole, at the option of the Company, three years after the issue date, at their principal amount together with accrued interest. The Directors of the Company are of the opinion that the Group has no contractual obligation to repay the principal or to pay the distribution for the Renewable Bonds, the Renewable Bonds should be classified as equity.

On 15 June 2020 and 16 October 2020, the Company issued two tranches of Renewable Bonds with an aggregate principal amount of RMB3.5 billion and RMB1 billion, respectively. The Renewable Bonds are unsecured or unguaranteed and listed on the Shanghai Stock Exchange by way of bond issues to qualified investors. Pursuant to the terms and conditions of the Renewable Bonds, the Renewable Bonds bear the initial interest rate of 3.50% per annum (category one), and 3.99% and 4.47% per annum (category two), respectively, and has no maturity date. The interest rate will be reset every three years (category one), and every five years, and three years (category two), respectively, from the issuance date. The interest is payable annually in arrears. As long as the compulsory interest payment events have not occurred, the Company may, at its sole discretion, elect to defer the distribution of interest, and is not subject to any restriction as to the number of times the distribution can be deferred. The Renewable Bonds are subject to redemption in whole, at the option of the Company, three years (category one) and five years and three years (category two), respectively after the issue date, at their principal amount together with accrued interest. The Directors of the Company are of the opinion that the Group has no contractual obligation to repay the principal or to pay the distribution for the Renewable Bonds, the Renewable Bonds should be classified as equity.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 41. Perpetual Notes (Continued)

(b) (Continued)

On 2 June 2021, 17 June 2021, 9 November 2021 and 23 November 2021, the Company issued four tranches Renewable Bonds with an aggregate principal amount of RMB3 billion, RMB3 billion, RMB3 billion and RMB2.9 billion respectively. The Renewable Bonds are unsecured or unguaranteed and listed on the Shanghai Stock Exchange by way of bond issues to qualified investors. Pursuant to the terms and conditions of the Renewable Bonds, the Renewable Bonds bear the initial interest rate of 3.63%, 3.73%, 3.15% and 3.14% per annum (category one), respectively, and 3.85%, 4.05%, 3.37% and 3.30% per annum (category two), respectively, and has no maturity date. The interest rate will be reset every three years, three years, two years and two years (category one), respectively and every five years, five years, three years and three years (category two), respectively from the issuance date. The interest is payable annually in arrears. As long as the compulsory interest payment events have not occurred, the Company may, at its sole discretion, elect to defer the distribution of interest, and is not subject to any restriction as to the number of times the distribution can be deferred. The Renewable Bonds are subject to redemption in whole, at the option of the Company, three years, three years, two years and two years (category one), respectively and five years, five years, three years and three years (category two), respectively, after the issue date, at their principal amount together with accrued interest. The Directors of the Company are of the opinion that the Group has no contractual obligation to repay the principal or to pay the distribution for the Renewable Bonds, the Renewable Bonds should be classified as equity.

On 2 September 2022, 25 October 2022 and 16 December 2022, the Company issued three tranches Renewable Bonds with an aggregate principal amount of RMB2.5 billion, RMB2.5 billion and RMB3.4 billion respectively. The Renewable Bonds are unsecured or unguaranteed and listed on the Shanghai Stock Exchange by way of bond issues to qualified investors. Pursuant to the terms and conditions of the Renewable Bonds, the Renewable Bonds bear the initial interest rate of 2.69%, 2.70% and 3.75% per annum (category one), respectively, and 3.07%, 3.09% and 3.97% per annum (category two), respectively, and has no maturity date. The interest rate will be reset every three years, three years and two years (category one), respectively and every five years, five years and three years (category two), respectively from the issuance date. The interest is payable annually in arrears. As long as the compulsory interest payment events have not occurred, the Company may, at its sole discretion, elect to defer the distribution of interest, and is not subject to any restriction as to the number of times the distribution can be deferred. The Renewable Bonds are subject to redemption in whole, at the option of the Company, three years, three years and two years (category one), respectively and five years, five years and three years (category two), respectively, after the issue date, at their principal amount together with accrued interest. The Directors of the Company are of the opinion that the Group has no contractual obligation to repay the principal or to pay the distribution for the Renewable Bonds, the Renewable Bonds should be classified as equity.

- (c) For the year ended 31 December 2022, as a consequence of the compulsory interest payment event, i.e. the final dividend declared to the shareholders of the Company, the Company declared dividends to perpetual notes holders totaling RMB1,799 million, including the interest of RMB1,543 million which was generated during the period was deducted from retained earnings, and RMB256 million represented the accrued interest in the balance of perpetual notes as at 31 December 2021.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 42. Trade and other payables

	2022	2021
	RMB million	RMB million
Trade and bills payables (a)	<b>480,430</b>	405,520
Dividend payables	<b>698</b>	702
Accrued payroll and welfare	<b>4,537</b>	4,100
Other taxes	<b>6,084</b>	4,622
Deposit received in advance	<b>1,161</b>	1,048
Deposits (b)	<b>6,003</b>	3,243
Advance from customers for rental	<b>1,031</b>	446
Other payables	<b>143,649</b>	112,993
	<b>643,593</b>	532,674
Analysed for reporting purposes:		
Non-currents	<b>26,288</b>	10,263
Current	<b>617,305</b>	522,411
	<b>643,593</b>	532,674

The credit period on purchases of goods ranges from 180 days to 360 days. Included in trade and bills payables are retention payables of RMB13,817 million (31 December 2021: RMB10,518 million). Retention payables are interest-free and payable at the end of the retention period of the respective infrastructure construction and products manufacturing and installation contracts.

The balances of other payables mainly include payments made by the third parties on behalf of the Group, guarantee money payables and others.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 42. Trade and other payables (Continued)

- (a) The ageing analysis of trade and bills payables (including amounts due to related parties of trading nature), based on invoice date, is as follows:

	2022	2021
	RMB million	RMB million
Less than 1 year	<b>439,796</b>	370,538
1 year to 2 years	<b>22,478</b>	19,622
2 years to 3 years	<b>9,311</b>	9,274
More than 3 years	<b>8,845</b>	6,086
	<b>480,430</b>	405,520

- (b) China Railway Finance Co., Ltd. ("CREC Finance"), a subsidiary of the Company, accepted deposits from related parties and third parties. As at 31 December 2022, these deposits were due within one year with average annual interest rate of 1.265%.
- (c) The carrying amount of trade and other payables are denominated in the following currencies:

	2022	2021
	RMB million	RMB million
RMB	<b>626,305</b>	519,904
USD	<b>12,974</b>	7,518
Other currencies	<b>4,314</b>	5,252
	<b>643,593</b>	532,674

At 31 December 2022, other currencies mainly consist of West African Franc, Ethiopian Birr, and HKD.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 43. Borrowings

	2022	2021
	RMB million	RMB million
Bank borrowings:		
– Secured	120,449	81,976
– Unsecured	205,020	152,824
	<b>325,469</b>	234,800
Long-term debentures, unsecured (a)	53,122	55,007
Other borrowings:		
– Secured	1,895	1,992
– Unsecured	11,756	20,128
	<b>13,651</b>	22,120
	<b>392,242</b>	311,927
Analysed for reporting purposes:		
Non-current	282,508	198,503
Current	109,734	113,424
	<b>392,242</b>	311,927

- (a) On 16 January, 21 January, 15 April, 29 April, 19 June, 16 July and 25 July 2022, the first tranche of the corporate bond, the first tranche of the medium-term note, the second tranche of the corporate bond (category 2), the third tranche of the medium-term note, the fourth tranche of the medium-term note, the third tranche of the corporate bond (category 1) and Guaranteed Bonds, issued separately on 16 January 2019, 21 January 2019, 14 April 2019, 29 April 2019, 19 June 2019, 16 July 2019 and 25 July 2017, of a principal amount of RMB2,500 million, RMB1,000 million, RMB2,200 million, RMB1,500 million, RMB2,500 million, RMB1,900 million and USD500 million respectively have been fully paid off.

On 8 April 2020, the Company issued the first tranche of the medium-term note of a principal amount of RMB3,000 million with a maturity date of 10 April 2023, including RMB1,500 million for category 1 with investors' put options and issuer's coupon rate adjustment options at the end of the second year and RMB1,500 million for category 2. The interest rates are 2.33% (category 1) and 2.48% (category 2) per annum, payable annually in arrears. In March 2022, the Company exercised the coupon rate adjustment option and adjust the interest rate from 2.33% to 2.70% (category 1). In April 2022, the investors partially exercised put option. The category 1 of the first tranche of the medium-term note of a principal amount of RMB1,220 was fully paid off. At 31 December 2022, the Company continued holding the rest part of the category 1 of the first tranche of the medium-term note with a principal amount of RMB280 million.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 43. Borrowings (Continued)

(a) (Continued)

On 13 May 2020, the Company issued the third tranche of the medium-term note of a principal amount of RMB3,000 million with a maturity date of 15 May 2023, with investors' put options and issuer's coupon rate adjustment options at the end of the second year. The interest rates is 2.14% per annum, payable annually in arrears. In April 2022, the Company exercised the coupon rate adjustment option and adjust the interest rate from 2.14% to 2.60%. In April 2022, the investors partially exercised put option. The third tranche of the medium-term note of a principal amount of RMB600 million was fully paid off. At 31 December 2022, the Company continued holding the rest part of the forth tranche of the medium-term note with a principal amount of RMB2,400 million.

On 3 June 2020, the Company issued the forth tranche of the medium-term note of a principal amount of RMB3,000 million with a maturity date of 5 June 2023, with investors' put options and issuer's coupon rate adjustment options at the end of the second year. The interest rates is 2.85% per annum, payable annually in arrears. In May 2022, the Company exercised the coupon rate adjustment option and adjust the interest rate from 2.85% to 2.50%. In May 2022, the investors partially exercised put option. The forth tranche of the medium-term note of a principal amount of RMB750 million was fully paid off. At 31 December 2022, the Company continued holding the rest part of the forth tranche of the medium-term note with a principal amount of RMB2,250 million.

On 6 July, 2 August, 26 September 2022, the Company and certain subsidiaries issued three notes, including one guaranteed bond and two medium-term notes with principal amounts of USD500 million, RMB3,000 million and RMB1,000 million with a maturity date of 6 July 2027, 3 August 2025 and 27 September 2025 respectively. The notes bear interest at a coupon rate of 4.00%, 2.58% and 3.00% per annum respectively, all payable annually in arrears.

On 21 January and 11 April 2022, a subsidiary issued two categories of 3-year corporate bonds in a principal amount of RMB500 million, with maturity dates of 21 January 2025 and 11 April 2025.

On 11 January 2022, the Company issued the first tranche of the corporate bond, including 3-year corporate bond in a principal amount of RMB2,000 million (category 1), with a maturity date of 11 January 2025, and 5-year corporate bond in a principal amount of RMB1,000 million (category 2), with a maturity date of 11 January 2027. The interest rates are 2.93% (category 1) and 3.28% (category 2) per annum, payable annually in arrears.

On 8 June 2022, the Company issued the second tranche of the corporate bond, including 3-year corporate bond in a principal amount of RMB1,100 million (category 1), with a maturity date of 8 June 2025, and 5-year corporate bond in a principal amount of RMB600 million (category 2), with a maturity date of 8 June 2027. The interest rates are 2.90% (category 1) and 3.30% (category 2) per annum, payable annually in arrears.

On 5 February 2023, the guaranteed notes of a principal amount of USD500 million issued on 5 February 2013 has been fully paid off.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 43. Borrowings (Continued)

- (b) Bank borrowings carry interest at rates ranging from 0.75% to 6.65% (31 December 2021: 0.75% to 9.50%) per annum.

Long-term debentures were issued at fixed rates ranging from 2.14% to 4.80% (31 December 2021: 2.14% to 4.50%) per annum.

Other borrowings carry interest at rates ranging from 2.90% to 4.43% (31 December 2021: 2.35%) per annum.

- (c) The details of secured borrowings are set out below:

	2022		2021	
	Secured borrowings RMB million	Carrying amount of pledged assets and contract value of certain rights RMB million	Secured borrowings RMB million	Carrying amount of pledged assets and contract value of certain rights RMB million
Property, plant and equipment (Note 18)	2,205	3,878	295	1,715
Intangible assets (Note 23)	75,252	96,955	45,894	64,728
Properties under development for sale (Note 31)	5,013	13,420	7,699	30,698
Trade and bills receivables (Note 33)	319	319	221	221
Trade receivables from fellow subsidiaries of the Group	14	375	34	375
Contract assets (Note 34)	39,541	63,529	29,825	48,320
	<b>122,344</b>	<b>178,476</b>	83,968	146,057

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 43. Borrowings (Continued)

- (d) The exposure of the Group's variable rate bank borrowings to interest rate changes and the contractual repricing dates at the end of the year are as follows:

	2022	2021
	RMB million	RMB million
6 months or less	<b>33,348</b>	30,969
6 -12 months	<b>188,550</b>	123,580
1-5 years	<b>11,958</b>	1,891
	<b>233,856</b>	156,440

- (e) The Group's borrowings were repayable as follows:

	2022	2021
	RMB million	RMB million
Within 1 year	<b>109,734</b>	113,424
Between 1 and 2 years	<b>42,096</b>	31,351
Between 2 and 5 years	<b>71,435</b>	64,552
Over 5 years	<b>168,977</b>	102,600
	<b>392,242</b>	311,927

- (f) The carrying amounts of the borrowings are denominated in the following currencies:

	2022	2021
	RMB million	RMB million
RMB	<b>383,834</b>	299,876
USD	<b>8,213</b>	11,682
EUR	<b>10</b>	13
Others	<b>185</b>	356
	<b>392,242</b>	311,927

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 43. Borrowings (Continued)

- (g) The carrying amounts of current portion of long-term borrowings and short-term borrowings approximate their fair values, as the impact of discounting is not significant.

The carrying amounts and fair values of the non-current borrowings are as follows:

	2022	2021
	RMB million	RMB million
Carrying amount		
– Bank borrowings	<b>240,380</b>	161,579
– Long-term debentures	<b>39,373</b>	33,563
– Other borrowings	<b>2,755</b>	3,361
	<b>282,508</b>	198,503
Fair value		
Level 3		
– Bank borrowings	<b>249,300</b>	168,180
– Long-term debentures	<b>39,342</b>	33,735
– Other borrowings	<b>2,755</b>	3,361
	<b>291,397</b>	205,276

- (h) The Group has the following undrawn borrowing facilities:

	2022	2021
	RMB million	RMB million
Expiring within one year	<b>108,255</b>	49,863
Expiring beyond one year	<b>1,397,319</b>	1,151,628
	<b>1,505,574</b>	1,201,491

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 44. Retirement Benefit Obligations

#### (a) State-managed retirement plans and supplementary defined contribution retirement schemes

The employees of the group entities established in the PRC are members of a state-managed retirement benefit scheme operated by the PRC government. These PRC companies are required to contribute a certain percentage of payroll costs, depending on the applicable local regulations to the state-managed retirement plans. The Group also participates in supplementary defined contribution retirement schemes. The only obligation of these PRC companies with respect to the state-managed retirement plans and supplementary defined contribution retirement schemes is to make the specified contributions. The total costs charged to profit or loss during the year were RMB6,970 million and RMB2,101 million respectively (2021: RMB6,273 million and RMB1,921 million respectively).

As at 31 December 2022, the amounts due in respect of the reporting period not yet paid to the state-managed retirement plans and supplementary defined contribution retirement schemes, and included in trade and other payables were RMB217 million and RMB95 million respectively (31 December 2021: RMB216 million and RMB60 million respectively).

#### (b) Retirement and other supplemental benefit obligations

The Group paid supplementary pension subsidies and other post-employment medical benefits to its retired employees in the PRC. In addition, the Group was committed to make periodic benefits payments to certain former employees who were terminated or early retired and the dependents of deceased employees in accordance with various employee benefit schemes adopted by the Group.

The plan exposes the Group to actuarial risks such as interest rate risk, benefit risk and average medical expense risk.

Interest rate risk	The present value of the defined benefit plan obligations is calculated using a discount rate determined by reference to government bond yields. A decrease in the bond interest rate will increase the plan liability.
Benefit risk	The present value of the defined benefit plan obligations is calculated by reference to the future benefits of plan participants. As such, an increase in the benefits of the plan participants will increase the plan liability.
Average medical cost risk	The present value of the defined benefit plan obligations is calculated by reference to the future average medical cost of plan participants. As such, an increase in the average medical cost of the plan participants will increase the plan liability.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 44. Retirement Benefit Obligations (Continued)

## (b) Retirement and other supplemental benefit obligations (Continued)

No other post-retirement benefits are provided to these employees.

The most recent actuarial valuations of the present value of the defined benefit obligations as at 31 December 2022 were carried out by an independent firm of actuaries, Towers Watson Management Consulting (Shenzhen) Co., Ltd. Beijing Branch. The present value of the defined benefit obligations, and the related current service cost and past cost were measured using the Projected Unit Credit Method.

The principal assumptions used for the purposes of the actuarial valuations were as follows:

	2022	2021
Discount rate	<b>2.75%</b>	2.75%
Early-retiree's salary and supplemental benefit inflation rate	<b>4.50%</b>	4.50%
Average medical cost growth rate	<b>8.00%</b>	8.00%

Amounts recognised in the consolidated income statement and consolidated statement of comprehensive income in respect of these defined benefit plans are as follows:

	2022 RMB million	2021 RMB million
Net finance costs ( <i>Note 10</i> )	<b>67</b>	85
Components of defined benefit costs recognised in profit or loss	<b>67</b>	85
Remeasurement on the net defined benefit obligations: Actuarial losses arising from experience adjustments	<b>12</b>	78
Components of defined benefit costs recognised in other comprehensive income	<b>12</b>	78
Total	<b>79</b>	163

The current service cost and the net interest expense for the year are included in the employee benefits expense in profit or loss. The remeasurement of the net defined benefit liability is included in other comprehensive income.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 44. Retirement Benefit Obligations (Continued)

#### (b) Retirement and other supplemental benefit obligations (Continued)

The amount included in the consolidated balance sheet arising from the Group's obligation in respect of its defined benefit plans is as follows:

	2022	2021
	RMB million	RMB million
Present value of unfunded defined benefit obligations	<b>2,325</b>	2,593
Net liability arising from defined benefit obligations	<b>2,325</b>	2,593
Less: amount due within one year	<b>(275)</b>	(300)
Amount due after one year	<b>2,050</b>	2,293

Movements in the present value of the retirement and other supplemental benefit obligations in the current year were as follows:

	2022	2021
	RMB million	RMB million
Opening defined benefit obligations	<b>2,593</b>	2,805
Finance costs	<b>67</b>	85
Remeasurement losses:		
Actuarial losses arising from experience adjustments	<b>12</b>	78
Benefits paid	<b>(347)</b>	(375)
Closing defined benefit obligations	<b>2,325</b>	2,593



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 44. Retirement Benefit Obligations (Continued)

#### (b) Retirement and other supplemental benefit obligations (Continued)

Significant actuarial assumptions for the determination of the defined benefit obligation are discount rate, benefit inflation rate and the average medical cost growth rate. The sensitivity analyses below have been determined based on reasonably possible changes of the respective assumptions occurring at the end of the reporting period, while holding all other assumptions constant.

- If the discount rate on benefit obligation increases or decreases by 0.25 percentage point, the defined benefit obligation would have been decreased by RMB38 million or increased by RMB39 million (2021: decreased by RMB43 million or increased by RMB45 million).
- If the benefit inflation rate increases or decreases by 1 percentage point, the defined benefit obligation would have been increased by RMB82 million or decreased by RMB72 million (2021: increased by RMB94 million or decreased by RMB82 million).
- If the average medical cost growth rate increases or decreases by 1 percentage point, the defined benefit obligation would have been increased by RMB5 million or decreased by RMB5 million (2021: increased by RMB6 million or decreased by RMB6 million).

The sensitivity analysis presented above may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

Furthermore, in presenting the above sensitivity analysis, the present value of the defined benefit obligations has been calculated using the projected unit credit method at the end of the reporting period, which is the same as that applied in calculating the defined benefit obligations liability recognised in the consolidated balance sheet.

There was no change in the methods and assumptions used in preparing the sensitivity analysis from prior years.

The average expected future lifetime of the defined benefit obligation as at 31 December 2022 is 9.5 years (2021: 10 years). This number can be analysed as follows:

- civil retirees: 3.4 years (2021: 3.6 years);
- retired members: 10 years (2021: 10 years); and
- beneficiaries: 11 years (2021: 11 years).

The duration of the defined benefit obligation as at 31 December 2022 is 6.7 years (2021: 6.8 years).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 45. Provisions

	2022	2021
	RMB million	RMB million
Foreseeable losses on contracts	443	357
Lawsuits	79	122
Others	78	330
	<b>600</b>	809
Analysed for reporting purpose as:		
Non-current	578	761
Current	22	48
	<b>600</b>	809

Movements in each class of provision during the financial year are set out below:

	Foreseeable losses on contracts	Lawsuits	Others	Total
	RMB million	RMB million	RMB million	RMB million
<b>At 1 January 2021</b>	686	116	–	802
Charged/(credited) to the consolidated income statement:				
– Additional provisions	109	50	330	489
– Utilised/reversed during the year	(438)	(44)	–	(482)
<b>At 31 December 2021</b>	357	122	330	809
<b>At 1 January 2022</b>	<b>357</b>	<b>122</b>	<b>330</b>	<b>809</b>
Charged/(credited) to the consolidated income statement:				
– Additional provisions	<b>284</b>	<b>6</b>	<b>78</b>	<b>368</b>
– Utilised/reversed during the year	<b>(198)</b>	<b>(49)</b>	<b>(330)</b>	<b>(577)</b>
<b>At 31 December 2022</b>	<b>443</b>	<b>79</b>	<b>78</b>	<b>600</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 46. Deferred Taxation

(a) The analysis of deferred tax assets and deferred tax liabilities is as follows:

	2022		2021	
	Deferred tax assets RMB million	Deferred tax liabilities RMB million	Deferred tax assets RMB million	Deferred tax liabilities RMB million
The balances before offsetting	12,997	(3,907)	10,966	(2,241)
Offsetting	(888)	888	(594)	594
	<b>12,109</b>	<b>(3,019)</b>	10,372	(1,647)

(b) The gross movement on the deferred income tax account is as follows:

	2022 RMB million	2021 RMB million
<b>At 31 December in prior year</b>	<b>8,725</b>	7,879
Recognised in the income statement ( <i>Note 13</i> )	<b>713</b>	838
Recognised in other comprehensive income ( <i>Note 13</i> )	<b>(18)</b>	(6)
Effect of change in tax rate charged to profit or loss ( <i>Note 13</i> )	<b>12</b>	28
Acquisition of subsidiaries	<b>(339)</b>	(4)
Disposal of subsidiaries	<b>(2)</b>	(11)
Exchange differences	<b>(1)</b>	1
<b>At 31 December</b>	<b>9,090</b>	8,725

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 46. Deferred Taxation (Continued)

- (c) The movement in deferred tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

## Deferred Tax Liabilities

	Financial assets/ liabilities measured at fair value RMB million	Unrealised losses from intercompany transactions RMB million	Depreciation and amortisation RMB million	Acquisition of subsidiaries RMB million	Others RMB million	Total RMB million
At 1 January 2021	(678)	(24)	(193)	(533)	(628)	(2,056)
Credited/(charged) to the consolidated income statement	5	1	(12)	47	(209)	(168)
Charged to other comprehensive income	(10)	–	–	–	–	(10)
Acquisition of subsidiaries	–	–	–	(9)	–	(9)
Exchange differences	–	–	–	2	–	2
<b>At 31 December 2021</b>	<b>(683)</b>	<b>(23)</b>	<b>(205)</b>	<b>(493)</b>	<b>(837)</b>	<b>(2,241)</b>
At 1 January 2022	<b>(683)</b>	<b>(23)</b>	<b>(205)</b>	<b>(493)</b>	<b>(837)</b>	<b>(2,241)</b>
(Charged)/credited to the consolidated income statement	<b>(9)</b>	<b>1</b>	<b>(65)</b>	<b>(16)</b>	<b>(1,184)</b>	<b>(1,273)</b>
Charged to other comprehensive income	<b>(11)</b>	–	–	–	–	<b>(11)</b>
Acquisition of subsidiaries ( <i>Note 48</i> )	–	–	–	<b>(397)</b>	<b>16</b>	<b>(381)</b>
Exchange differences	–	–	<b>(2)</b>	–	<b>1</b>	<b>(1)</b>
<b>At 31 December 2022</b>	<b>(703)</b>	<b>(22)</b>	<b>(272)</b>	<b>(906)</b>	<b>(2,004)</b>	<b>(3,907)</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 46. Deferred Taxation (Continued)

- (c) The movement in deferred tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows: (Continued)

**Deferred Tax Assets:**

	Provision for impairment of assets	Depreciation and amortisation	Financial assets/ liabilities measured at fair value	Provision for employee benefits	Tax losses	Unrealised profit from intercompany transactions	Other	Total
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
At 1 January 2021	3,845	51	305	428	2,127	2,402	777	9,935
Credited/(charged) to the consolidated income statement	288	8	119	(44)	208	310	117	1,006
(Charged)/credited to other comprehensive income	-	-	(10)	13	-	-	1	4
Acquisition of subsidiaries	-	-	-	-	5	-	-	5
Disposal of subsidiaries	(11)	-	-	-	-	-	-	(11)
Effect of change in tax rate credited to profit or loss	27	4	-	6	(9)	-	-	28
Exchange differences	-	-	-	-	(1)	-	-	(1)
<b>At 31 December 2021</b>	<b>4,149</b>	<b>63</b>	<b>414</b>	<b>403</b>	<b>2,330</b>	<b>2,712</b>	<b>895</b>	<b>10,966</b>
At 1 January 2022	<b>4,149</b>	<b>63</b>	<b>414</b>	<b>403</b>	<b>2,330</b>	<b>2,712</b>	<b>895</b>	<b>10,966</b>
Credited/(charged) to the consolidated income statement	<b>446</b>	<b>25</b>	<b>149</b>	<b>(43)</b>	<b>948</b>	<b>356</b>	<b>105</b>	<b>1,986</b>
(Charged)/credited to other comprehensive income	-	-	<b>(8)</b>	<b>2</b>	-	-	<b>(1)</b>	<b>(7)</b>
Acquisition of subsidiaries	-	-	-	-	<b>3</b>	-	<b>39</b>	<b>42</b>
Disposal of subsidiaries	-	-	-	-	<b>(2)</b>	-	-	<b>(2)</b>
Effect of change in tax rate credited to profit or loss	<b>2</b>	-	-	<b>3</b>	<b>4</b>	-	<b>3</b>	<b>12</b>
Exchange differences	<b>(1)</b>	-	-	-	-	<b>1</b>	-	-
<b>At 31 December 2022</b>	<b>4,596</b>	<b>88</b>	<b>555</b>	<b>365</b>	<b>3,283</b>	<b>3,069</b>	<b>1,041</b>	<b>12,997</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 46. Deferred Taxation (Continued)

- (d) Deferred income tax assets are recognised for tax loss carry-forwards to the extent that the realisation of the related tax benefit through future taxable profits is probable. As at 31 December 2022, the Group did not recognise deferred tax assets of RMB2,633 million (31 December 2021: RMB2,893 million) in respect of tax losses amounting to RMB14,730 million (31 December 2021: RMB13,132 million) as the Directors believes it is more likely than not that such tax losses would not be utilised before they expire.

As at 31 December 2022, the tax losses with no deferred tax assets recognised carried forward are as follows:

	2022 RMB million	2021 RMB million
<b>Year of expiry of tax losses</b>		
2022	–	2,645
2023	<b>2,105</b>	2,598
2024	<b>706</b>	726
2025	<b>2,917</b>	3,523
2026	<b>3,538</b>	3,640
2027-2031	<b>5,464</b>	–
	<b>14,730</b>	13,132

- (e) As at 31 December 2022, the Group did not recognise deferred tax assets of RMB5,563 million (31 December 2021: RMB6,503 million) in respect of deductible temporary differences amounting to RMB31,125 million (31 December 2021: RMB31,006 million) as the Directors believe it is not probable that such deductible temporary differences would be utilised.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 47. Cash Generated from Operations

## (a) Cash Generated from Operations

	2022	2021
	RMB million	RMB million
Profit for the year	<b>34,972</b>	30,470
Adjustments for:		
– Income tax expense	<b>9,720</b>	9,166
– Interest income	<b>(7,355)</b>	(1,063)
– Dividends from financial assets at FVPL	<b>(135)</b>	(603)
– Dividends from financial assets at FVOCI	<b>(548)</b>	(85)
– (Gains)/losses on disposal and/or write-off of:		
Property, plant and equipment	<b>(405)</b>	(328)
Lease prepayments	<b>(105)</b>	(98)
Interests in associates	<b>(68)</b>	(14)
Interests in subsidiaries	–	(72)
Interests in joint ventures	<b>15</b>	–
Financial assets/liabilities at FVPL	<b>(29)</b>	(47)
– Foreign exchange (gains)/losses, net	<b>(566)</b>	80
– Fair value losses on financial assets/liabilities at FVPL	<b>564</b>	515
– Gains on debt restructuring	<b>(114)</b>	(135)
– Net impairment losses/(gains) recognised on:		
Trade and other receivables (excluding advance to suppliers)	<b>2,037</b>	3,694
Other financial assets at amortised cost	<b>637</b>	560
Contract assets	<b>669</b>	1,224
– Impairment losses/(gains) recognised on:		
Property, plant and equipment	<b>504</b>	132
Inventories	<b>(13)</b>	5
Properties under development for sale	<b>545</b>	770
Properties held for sale	<b>1,673</b>	1,533
Advance to suppliers	<b>2</b>	4
Investment properties	<b>6</b>	48
– Increase/(decrease) in provision	<b>87</b>	(371)
– Interest expenses	<b>9,511</b>	7,531
– Losses from derecognition of financial assets at amortised cost	<b>4,520</b>	4,595

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 47. Cash Generated from Operations (Continued)

## (a) Cash Generated from Operations (Continued)

	2022 RMB million	2021 RMB million
– Share of losses of joint ventures	1,437	507
– Share of profits of associates	(4,734)	(3,809)
– Charge to retirement benefit obligations	67	85
– Government subsidies	140	86
– Depreciation and amortisation	11,498	10,926
Operating cash flows before movements in working capital	<b>64,532</b>	65,306
Changes in working capital (excluding the effects of acquisition and exchange differences on consolidation):		
– Increase in other prepayments	(212)	(145)
– Increase in properties held for sale	(10,206)	(17,810)
– Decrease in properties under development for sale	11,268	12,822
– Increase in inventories	(6,067)	(3,867)
– Increase in trade and other receivables	(11,973)	(16,998)
– Decrease in retirement and other supplemental benefit obligations	(347)	(375)
– Increase in trade and other payables	73,000	41,579
– (Decrease)/increase in other financial assets at amortised cost	(1,394)	1,168
– Decrease in payables arising from consolidated structured entities	(262)	(2,036)
– Increase in contract assets	(62,847)	(69,535)
– (Decrease)/increase in contract liabilities	(5,034)	18,610
– (Decrease)/increase in provisions	(110)	336
– Decrease in government grants	(50)	(70)
– (Increase)/decrease in financial assets at FVPL	(1,500)	1,009
– Decrease in deposits in CREC Finance	5,520	(153)
– Increase in restricted bank deposits	(1,883)	(5,871)
<b>Cash generated from operations</b>	<b>52,435</b>	23,970



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 47. Cash Generated from Operations (Continued)

## (b) Significant non-cash investing and financing activities

	2022 RMB million	2021 RMB million
Bills receivables paid for purchase	4,504	2,578
Additions of right-of-use assets	1,032	580
<b>Total</b>	<b>5,536</b>	<b>3,158</b>

## (c) Net debt reconciliation

This section sets out an analysis of net debt for each of the periods presented.

	2022 RMB million	2021 RMB million
Cash and cash equivalents ( <i>Note 37</i> )	204,987	148,116
Restricted cash and term deposit with maturity over three months ( <i>Note 36</i> )	33,597	30,797
Financial assets at FVPL – current ( <i>Note 35</i> )	10,312	7,304
Borrowings – repayable within one year ( <i>Note 43</i> )	(109,734)	(113,424)
Borrowings – repayable after one year ( <i>Note 43</i> )	(282,508)	(198,503)
Net debt	(143,346)	(125,710)

	2022 RMB million	2021 RMB million
Cash and Financial assets at FVPL	248,896	186,217
Gross debt – fixed interest rates	(158,386)	(155,487)
Gross debt – variable interest rates	(233,856)	(156,440)
Net debt	(143,346)	(125,710)

No change in financial assets are included in cash flows of financing activities during the year of 2022.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 48. Business combination

#### (a) Summary of acquisition

On 30 May 2022, the Group completed the acquisition of additional 33.54% equity shares of a previously invested associate, Yunnan Dianzhong Water Diversion Engineering Co., LTD. (“Dianzhong Water Diversion Engineering”) of the Group. The total consideration was RMB11,000 million in cash. Upon completion of the acquisition, the Group’s interests in Dianzhong Water Diversion Engineering has been increased from 19.83% to 53.37% and consolidated it as a subsidiary from the date on which control was transferred to the Group.

Details of the purchase consideration, the net assets acquired and goodwill are as follows:

Purchase consideration (refer to (b) below):	RMB million
Cash paid	11,000
The carrying amount of the original shareholding	6,504
Total purchase consideration	17,504

The assets and liabilities recognised as a result of the acquisition are as follows:

	RMB million
Cash and cash equivalents	10,117
Trade and other receivables	7,364
Property, plant and equipment	28,551
Intangible assets	1
Trade and other payables	(10,758)
Borrowings	(247)
Deferred income tax liabilities	(381)
Non-controlling interests	(17,346)
Net identifiable assets acquired	17,301
Goodwill	203

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 48. Business combination (Continued)

## (b) Purchase consideration – cash outflow

	RMB million
Outflow of cash to acquire subsidiary, net of cash acquired	
Cash consideration	11,000
Less:	
Cash and cash equivalents	10,117
Net outflow of cash – investing activities	883

Dianzhong Water Diversion Engineering contributed revenue of RMB765 thousand and net profit of RMB351 thousand to the Group for the period from the acquisition date to 30 May 2022. If the acquisition had occurred on 1 January 2022, unaudited revenue and net profit for the year ended 31 December 2022 would have been RMB765 thousand and RMB1,497 thousand, respectively.

## 49. Contingent Liabilities

	2022	2021
	RMB million	RMB million
Pending lawsuits (a)		
– arising in the ordinary course of business	5,116	5,256

- (a) The Group has been involved in a number of lawsuits arising in the ordinary course of business. Provision has been made for the probable losses to the Group on those claims when the management can reasonably estimate the outcome of the lawsuits taking into account of the legal advice. No provision has been made for those pending lawsuits where the management considered that the outcome of the lawsuits cannot be reasonably estimated or management believes the outflow of resources is not probable. The aggregate sum of those unprovided claims is disclosed in the table above.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 50. Commitments

#### (a) Capital expenditure

Significant capital expenditure contracted for at the end of reporting period but not recognised as liabilities is as follows:

	2022 RMB million	2021 RMB million
Property, plant and equipment	<b>302</b>	2,418

#### (b) Investment commitment

According to relevant agreements, the Group has the following commitments:

	2022 RMB million	2021 RMB million
Investment commitment to associates, joint ventures and others	<b>42,266</b>	53,024

- (i) It includes the Group's investment in certain mining projects (including development and construction expenditures) of an associate in the Democratic Republic of the Congo pursuant to co-operation agreements signed between the co-operation partners. Since the signing of relevant co-operation agreements, the co-operation partners have carried out continuous negotiation on the details of the cooperation and gradually promoted the mining development and infrastructure construction. The amount of investment commitment disclosed above was based on the latest situation of the mining projects which is subject to change based on the projects progress in the future.

#### (c) Operating Lease Commitments – as lessor

As the lessor, the Group's undiscounted amount of lease receivables after the balance sheet date are summarized as follows:

	2022 RMB million	2021 RMB million
No later than 1 year	<b>897</b>	579
Later than 1 year and no later than 5 years	<b>1,685</b>	1,132
Later than 5 years	<b>278</b>	369
	<b>2,860</b>	2,080

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 51. Related-party transactions

The Company is controlled by the following entity:

Name	Relationship	Place of incorporation and operation	Ownership interest	
			2022	2021
CREC	Parent and ultimate holding company	PRC	<b>46.96%</b>	47.21%

The Company is controlled by CREC, the parent company and a state-owned enterprise established in the PRC. CREC is controlled by the PRC government (CREC and its subsidiaries other than the Group are referred to as the "CREC Group"). The Group operates in an economic environment currently predominated by entities controlled, jointly controlled or under significant influence by the PRC government ("Government-related entities").

During the year, the Group had transactions with government-related entities including, but not limited to, the provision of infrastructure construction services, survey, design and consulting services and sales of goods. The Directors consider that the transactions with these government-related entities are activities in the ordinary course of the Group's business and that the dealings of the Group have not been significantly or unduly affected by the fact that the Group and these government-related entities are ultimately controlled or owned by the PRC government. The Group has also established pricing policies for services and products, and such pricing policies do not depend on whether or not the customers are government-related entities. For the purpose of the related party transaction disclosures, management believes that meaningful information relating to related party transactions has been adequately disclosed.

The following is a summary of significant related party transactions between the Group and its related parties during the year and balances arising from related party transactions at the end of the reporting period.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 51. Related-party transactions (Continued)

## (a) Significant related party transactions

The following transactions were carried out with related parties other than government-related entities:

	2022	2021
	RMB million	RMB million
<b>Transactions with the CREC Group</b>		
– Revenue from construction contracts	26	–
– Service expenses paid	47	103
– Rental expense	24	17
– Interest income	45	55
– Interest expense	15	17
– Provision of borrowings	1,100	980
– Repayment of borrowings	1,025	1,927
<b>Transactions with joint ventures</b>		
– Revenue from construction contracts	25,852	28,831
– Revenue from sales of goods	398	333
– Purchase	359	1,804
– Proceeds of borrowings	39	–
– Rental income	2	2
– Rental expense	25	–
– Interest income	272	467
– Interest expense	2	5
– Lending funds	2,266	6,018
– Repayment of borrowings	317	4,613
<b>Transactions with associates</b>		
– Revenue from construction contracts	19,828	21,927
– Revenue from sales of goods	3,626	2,261
– Purchase	16,596	10,958
– Rental income	3	3
– Rental expense	4	–
– Interest income	247	182
– Interest expense	1	–
– Lending funds	218	629
– Repayment of borrowings	2,825	2,366

These transactions are carried out on terms agreed with the counter parties in the ordinary course of business.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 51. Related-party transactions (Continued)

## (b) Balances with related parties

	2022	2021
	RMB million	RMB million
<b>Balances with the CREC Group</b>		
Trade and bills receivables	1	18
Other financial assets at amortised cost	1,100	980
Trade payables	8	–
Other payables	249	287
Deposits	627	748
Right-of-use assets	3	7
Lease liabilities	3	7
Contract liabilities	7	–
<b>Balances with joint ventures</b>		
Trade and bills receivables	2,568	1,598
Other receivables	798	287
Advance to suppliers	–	22
Other financial assets at amortised cost	8,563	6,451
Contract assets	1,357	1,261
Trade payables	463	647
Other payables	92	149
Contract liabilities	1,220	6,337
Advance from customers	–	131
Deposits	2,941	1,300
<b>Balances with associates</b>		
Trade and bills receivables	4,243	4,378
Other receivables	260	138
Other financial assets at amortised cost	3,106	5,698
Contract assets	3,388	3,343
Advance to suppliers	74	71
Trade payables	3,848	1,695
Other payables	483	492
Contract liabilities	2,165	1,861
Advance from customers	2	2
Deposits	526	211

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 51. Related-party transactions (Continued)

## (c) Guarantees

	2022	2021
	RMB million	RMB million
<b>Outstanding loan guarantees provided by the Group to</b>		
– Joint ventures	<b>5,139</b>	2,969
– Associates	<b>1,816</b>	4,730
– Government-related entities	<b>362</b>	480
<b>Outstanding debentures guarantees provided by CREC to the Group</b>	<b>3,500</b>	3,500

## (d) Key management compensation

The remuneration of Directors and other members of key management during the year were as follows:

	2022	2021
	RMB'000	RMB'000
Basic salaries, housing allowances and other allowances	<b>4,384</b>	4,767
Fees	<b>250</b>	295
Contributions to pension plans	<b>689</b>	614
Share-based payment	<b>1,712</b>	–
Others	<b>13,949</b>	6,232
	<b>20,984</b>	11,908

Key management represents the Directors and other senior management personnel disclosed in the annual report. The remuneration of key management is determined by the remuneration committee having regard to the performance of the respective individuals and the market trends.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 52. Particulars of Principal Subsidiaries

## (a) General information of principal subsidiaries

As at 31 December 2022 and 2021, the Company had the following principal subsidiaries:

Name of subsidiary	Country/ place of establishment and operation	Issued and paid in capital  RMB '000	Proportion of interest and voting power held by the Group		Proportional of ordinary shares held by non-controlling interests		Principal activities
			2022	2021	2022	2021	
<b>Listed-</b>							
中鐵高新工業股份有限公司 China Railway Hi-tech Industry Corporation Limited (//)	PRC	RMB2,221,552	<b>49.12%</b>	49.12%	<b>50.88%</b>	50.88%	Engineering Equipment and Component Manufacturing
<b>Unlisted-</b>							
中鐵一局集團有限公司 China Railway No.1 Engineering Group Co., Ltd.	PRC	RMB6,152,100	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵二局集團有限公司 China Railway No.2 Engineering Group Co., Ltd.	PRC	RMB7,692,920	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵三局集團有限公司 China Railway No.3 Engineering Group Co., Ltd.	PRC	RMB5,213,991	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵四局集團有限公司 China Railway No.4 Engineering Group Co., Ltd.	PRC	RMB8,272,699	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵五局集團有限公司 China Railway No.5 Engineering Group Co., Ltd.	PRC	RMB5,615,152	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵六局集團有限公司 China Railway No.6 Engineering Group Co., Ltd.	PRC	RMB2,200,000	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵七局集團有限公司 China Railway No.7 Engineering Group Co., Ltd.	PRC	RMB2,611,810	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵八局集團有限公司 China Railway No.8 Engineering Group Co., Ltd.	PRC	RMB5,906,056	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵九局集團有限公司 China Railway No.9 Engineering Group Co., Ltd.	PRC	RMB2,500,000	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵十局集團有限公司 China Railway No.10 Engineering Group Co., Ltd.	PRC	RMB3,836,510	<b>100%</b>	100%	-	-	Infrastructure construction
中鐵大橋局集團有限公司 China Railway Major Bridge Engineering Group Co., Ltd.	PRC	RMB4,278,453	<b>100%</b>	100%	-	-	Infrastructure construction

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 52. Particulars of Principal Subsidiaries (Continued)

## (a) General information of principal subsidiaries (Continued)

Name of subsidiary	Country/ place of establishment and operation	Issued and paid in capital RMB '000	Proportion of interest and voting power held by the Group		Proportional of ordinary shares held by non-controlling interests		Principal activities
			2022	2021	2022	2021	
中鐵電氣化局集團有限公司 China Railway Electrification Engineering Group Co., Ltd.	PRC	RMB4,409,280	100%	100%	–	–	Infrastructure construction
中鐵建工集團有限公司 China Railway Construction Group Co., Ltd.	PRC	RMB9,611,430	100%	100%	–	–	Infrastructure construction
中鐵隧道局集團有限公司 China Railway Tunnel Group Co., Ltd.	PRC	RMB2,997,688	100%	100%	–	–	Infrastructure construction
中鐵國際集團有限公司 China Railway International Group Co., Ltd.	PRC	RMB2,500,000	100%	100%	–	–	Infrastructure construction
中鐵二局建設有限公司 China Railway No.2 Construction Co., Ltd.	PRC	RMB8,263,820	100%	100%	–	–	Infrastructure construction
中鐵二院工程集團有限責任公司 China Railway Eryuan Engineering Group Co. Ltd.	PRC	RMB1,246,138	100%	100%	–	–	Survey and design
中鐵北京工程局集團有限公司 China Railway Beijing Engineering Group Co. Ltd.	PRC	RMB3,485,846	100%	100%	–	–	Infrastructure construction
中鐵廣州工程局集團有限公司 China Railway Guangzhou Engineering Group Co. Ltd.	PRC	RMB3,050,000	100%	100%	–	–	Infrastructure construction
中鐵上海工程局集團有限公司 China Railway Shanghai Engineering Group Co. Ltd.	PRC	RMB2,276,368	100%	100%	–	–	Infrastructure construction
中鐵置業集團有限公司 China Railway Real Estate Group Co., Ltd.	PRC	RMB6,508,410	100%	100%	–	–	Property development
中鐵資源集團有限公司 China Railway Resources Group Co., Ltd.	PRC	RMB5,427,127	100%	100%	–	–	Mining
中鐵交通投資集團有限公司 China Railway Communications Investment Group Co., Ltd.	PRC	RMB8,049,920	100%	100%	–	–	Build-operate-transfer service concession arrangement
中鐵南方投資集團有限公司 China Railway Southern Investment Group Co., Ltd.	PRC	RMB3,343,367	100%	100%	–	–	Infrastructure construction and asset management

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 52. Particulars of Principal Subsidiaries (Continued)

## (a) General information of principal subsidiaries (Continued)

Name of subsidiary	Country/ place of establishment and operation	Issued and paid in capital RMB '000	Proportion of interest and voting power held by the Group		Proportional of ordinary shares held by non-controlling interests		Principal activities
			2022	2021	2022	2021	
中鐵投資集團有限公司 China Railway Investment Group Co., Ltd.	PRC	RMB2,698,448	100%	100%	–	–	Infrastructure construction and asset management
中鐵城市發展投資集團有限公司 China Railway City Development and Investment Group Co. Ltd.	PRC	RMB5,000,000	100%	100%	–	–	Infrastructure construction and asset management
中鐵（上海）投資集團有限公司 China Railway (Shanghai) Investment Group Co., Ltd.	PRC	RMB2,933,240	100%	100%	–	–	Infrastructure construction and asset management
中鐵信託有限責任公司 China Railway Trust (//)	PRC	RMB5,000,000	93%	93%	7%	7%	Financial trust management
中鐵財務有限責任公司 China Railway Finance Co., Ltd.	PRC	RMB9,000,000	95%	95%	5%	5%	Comprehensive financial service
中鐵資本有限公司 China Railway Capital Co., Ltd.	PRC	RMB3,760,410	100%	100%	–	–	Asset Management
中鐵物質集團有限公司 China Railway Material Trade Co., Ltd.	PRC	RMB3,000,000	100%	100%	–	–	Trade
中鐵第六勘察設計院集團有限公司 China Railway Liuyuan Group Co., Ltd.	PRC	RMB600,000	100%	100%	–	–	Survey and design
中鐵工程設計諮詢集團有限公司 China Railway Engineering Consulting Group Co., Ltd.	PRC	RMB730,818	70%	70%	–	–	Survey and design
中鐵大橋勘測設計院集團有限公司 China Railway Major Bridge Reconnaissance & Design Institute Co., Ltd. (//)	PRC	RMB148,337	100%	100%	–	–	Survey and design
中鐵科學研究院有限公司 China Railway Academy Co., Ltd.	PRC	RMB600,000	100%	100%	–	–	Survey and design
中鐵華鐵工程設計集團有限公司 China Railway Huatie Engineering Designing Group Co., Ltd.	PRC	RMB217,084	100%	100%	–	–	Survey and design

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 52. Particulars of Principal Subsidiaries (Continued)

## (a) General information of principal subsidiaries (Continued)

Name of subsidiary	Country/ place of establishment and operation	Issued and paid in capital RMB '000	Proportion of interest and voting power held by the Group		Proportional of ordinary shares held by non-controlling interests		Principal activities
			2022	2021	2022	2021	
中鐵人才交流諮詢有限責任公司 China Railway Talent Exchange Consulting Co., Ltd.	PRC	RMB500	100%	100%	–	–	Talent information network service
中鐵東方國際集團有限公司 China Railway Oriental International Group Co., Ltd	Malaysia	–	100%	100%	–	–	Infrastructure construction and real estate development
鐵工（香港）財資管理有限公司 CR (Hong Kong) Treasury Management Co., Ltd.	Hongkong	RMB69	100%	100%	–	–	Asset management
中鐵（廣州）投資發展有限公司 China Railway (Guangzhou) Investment Development Co., Ltd.	PRC	RMB780,000	100%	100%	–	–	Infrastructure construction
中鐵武漢電氣化局集團有限公司 China Railway Wuhan Electrification Bureau Group Co., Ltd.	PRC	RMB902,960	100%	100%	–	–	Infrastructure construction
中鐵雲網信息科技有限責任公司 China Railway Cloud Network Information Technology Co., Ltd.	PRC	RMB200,000	100%	100%	–	–	Software and information technology services
中國鐵工投資建設集團有限公司 China Tiegong Investment and Construction Co., Ltd.	PRC	RMB4,749,147	100%	100%	–	–	Infrastructure construction
中國中鐵匈牙利有限責任公司 China Railway Hungary Co., Ltd.	Hungary	–	100%	100%	–	–	Infrastructure construction
中鐵水利水電規劃設計研究院集團有限公司 China Railway Water Conservancy & Hydropower Planning and Design Group Co.,Ltd.	PRC	RMB300,000	65%	65%	35%	35%	Research, design and construction of water conservancy and hydropower
中鐵長江交通設計集團有限公司 China Railway Changjiang Transport Design Group Co.,Ltd.	PRC	RMB147,059	66%	66%	34%	34%	Survey, design and management of communications
中國海外工程有限責任公司 China Overseas Engineering Group Co., Ltd.	PRC	RMB2,000,000	100%	100%	–	–	Infrastructure construction

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 52. Particulars of Principal Subsidiaries (Continued)

## (a) General information of principal subsidiaries (Continued)

Name of subsidiary	Country/ place of establishment and operation	Issued and paid in capital RMB '000	Proportion of interest and voting power held by the Group		Proportional of ordinary shares held by non-controlling interests		Principal activities
			2022	2021	2022	2021	
中鐵雲南建設投資有限公司 China Railway Yunnan Construction Investment Co., Ltd. (ii)	PRC	RMB36,393,459	100%	-	-	-	Infrastructure construction and asset management
中國鐵路工程（馬來西亞）有限公司 China Railway Engineering (Malaysia) Co., Ltd. (iii)	Malaysia	-	100%	-	-	-	Infrastructure construction and real estate development

All the above subsidiaries were established as limited liability companies in the PRC, which have similar characteristics of limited liability company incorporated under the Hong Kong Companies Ordinance.

The above table lists the subsidiaries of the Company which, in the opinion of the Directors, principally affected the results or assets of the Group. To give details of other subsidiaries would, in the opinion of the Directors, result in particulars of excessive length.

- (i) Unless otherwise stated, above subsidiaries have share capital consisting solely of ordinary shares that are held directly by the Company.
- (a) At 31 December 2022, 28.57% (2021: 28.57%) of ordinary shares of China Railway Industry is indirectly held by the Company.
- (b) At 31 December 2022, 14% (2021: 14%) of ordinary shares of China Railway Trust is indirectly held by the Company.
- (c) At 31 December 2022, 35% (2021: 35%) of ordinary shares of China Railway Major Bridge Reconnaissance & Design Institute Co., Ltd. is indirectly held by the Company.
- (ii) In 2022, the Company and the other shareholders jointly established China Railway Yunnan Construction Investment Co., Ltd. details are set out in Note 25(b).
- (iii) At 1 January 2022, the Company restructured China Railway Engineering (Malaysia) Co., Ltd. Therefore, 100% of equity shares of China Railway Engineering (Malaysia) Co., Ltd. is held by the Company.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 52. Particulars of Principal Subsidiaries (Continued)

## (b) Information of debt securities

As at 31 December 2022, the Group had outstanding issued debt securities as follows:

Name	Face value of debt securities RMB million	Maturity date
China Railway Group Limited	<b>3,500</b>	19/10/2025
	<b>2,120</b>	28/01/2026
	<b>1,000</b>	21/01/2022
	<b>500</b>	18/06/2024
	<b>1,100</b>	16/07/2024
	<b>280</b>	10/04/2023
	<b>1,500</b>	10/04/2023
	<b>3,000</b>	24/04/2023
	<b>2,400</b>	15/05/2023
	<b>2,250</b>	05/06/2023
	<b>3,000</b>	27/04/2024
	<b>2,500</b>	28/05/2024
	<b>3,000</b>	13/07/2024
	<b>2,200</b>	23/07/2024
	<b>800</b>	23/07/2026
	<b>3,000</b>	17/08/2024
	<b>2,000</b>	12/01/2025
	<b>1,000</b>	12/01/2027
<b>1,100</b>	14/06/2025	
<b>600</b>	14/06/2027	
<b>3,000</b>	03/08/2025	
China Railway Resources Huitung Limited	<b>3,488</b>	05/02/2023
China Railway Xunjie Co. Limited	<b>3,488</b>	28/07/2026
	<b>3,482</b>	06/07/2027
Guangdong China Railway Xijiang High-tech Investment Co.Limited	<b>500</b>	21/01/2025
	<b>500</b>	11/04/2025
China Tiegong Investment & Construction Group Limited	<b>1,000</b>	27/09/2025

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 52. Particulars of Principal Subsidiaries (Continued)

## (b) Information of debt securities (Continued)

As at 31 December 2021, the Group had outstanding issued debt securities as follows:

Name	Face value of debt securities RMB million	Maturity date
China Railway Group Limited	3,500	19/10/2025
	2,120	28/01/2026
	2,500	17/01/2022
	1,000	21/01/2022
	1,000	27/01/2024
	420	15/04/2022
	1,500	29/04/2022
	2,500	18/06/2022
	500	18/06/2024
	1,900	16/07/2022
	1,100	16/07/2024
	1,500	10/04/2023
	1,500	10/04/2023
	3,000	24/04/2023
	3,000	15/05/2023
	3,000	05/06/2023
	3,000	27/04/2024
	2,500	28/05/2024
	3,000	13/07/2024
	2,200	23/07/2024
800	23/07/2026	
3,000	17/08/2024	
China Railway Resources Huitung Limited	3,488	05/02/2023
China Railway Xunjie Co. Limited	3,488	25/07/2022
	3,488	28/07/2026

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 53. Events occurring after the balance sheet date

Subsequent to 31 December 2022, the following significant event took place:

- (a) As approved by the Board meeting on 30 March 2023, the Company declared a dividend in respect of the year ended 31 December 2022 of RMB0.200 per ordinary share, amounting to a total dividend of RMB4,950 million. The dividend is to be approved at the 2022 annual general meeting in 2023.
- (b) In February 2023, L'Inspection Générale des Finances de la République Démocratique du Congo (the General Inspectorate of Finance of the Democratic Republic of the Congo) released a report on the implementation of cooperation agreements signed between the Democratic Republic of the Congo and the Chinese companies. The report recommended that the relevant contract parties to review the cooperation agreements in terms of the shareholder structure of specific structure companies, the capital expenditure of the infrastructure projects and the preferential tax treatment of the jointly invested companies. The Group will continue to pay attention to the progress of this event and evaluate its impact to the Group's financial position and operating results. As of the approval date of this financial statement, there is no significantly negative influence has been identified by the Group.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 54. Balance Sheet and Reserve Movement of the Company

	2022 RMB million	2021 RMB million
<b>ASSETS</b>		
<b>Non-current assets</b>		
Other non-current assets	55,763	55,759
Investments in subsidiaries	321,708	246,825
	<b>377,471</b>	302,584
<b>Current assets</b>		
Amounts due from subsidiaries	68,990	98,928
Other current assets	10,540	15,536
Bank balances and cash	28,157	12,893
	<b>107,687</b>	127,357
<b>Total assets</b>	<b>485,158</b>	429,941
<b>EQUITY</b>		
Share capital	24,752	24,571
Perpetual notes	45,621	45,624
Share premium and reserves	167,606	149,481
<b>Total equity</b>	<b>237,979</b>	219,676
<b>LIABILITIES</b>		
<b>Non-current liabilities</b>		
Borrowings	44,323	27,844
Other non-current liabilities	14,335	18,928
	<b>58,658</b>	46,772
<b>Current liabilities</b>		
Amounts due to subsidiaries	138,344	116,257
Other current liabilities	50,177	47,236
	<b>188,521</b>	163,493
<b>Total liabilities</b>	<b>247,179</b>	210,265

The balance sheet of the Company was approved by the Board of Directors on 30 March 2023 and were signed on its behalf.

*Director*  
Chen Yun

*Director*  
Chen Wenjian

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 54. Balance Sheet and Reserve Movement of the Company (Continued)

## (a) Reserve movement of the Company

	Share premium RMB million	Capital reserves RMB million	Statutory reserve RMB million	Retained earnings RMB million	Total RMB million
<b>At 31 December 2020</b>	53,067	7,606	10,912	66,135	137,720
Profit and total comprehensive income for the year	–	(4)	–	18,343	18,339
Redemption of perpetual notes	(6)	–	–	–	(6)
Transfer to reserves	–	–	1,838	(1,838)	–
Dividends recognised as distribution	–	–	–	(4,423)	(4,423)
Dividends declared to perpetual notes holders	–	–	–	(2,149)	(2,149)
<b>At 31 December 2021</b>	53,061	7,602	12,750	76,068	149,481
Profit and total comprehensive income for the year	–	74	–	24,708	24,782
Issuance of shares for 2021 Restricted Share Incentive Scheme	–	467	–	–	467
Shares held for 2021 Restricted Share Incentive Scheme	–	(645)	–	–	(645)
Repurchase and cancel unlocked restricted stock	–	(3)	–	–	(3)
Amount recorded in shareholders' equity arising from 2021 Restricted Share Incentive Scheme	–	142	–	–	142
Redemption of perpetual notes	(3)	–	–	–	(3)
Transfer to reserves	–	–	2,439	(2,439)	–
Dividends recognised as distribution	–	–	–	(4,816)	(4,816)
Dividends declared to perpetual notes holders	–	–	–	(1,799)	(1,799)
<b>At 31 December 2022</b>	53,058	7,637	15,189	91,722	167,606

# SIGNIFICANT EVENTS

## I. The Plan for Profit Distribution on Ordinary Shares or Capitalisation of Capital Reserves

### 1 Formulation, Implementation or Adjustment of the Cash Dividend Policy

#### (1) Specific policies for profit distribution

According to the Articles of Association of the Company, the specific policies for profit distribution of the Company are as follows:

- (i) Form of profit distribution: The Company distributes profits in cash, share or a combination of cash and share. The Company can make interim profit distributions when conditions permit.
- (ii) Specific conditions, proportion and interval of the Company's cash dividends: Under the premise of ensuring the Company's continuous operation and long-term development, if the Company is profitable in the year and the accumulated undistributed profit is positive and there are no major investment plans or other major cash expenditures, the Company will distribute the profits in cash after appropriation to the statutory reserves and other reserves in full. In any three consecutive years, the Company's accumulated profits distributed in cash shall not be less than 30% of the annual average distributable profits realized in the three years; the annual profits distributed in cash shall generally not be less than 10% of the distributable profits realized in the year. The Company may not distribute cash dividends under the following special circumstances:
  - ① The auditors issue a non-standard unqualified audit report on the Company's financial report for the year.
  - ② The operating net cash flow is negative in the year.

If the abovementioned conditions for cash dividends are met, the Company in principle shall distribute cash dividends once a year, and the Company's Board of Directors can propose the Company to make interim cash dividends based on the Company's profitability and capital demand.

- (iii) Specific conditions for the Company to issue share dividends:

The Company can propose a share dividend distribution plan when the Company is in good operating condition, and the Board of Directors believes that the Company's share price does not match the Company's share capital and that issuing share dividends is beneficial to the overall interests of all shareholders of the Company, under the premise that the abovementioned conditions for cash dividends are met.

## SIGNIFICANT EVENTS

### I. The Plan for Profit Distribution on Ordinary Shares or Capitalisation of Capital Reserves (Continued)

#### 1 Formulation, Implementation or Adjustment of the Cash Dividend Policy (Continued)

##### (2) Implementation of the cash dividend policy during the reporting period

Profits are distributed in cash under the profit distribution plan of the Company for 2021. Pursuant to the profit distribution plan considered and passed at the 2021 annual general meeting convened on 22 June 2022, a cash dividend of RMB0.196 (tax inclusive) per share based on the total share capital of 24,741,653,683 shares before the implementation of the plan was declared by the Company, totalling RMB4,849,364,121.87 (tax inclusive) and representing 17.5% of net profit attributable to the Company's shareholders under the consolidated financial statements for the year of 2021 of the Company. The announcement on the profit distribution of H shares was published on 7 July 2022 on the website of Hong Kong Stock Exchange and the website of the Company. The announcement on the profit distribution of A shares was published on 22 July 2022 on China Securities Journal, Shanghai Securities News, Securities Times, Securities Daily and the website of Shanghai Stock Exchange. As of 9 August 2022, the implementation of the profit distribution plan of the Company for 2021 has been completed.

##### (3) Profit distribution plan for 2022

Pursuant to the relevant provisions of the Company Law and the Articles of Association, taking into account factors such as shareholder returns and the capital requirements of the Company for its business development, and in accordance with the "Resolution on the Profit Distribution Plan for 2022 of the Company" which was adopted at the 26th meeting of the fifth session of the Board, the details of the profit distribution plan are set out below: the retained profits of the Company at the beginning of 2022 were RMB78,408,144,168.91 based on the audited financial report prepared under Chinese Accounting Standards of the Company for 2022. After taking into account the added net profit realized by the Company of RMB24,393,480,424.54 during the year and deducting the cash dividends for 2022 and interest payments on perpetual notes amounting to RMB6,648,407,436.94, and with 10% of the net profit of the parent, i.e. RMB2,439,348,042.45, being appropriated to its surplus reserve, the distributable profit of the Company to shareholders amounted to RMB93,713,869,114.06 as of 31 December 2022. Based on the Company's total share capital of 24,752,195,983 shares as at 30 March 2023, a cash dividend of RMB2.00 per 10 shares (tax inclusive) is proposed to be distributed, and the total amount of such dividend is RMB4,950,439,196.60 (tax inclusive), representing 15.82% of net profit attributable to the Company's shareholders under the consolidated financial statements for the current year of the Company. Upon the distribution, the remaining retained profit of the Company amounting to RMB88,763,429,917.46 will be carried forward to the next year. The profit distribution will be based on the total share capital on the record date for payment of the cash dividend. In the event of change in total share capital of the Company before the record date for payment of the cash dividend, the total distribution amount will be kept unchanged and the rate will be adjusted accordingly. The Company will make a further announcement on the details of the adjustment.

## SIGNIFICANT EVENTS

### I. The Plan for Profit Distribution on Ordinary Shares or Capitalisation of Capital Reserves (Continued)

#### 1 Formulation, Implementation or Adjustment of the Cash Dividend Policy (Continued)

##### (3) Profit distribution plan for 2022 (Continued)

The independent directors of the Company have expressed their opinions on the plan, and the above plan is still subject to the approval of the 2022 annual general meeting of the Company. Minority shareholders will be offered sufficient opportunities to express their views and requests at the 2022 annual general meeting of the Company through the combination of on-site open voting and online voting to ensure that their legal rights are fully safeguarded.

##### (4) Information on the profit distribution for 2022

In 2022, the Company intends to make a cash dividend at 15.82% of net profit attributable to the Company's shareholders under the consolidated financial statements for the current year of the Company, which is lower than the proportion in the guidelines, mainly based on the following considerations:

(i) *Situation and characteristics of the industry of the Company*

The industry in which the Company operates is the construction industry, which is a fully competitive industry. The market competition is becoming increasingly fierce, and the gross profit margin of the industry is generally low. Emerging fields such as clean energy, green infrastructure and ecological environmental protection will become new directions for the development of the industry. According to the 14th Five-Year Plan, a series of major national strategies will form new growth points in the field of infrastructure construction and bring new development momentum to the construction industry. The Central Economic Working Conference pointed out that the fiscal policy will be more effective this year. By utilizing tools such as deficits, special-purpose bonds, and interest subsidies on a combined basis, fiscal funds for infrastructure construction will maintain a high level of growth. The Company is still in a period of great opportunity.

(ii) *The Company's development stage and its own business model*

The Company actively implements the national strategy, actively serves the building of a new development pattern, seizes opportunities of international market recovery and the 10th anniversary of the "Belt and Road" Initiative, and deeply expand into overseas markets to accelerate building it into a world-class construction industry group with global competitiveness. In 2022, the amount of new contracts, operating income and net profit of the Company hit a new record high. The Company jumps to No. 34 among the Fortune Global 500 enterprises, and its market competitiveness and brand influence continued to improve. The Company is at a stage of strategic opportunities and strategic upgrade. It will accelerate the transformation from debt-driven development to accumulation-driven development, and achieve the improvement in quality and the reasonable increase in quantity.

## SIGNIFICANT EVENTS

### I. The Plan for Profit Distribution on Ordinary Shares or Capitalisation of Capital Reserves (Continued)

#### 1 Formulation, Implementation or Adjustment of the Cash Dividend Policy (Continued)

##### (4) Information on the profit distribution for 2022 (Continued)

(iii) *Profitability level and demands on the funds of the Company*

In recent years, the Company has maintained a relatively high level of net profit and generated a relatively stable return on investment for its shareholders. For the year of 2022, the Company's net profit attributable to shareholders of the Company increased by 13.25% year on year, and the basic earnings per share after deducting non – recurring profit and loss increased by 11.20% year on year, the best level in history. However, as the Company strengthens structural adjustment, transformation and upgrading, actively cultivates and expands new businesses, and actively starts the “second curve” in growth, it requires a lot of financial support. The Company will rationally arrange fund requirements, optimize financial structure, improve the efficiency of fund use according to business development needs to ensure the Company's sustainable, healthy and stable development.

(iv) *Reasons for the Company's low level of cash dividends*

At present, the downward pressure on the world economy continues to increase, and the international situation is complex and changing. Objectively speaking, it is necessary for the Company to preserve retained earnings to enhance its ability to resist risks. At the same time, in order to meet the daily needs in the production and operations, project investment and strategic development of the Company, it is necessary for the Company to retain sufficient funds to ensure its production and operation capabilities and promote its stable operation and high-quality development.

(v) *The exact purpose of the Company's retained undistributed profits and estimated earnings*

The Company's retained undistributed profits will be used to support the Company to seize development opportunities, continue to deepen the Company's strategic transformation, enhance structural adjustment, and seek new growth points. On the basis of consolidating the advantages of traditional businesses, the Company will incubate and cultivate new advantageous businesses according to the main businesses and market demand, increase capital investment, cultivate and expand new businesses, promote the optimization and upgrading of business structure, enhance the profitability and profit level so as to provide shareholders with long-term, sustainable and stable return.

## SIGNIFICANT EVENTS

## I. The Plan for Profit Distribution on Ordinary Shares or Capitalisation of Capital Reserves (Continued)

## 1 Formulation, Implementation or Adjustment of the Cash Dividend Policy (Continued)

## (4) Information on the profit distribution for 2022 (Continued)

(vi) All the independent directors of the Company express the following independent opinions on the reasonability of the above 2022 profit distribution plan:

- ① The formulation of the Company's 2022 profit distribution plan takes into account the characteristics of the construction industry in which the company is located, the company's development stage, its own business model, capital needs and other factors, and is in line with the actual situation of the Company.
- ② The Company's total amount of cash dividends in 2022 maintained a steady growth, accounting for about 15.82% of the net profit attributable to shareholders of listed companies in the consolidated income statement for the current year. It is in line with the requirements of profit distribution policy under the Articles of Association of the Company and "2021-2023 Shareholder Return Plan of China Railway Group Limited", and can take into account the reasonable return of investors and the sustainable development of the Company, and does not impair the interests of small and medium shareholders.

Therefore, we believe that the 2022 profit distribution plan of the Company is reasonable. We agree on the profit distribution plan, and agree to submit it to the Company's general meeting of shareholders for deliberation.

## 2. Special explanation of the cash dividend policy

- |   |                                   |
|---|-----------------------------------|
| Was it in compliance with the provisions of the Articles of Association and the resolutions of the general meeting?   | √ Yes <input type="checkbox"/> No |
| Were the dividend distribution criteria and proportion well-defined and clear?  | √ Yes <input type="checkbox"/> No |
| Were the related decision-making process and mechanism in place?  | √ Yes <input type="checkbox"/> No |
| Did independent directors fulfill their duties and play their role??  | √ Yes <input type="checkbox"/> No |
| Were the minority shareholders given opportunities to sufficiently voice their opinion and make requests and were the legal interests of the minority shareholders fully protected? | √ Yes <input type="checkbox"/> No |

3. If profits for the reporting period and the distributable profit of the Company to ordinary shareholders are positive and no profit distribution plan in cash for the ordinary shares is proposed, the Company should disclose the reasons as well as the use and intended use of the retained profits in details

Not applicable

## SIGNIFICANT EVENTS

### II. Share Incentive Scheme, Employee Stock Ownership Plan and Other Incentive Measures and the Impacts Thereof

As of 31 December 2022, the Incentive Scheme was implemented completely, including the initial grant of 170.7244 million restricted shares and the grant of 11.922 million reserved restricted shares. Regarding 5 participants of the initial grant, 2 participants were transferred from the Company and ceased to take office in the Company due to organisational arrangements, 3 participants were disqualified from the Incentive Scheme due to incompetence in the position, disqualification in performance appraisal, negligence, violation of laws, non-compliance of laws, etc.. The Company repurchased and cancelled 1,379,700 restricted shares that had been granted to the above five participants but not yet unlocked.

#### Purpose of the Incentive Scheme

In order to further promote the establishment and improvement of the long-term incentive mechanism of the Company, attract and retain talents, fully incentivize the senior management personnel, middle management personnel and core personnel of the Group, effectively align the interests of the Shareholders, the Company with the individual interests of the operators to focus on and work collectively for the long-term development of the Company, the Incentive Scheme was formulated in accordance with the relevant requirements under the Securities Law, the Company Law, the Articles of Association and other relevant laws and regulations as well as in conjunction with the current management systems such as the remuneration system and performance appraisal system of the Company.

#### Participants of the Incentive Scheme

The incentive participants include (1) senior management of the Group; (2) middle management of the Group; and (3) core key personnel of the Group.

#### Total number of restricted shares available for issue under the Incentive Scheme and their percentage in the total shares issued as at the date of this annual report

The number of restricted shares to be granted under the Incentive Scheme is not more than 200,000,000 A shares, of which 180,000,000 A shares are to be initially granted and 20,000,000 A shares are reserved. As of 31 December 2022, the Incentive Scheme was implemented completely. 181,266,700 A shares have been granted under the Incentive Scheme, accounting for approximately 0.88% of the total A share capital and 0.73% of the total share capital of the Company as of the date of this annual report.

#### Cap of restricted shares available for grant to each participant in the Incentive Scheme

The total number of the Company's Shares granted under the Incentive Scheme to any of the participants shall not exceed 1% of the total A share capital of the Company at the time when the Incentive Scheme was submitted for approval at the general meetings. The value of the entitlements granted to senior management shall be determined at no more than 40% of the total remuneration level (including the value of interests granted) at the time of grant, and the value of the interests granted to other participants such as the core members in management, technology and business shall be determined reasonably by the Board.



## SIGNIFICANT EVENTS

### II. Share Incentive Scheme, Employee Stock Ownership Plan and Other Incentive Measures and the Impacts Thereof (Continued)

#### Lock-up period

Lock-up period of the restricted shares granted under the Incentive Scheme shall be 24 months, 36 months and 48 months from the relevant completion date of registration of the restricted shares under the corresponding grant. After the expiry of each of the three unlocking periods, 1/3 of the restricted shares granted under the first grant and the grant of the reserved shares will be unlocked. The restricted shares granted to the incentive recipients under the Incentive Scheme shall not be transferred, used for guarantee or debt repayment until the sales restrictions are released.

#### Amount (if any) payable for the acceptance of restricted shares

The amount payable for the acceptance of restricted shares is the grant price multiplied by the number of restricted shares granted. The total grant price was RMB645,046,645 (excluding the 1,379,700 restricted shares that were repurchased and canceled by the Company).

#### Basis of determining the exercise price

The grant price of the restricted shares under the first grant shall not be less than the nominal value of the shares, and shall not be lower than 60% of the fair market value. The fair market value shall be the higher of the following prices: 1. the average trading price of the underlying A shares of the Company on the last trading day immediately preceding the date of the relevant announcement of the first grant (the total transaction value for the last trading day/total volume of the shares of the Company traded for the last trading day); or 2. any of the average trading price of the underlying A shares of the Company for the last 20 trading days, 60 trading days and 120 trading days immediately preceding the date of the relevant announcement.

The grant of the restricted shares under the reserved grant is subject to the consideration and passing of related resolutions by the Board and the disclosure of related information. The grant price of the restricted shares under the reserved grant shall not be less than the nominal value of the shares, and shall not be lower than 60% of the fair market value. The fair market value shall be the higher of the following prices: 1. the average trading price of the A shares on the last trading day immediately preceding the date of the announcement of Board resolutions on the reserved grant; or 2. any of the average trading price of the A shares for the last 20 trading days, 60 trading days and 120 trading days immediately preceding the date of the announcement of Board resolutions on the reserved grant.

#### The remaining life of the Incentive Scheme

The term of the Incentive Scheme commenced from the completion date of registration of the restricted shares under the first grant and will end on the date when all the restricted shares granted to the participants have been unlocked or repurchased and cancelled, the maximum period of which shall not exceed 72 months.

#### Agreement on the granting of restricted shares

The Company entered into an agreement on the granting of restricted shares with the participants in order to determine their respective rights and obligations pursuant to the Incentive Scheme.

## SIGNIFICANT EVENTS

### Conditions of grant of the restricted shares

The Company granted restricted shares to the participants upon satisfaction of all of the following conditions of grant, and no restricted shares would be granted to the participants if any of the following conditions of grant has not been satisfied.

1. None of the following events with respect to the Company has occurred: i. issue of an auditors' report with adverse opinion or which indicates an inability to give an opinion by a certified public accountant with respect to the financial and accounting report of the Company for the latest accounting year; ii. issue of an auditors' report with adverse opinion or which indicates an inability to give an opinion by a certified public accountant with respect to the internal control of the financial report of the Company for the latest accounting year; iii. failure to conduct profit distribution in accordance with laws and regulations, the Articles of Association and public undertakings during the 36 months after listing; iv. prohibition from implementation of a share incentive scheme by laws and regulations; v. other circumstance as determined by the CSRC.
2. None of the following events with respect to the participant has occurred: i. he or she has been determined by the Shanghai Stock Exchange as an ineligible person in the past 12 months; ii. he or she has been determined by the CSRC or any of its delegated agencies as an ineligible person in the past 12 months; iii. he or she has been imposed with administrative penalties or measures prohibiting access into the securities market by the CSRC or any of its delegated agencies due to material non-compliance of laws and regulations in the past 12 months; iv. he or she is prohibited from being a director or senior management of a company under the Company Law; v. he or she is prohibited from participating in any share incentive scheme of listed companies as required by laws and regulations; vi. he or she falls under any other circumstances as determined by the CSRC.
3. The Company is deemed to have achieved the performance target if all of the following conditions are satisfied: i. the average growth rate of the net profit for 2018 to 2020 shall not be less than 11.75%; ii. the average return on net assets for 2018 to 2020 shall not be less than 9.86%; iii. the economic value added performance targets set by SASAC in 2020 is achieved.
4. The individual performance appraisal of the participants: the individual performance appraisal result of the participants in 2020 is competent or above.

## SIGNIFICANT EVENTS

## III. Performance Status of Undertakings

## 1. Undertakings made by undertaking parties, including the ultimate controller, shareholders, related parties, acquirers of the Company and the Company given or subsisting in the reporting period

Undertaking background	Type of undertaking	Undertaking party	Content of the undertaking	Timing and duration of undertaking	Whether there is a deadline for performance	Whether duly complied	If not duly complied, describe the specific reasons	If not duly complied, describe future plans
IPO-related undertakings	Non-competition	CREC	Upon the establishment of China Railway in accordance with the law, CREC and its subsidiaries (other than China Railway) will not in any form, directly or indirectly, engage in or participate in or assist in the engagement or participation in any business that competes, or is likely to compete with the core businesses of China Railway and its subsidiaries. If CREC or its subsidiaries (other than China Railway) become(s) aware of any new business opportunity which directly or indirectly competes, or is likely to compete, with the core businesses of China Railway, it shall notify China Railway in writing of such business opportunity immediately upon becoming aware of it, and undertakes that priority and a preemptive right of first refusal in respect of the business opportunity shall be available to China Railway or its subsidiaries. If CREC or any of its subsidiaries intends to transfer, sell, lease or license or otherwise assign to any third parties or permit them any new business opportunity, assets or interests that it may acquire in future and which may compete or is likely to compete, directly or indirectly, with the core businesses of China Railway, CREC warrants that such business opportunity, assets or interests will first be offered to China Railway or its subsidiaries.	None	No	Yes	/	/
Undertakings related to refinancing	Other undertakings	CREC	If China Railway is subject to administrative penalties or currently under formal investigation due to any undisclosed violation of laws and regulations in respect of the delay in developing acquired land, land speculation, hoarding of properties and driving up of property prices by price-rigging, which cause losses to China Railway and its investors, CREC shall bear the liability for compensation according to the requirements of the relevant laws and administrative regulations and as required by the securities regulatory authorities.	Long term	No	Yes	/	/

## SIGNIFICANT EVENTS

### III. Performance Status of Undertakings (Continued)

*Note 1: For details of the relevant undertakings made by the Company and CREC during the material asset restructuring of China Railway Erju Co., Ltd. (renamed as China Railway Hi-Tech Industry Co., Ltd. in March 2017, stock code: 600528.SH), a subsidiary of the Company, please refer to the Report on the Material Asset Swap and Share Issuance for Asset Acquisition, Fundraising and Related Party Transaction of China Railway Erju Co., Ltd. (Revision) disclosed on the website of the Shanghai Stock Exchange (<http://www.sse.com.cn>) on 21 September 2016. The Company and CREC are currently duly complying with all the undertakings.*

*Note 2: The Company issued the Letter of CREC on Changing Undertakings on Certain Contingencies on 25 November 2020, pursuant to which, the performance term of the original undertaking in relation to apply for ownership certificates for defective real estate was changed to long-term undertaking. The Letter was considered and approved by the 2020 first extraordinary general meeting of China Railway Hi-tech Industry Corporation Limited (CRHIC) on 25 December 2020. For details, please refer to the Announcement of CRHIC on Changing the Performance Term of Undertakings on Certain Contingencies by the Controlling Shareholder of the Company disclosed at the website of the Shanghai Stock Exchange (<http://www.sse.com.cn>) on 8 December 2020. The Company is currently duly complying with the relevant undertaking.*

*Note 3: For details of the relevant undertakings made by the Company and CREC during the share issuance for asset acquisition, please refer to the Report on the Share Issuance for Asset Acquisition of China Railway Group Limited(Revision) published on the website of the Shanghai Stock Exchange (<http://www.sse.com.cn>) on 31 May 2019. The Company and CREC are currently duly complying with all the undertakings.*

*Note 4: In the course of acquiring the control over China Railway Prefabricated Construction, the Company and CREC issued the Letter of Undertaking to Avoid Horizontal Competition with Beijing Hengtong Innovation Luxwood Technology Co., Ltd., Letter of Undertaking to Regulate Related Party Transactions with Beijing Hengtong Innovation Luxwood Technology Co., Ltd., and Letter of Undertaking to Safeguard the Independence of Beijing Hengtong Innovation Luxwood Technology Co., Ltd. respectively. The above undertakings are continuously effective during the period in which the Company has control over Beijing Hengtong Innovation Luxwood Technology Co., Ltd. The Company and CREC are currently duly complying with the undertakings.*

*Note 5: In the course of spinning off CRHEEC to go listing on the STAR Market, the Company and CREC issued the Letter of Undertaking to Avoid Horizontal Competition, Letter of Undertaking to Reduce and Regulate Related Party Transactions, Letter of Undertaking to Make up for Diluted Immediate Returns, and other letters of undertakings. For details, please refer to the Plan for China Railway Group Limited on the Spin-off of Its Subsidiary China Railway High-speed Electrification Equipment Corporation Limited to Go Listing on the STAR Market (Revision) disclosed on the website of the Shanghai Stock Exchange on 30 September 2020. The Company and CREC are currently duly complying with all the undertakings.*

## SIGNIFICANT EVENTS

### III. Performance Status of Undertakings (Continued)

2. If the Company has made a profit forecast to its assets or projects, and the profit estimate period is within the reporting period, the Company's explanation on whether its assets or projects would meet its profit forecast and the reasons thereof  
Not applicable
3. Fulfillment of undertakings and its impact on goodwill impairment test  
Not applicable

### IV. Non-operating Appropriation of Funds by the Controlling Shareholder and Other Related Parties during the Reporting Period

Not applicable

### V. Illegal Guarantee

Not applicable

### VI. Explanation of the Company on the "Modified Audit Report" from Auditors

Not applicable

## SIGNIFICANT EVENTS

### VII. Analysis and Explanation of the Company on the Reasons for and Impacts of the Changes in Accounting Policies or Accounting Estimates or Correction of Material Accounting Errors

1. **Analysis and explanation of the Company on the reasons for and impacts of the changes in accounting policies or accounting estimates**

The Ministry of Finance issued in 2021 the Notice on the Issuance of the Interpretation No. 15 of Accounting Standards for Business Enterprises, and issued the Notice on the Issuance of the Interpretation No. 16 of Accounting Standards for Business Enterprises and Implementation Q&As on Accounting Standards for Business Enterprises (collectively, the “**Notices and Implementation Q&As**”) in 2022 and 2023, The Group and the Company have adopted the Notices and Implementation Q&As in preparation of the CAS 2022 financial statement, and there is no material impact to the Group’s and the Company’s financial statements.

2. **Analysis and explanation of the Company on the reasons for and impacts of the correction of material accounting errors**

Not applicable

3. **Communications with former auditors**

Not applicable

4. **Others**

Not applicable

## SIGNIFICANT EVENTS

## VIII. Appointment and Removal of Auditors

Unit: '0,000 Currency: RMB

	Current engagement
Name of domestic accounting firm	PricewaterhouseCoopers Zhong Tian LLP
Remuneration of domestic accounting firm	3,310
Term of domestic accounting firm	6 years
Names of the certified public accountants of the domestic accounting firm	Zhao Jianrong, Hu Wei
The continuous period providing auditing services by the certified public accountants of the domestic accounting firm	Zhao Jianrong (1 year), Hu Wei (2 years)
Name of international accounting firm	PricewaterhouseCoopers
Remuneration of international accounting firm	220
Term of international accounting firm	6 years

	Name	Remuneration
Accounting firm for internal control audit	PricewaterhouseCoopers Zhong Tian LLP	180
Financial advisor	/	/
Sponsor	/	/

## SIGNIFICANT EVENTS

### VIII. Appointment and Removal of Auditors (Continued)

#### Explanation on the appointment and removal of auditors

On 29 and 30 March 2022, two resolutions, namely the Resolution on the Appointment of Auditors for 2022 and Resolution on the Appointment of Internal Control Auditors for 2022 were considered and approved at the 14th meeting of the fifth session of the Board of Directors. For details of the appointment of auditors, please refer to the Announcement of China Railway Group Limited on Renewal of Appointment of Auditors disclosed on the website of the Shanghai Stock Exchange on 31 March 2022. These resolutions were then considered and approved at the 2021 annual general meeting of the Company on 22 June 2022. The Company has engaged PricewaterhouseCoopers Zhong Tian LLP and PricewaterhouseCoopers as the auditors of the Company for 2022 and engaged PricewaterhouseCoopers Zhong Tian LLP as the internal control auditors for 2022. For details, please refer to the Announcement of China Railway Group Limited on Resolutions of Annual General Meeting of 2021 disclosed by the Company on the website of the Shanghai Stock Exchange on 23 June 2022.

### IX. Risk of Suspension of Listing

#### 1. Reason for Suspension of Listing

Not applicable

#### 2. Response Measures to be Adopted by the Company

Not applicable

#### 3. Delisting and the Reasons Thereof

Not applicable



## SIGNIFICANT EVENTS

### X. Matters Relating to Insolvency or Restructuring

Not applicable

### XI. Material Litigation and Arbitration

The Company had no material litigation or arbitration during the year.

### XII. Penalty and Rectification Order against the Company and its Directors, Supervisors, Senior Management, Controlling Shareholders, Ultimate Controller and Acquirer

Not applicable

### XIII. Integrity of the Company and its Controlling Shareholders and Ultimate Controllers during the Reporting Period

During the reporting period, the Company and its controlling shareholder and ultimate controller operated legally by strictly following the provisions of the laws and regulations and normative documents, such as the Company Law and the Securities Law, and duly fulfilled all the undertakings without committing any default. The Company was on the "Credit List of Top 500 Listed Companies in China in 2022" as accredited by the China Cooperative Trade Enterprises Association and China Enterprise Reform and Development Society.

## SIGNIFICANT EVENTS

## XIV. Significant Related Party Transactions

## 1. Related party transactions in ordinary course of business

## (1) Matters which were disclosed in announcement without subsequent progress or changes

Not applicable

## (2) Matters which were disclosed in announcement with subsequent progress or changes

Not applicable

## (3) Matters undisclosed in announcement

Unit: '000 Currency: RMB

Related parties	Related relations	Type of related party transaction	Particulars of related party transaction	Pricing method of related party transaction	Price of related party transaction	Amount of related party transaction	Percentage of transaction value to the same type of transactions (%)
China Railway State Assets Management Co., Ltd.	Wholly-owned subsidiary of parent company	Receipt of labor services	Lease of office premises, etc.	Contract price	23,718	23,718	Less than 1%
China Railway State Assets Management Co., Ltd.	Wholly-owned subsidiary of parent company	Receipt of labor services	Receipt of comprehensive services	Contract price	46,586	46,586	Less than 1%
<b>Total</b>					<b>70,304</b>	<b>70,304</b>	

Description of related party transactions

The above two transactions resulted from the implementation during the reporting period of the Premises Leasing Agreement and Comprehensive Services Agreement renewed by the Company and CREC on 30 December 2021. The terms of both agreements are three years. The total transaction amount involved was within the decision-making authority of the Board and was considered and approved at the 12th meeting of the fifth session of the Board, which complied with the relevant requirements of The Rules Governing the Listing of Stock on Shanghai Stock Exchange. Meanwhile, the Premises Leasing Agreement and Comprehensive Services Agreement were exempted from the requirements of reporting, annual review, announcement and independent shareholders' approval as the annual caps of such transactions were within the de minimis exemption under the Hong Kong Listing Rules. In addition, the interest expense on lease liabilities recognized by the Company's subsidiaries arisen from the housing lease with China Railway State Assets Management Co., Ltd. was RMB288,000.

## SIGNIFICANT EVENTS

## XIV. Significant Related Party Transactions (Continued)

## 2. Related party transactions in relation to acquisition and disposal of assets

## (1) Matters which were disclosed in announcement without subsequent progress or changes

Not applicable

## (2) Matters which were disclosed in announcement with subsequent progress or changes

Not applicable

## (3) Matters undisclosed in announcement

Not applicable

## (4) If agreement upon performance is involved, the performance achievements during the reporting period shall be disclosed

Not applicable

## 3. Significant related party transactions in relation to joint external investment

## (1) Matters which were disclosed in announcement without subsequent progress or changes

Not applicable

## (2) Matters which were disclosed in announcement with subsequent progress or changes

Not applicable

## (3) Matters undisclosed in announcement

Not applicable

## 4. Amounts due from/to related parties

## (1) Matters which were disclosed in announcement without subsequent progress or changes

Not applicable

## (2) Matters which were disclosed in announcement with subsequent progress or changes

Not applicable

## (3) Matters undisclosed in announcement

Not applicable

## SIGNIFICANT EVENTS

## XIV. Significant Related Party Transactions (Continued)

## 5. The financial business between the Company and its related financial company, and between the financial company held by the Company and its related parties

China Railway Finance Co., Ltd. provides financial services to the Company's controlling shareholder, CREC and its subsidiaries, which enables the Company to use part of its financing funds to improve the efficiency of capital utilization and increase the benefits through the net interest and service fees earned by China Railway Finance Co., Ltd.. The Proposal on the Related Party Transactions of Financial Services Framework Agreement between China Railway Finance Co., Ltd. and China Railway Engineering Group Co., Ltd. was considered and adopted at the 12th meeting of the fifth session of the Board convened by the Company on 22 December 2021, in which it was agreed that China Railway Finance Co., Ltd., a subsidiary of the Company, would renew the Financial Services Framework Agreement (the agreement would expire on 31 December 2024) with CREC, the controlling shareholder of the Company, and provide deposits, loans and other financial services to CREC and its subsidiaries pursuant to the agreement. For details, please refer to the relevant announcement of the Company dated 31 December 2021 disclosed on the website of the Shanghai Stock Exchange. During the reporting period, the daily deposit balance (including interest accrued) of CREC and its subsidiaries with China Railway Finance Co., Ltd. did not exceed the maximum amount stipulated in the Financial Services Framework Agreement; the maximum daily loan balance (including interest accrued) obtained by CREC and its subsidiaries from China Railway Finance Co., Ltd. did not exceed the maximum amount stipulated in the Financial Services Framework Agreement; and the service fee collected by China Railway Finance Co., Ltd. from CREC and its subsidiaries for other financial services did not exceed the maximum amount stipulated in the Financial Services Framework Agreement.

## (1) Deposit business

Unit: '000 Currency: RMB

Related Party	Related relationship	Maximum daily deposit limit	Range of deposit interest rate	Amount for the current period			Closing balance
				Opening balance	Total deposits for the current period	Total withdrawals for the current period	
CREC	Parent company		1.265%	127,147	4,314,006	3,847,723	593,430
China Railway State Assets Management Co., Ltd.	Wholly-owned subsidiaries of the parent company	20,000,000	1.265%	591,196	816,193	1,386,177	21,212
Party school of China Railway Engineering Group Co., Ltd.	Wholly-owned subsidiaries of the parent company		1.265%	29,972	50,905	68,742	12,135
<b>Total</b>				<b>748,315</b>	<b>5,181,104</b>	<b>5,302,642</b>	<b>626,777</b>

## SIGNIFICANT EVENTS

## XIV. Significant Related Party Transactions (Continued)

5. The financial business between the Company and its related financial company, and between the financial company held by the Company and its related parties (Continued)

## (2) Loan business

Unit: '000 Currency: RMB

Related Party	Related relationship	Line of credit	Range of loan interest rate	Opening balance	Amount for the current period		Closing balance
					Total loans for the current period	Total repayments for the current period	
CREC	Parent company	3,500,000	3.3%-3.45%	980,000	1,100,000	980,000	1,100,000

## (3) Credit business or other financial business

Unit: '000 Currency: RMB

Related Party	Related relationship	Business type	Total	Amount incurred
CREC	Parent company	Comprehensive credit granting	3,500,000	1,100,000

## SIGNIFICANT EVENTS

## XIV. Significant Related Party Transactions (Continued)

## 5. The financial business between the Company and its related financial company, and between the financial company held by the Company and its related parties (Continued)

## (4) Others

Unit: '000 Currency: RMB

Item	Related Party	Amount for the current period	Amount of the corresponding period last year
Interest Income	CREC	44,788	54,652
Interest Expense	CREC	13,887	12,705
Interest Expense	China Railway State Assets Management Co., Ltd.	1,086	3,935
Interest Expense	Party school of China Railway Engineering Group Co., Ltd.	205	66

Note: The interest income represents the interest receivable by China Railway Finance Co., Ltd., a subsidiary of the Company, from CREC for the loans to CREC. The interest expenses represent the interest payable by China Railway Finance Co., Ltd. to CREC and China Railway State Assets Management Co., Ltd. and party school of CREC for deposit-taking.

## 6. Others

## Related party guarantees

Unit: '000 Currency: RMB

Guarantor	Secured party	Guarantee amount	Commencement date of guarantee	Expiry date of guarantee	Guarantee fully performed
CREC	China Railway	3,500,000	October 2010	April 2026	No

Note: These are unconditional and irrevocable joint and several liability guarantees provided by CREC for the entire amount of the 15-year 2010 Corporate Bonds (Tranche 2) issued by the Company in October 2010. In accordance with the agreement on the guarantee period in the Company's "Prospectus for Public Offering of Corporate Bonds", the guarantor shall assume the guarantee liability during the period from the first day of issuance of the bonds to six months after the maturity date of the bonds. As of 31 December 2022, the guarantee liability undertaken by CREC as the guarantor of the 15-year 2010 Corporate Bonds (Tranche 2) has not expired. As at 31 December 2022, the remaining payable amount of the above-mentioned bonds was RMB3,526,101 thousand (31 December 2021: RMB3,524,444 thousand).

## SIGNIFICANT EVENTS

## XV. Material Contracts and Their Performance

## 1. Trusteeship, Contracting and Leasing

## (1) Trusteeship

Not applicable

## (2) Contracting

Not applicable

## (3) Leasing

Not applicable

## 2. Guarantees

Unit: '0,000 Currency: RMB

Guarantees provided by the Company (excluding the guarantees to subsidiaries)															
Guarantor	Relationship between guarantor and the listed company	Secured party	Guarantee amount	Commencement date of guarantee			Type of guarantee	Main debt condition	Collateral (if any)	Guarantee fully performed	Guarantee overdue	Overdue amount	Counter guarantee available	Guarantee provided to related parties	Related relationship
				(date of the agreement)	Commencement of guarantee	Expiry date of guarantee									
China Railway	The Company	Linha Railway Co., Ltd.	30,479	30 June 2008	30 June 2008	20 June 2027	Joint and several liability guarantee	Normal performance	None	No	No	/	Yes	No	/
China Railway No.4 Engineering Group Co., Ltd.	Wholly-owned subsidiary	Xuzhou Yingbin Expressway Construction Co., Ltd.	119,000	22 October 2018	30 October 2018	29 October 2028	Joint and several liability guarantee	Normal performance	Equity pledge	No	No	/	None	No	/
China Railway No.5 Engineering Group Co., Ltd.	Wholly-owned subsidiary	Qinghai Minmetals China Railway Expressway Construction Management Co., Ltd.	14,850	14 January 2020	14 January 2020	30 December 2045	Joint and several liability guarantee	Normal performance	Equity pledge	No	No	/	None	No	/
China Railway No.5 Engineering Group Co., Ltd.	Wholly-owned subsidiary	Jiangxi Chengke Yunchuang Real Estate Co., Ltd.	4,100	22 September 2021	22 September 2021	21 September 2029	Joint and several liability guarantee	Normal performance	None	No	No	/	None	No	/
China Railway No.10 Engineering Group Co., Ltd.	Wholly-owned subsidiary	Chongqing CREC Renzhi Pension Industry Co., Ltd.	50,000	12 January 2017	12 January 2017	30 November 2024	Joint and several liability guarantee	Normal performance	None	No	No	/	None	No	/
China Railway Major Bridge Engineering Group Co., Ltd.	Wholly-owned subsidiary	Wuhan Yangsigang Bridge Co., Ltd.	156,555.7	24 December 2015	24 December 2015	30 June 2023	Joint and several liability guarantee	Normal performance	None	No	No	/	None	No	/
China Railway Major Bridge Engineering Group Co., Ltd.	Wholly-owned subsidiary	Shantou Niutianyang Expressway Investment Development Co., Ltd.	7,502.03	14 November 2019	14 November 2019	23 August 2039	Joint and several liability guarantee	Normal performance	Equity pledge	No	No	/	None	No	/
China Railway Tunnel Group Co., Ltd.	Wholly-owned subsidiary	China Shanghai (Group) Corporation for Foreign Economic & Technological Cooperation	5,691.75	29 December 2012	29 December 2012	30 June 2023	Joint and several liability guarantee	Normal performance	None	No	No	/	None	No	/

## SIGNIFICANT EVENTS

## XV. Material Contracts and Their Performance (Continued)

## 2. Guarantees (Continued)

Guarantees provided by the Company (excluding the guarantees to subsidiaries)															
Guarantor	Relationship between guarantor and the listed company	Secured party	Guarantee amount	Commencement date of guarantee			Type of guarantee	Main debt condition	Collateral (if any)	Guarantee fully performed	Guarantee overdue	Overdue amount	Counter guarantee available	Guarantee provided to related parties	Related relationship
				(date of the agreement)	of guarantee	of guarantee									
China Railway Shanghai Engineering Group Co. Ltd.	Wholly-owned subsidiary	Fangchenggang China Railway Diluyuan Investment Development Co., Ltd.	500	8 May 2019	8 May 2019	31 December 2030	Joint and several liability guarantee	Normal performance	Equity pledge	No	No	/	None	No	/
China Railway International Group Co., Ltd.	Wholly-owned subsidiary	MontagProp Proprietary Limited	6,139.5	3 July 2015	3 July 2015	3 November 2023	Joint and several liability guarantee	Normal performance	None	No	No	/	None	No	/
China Southern Investment Group Co., Ltd.	Wholly-owned subsidiary	Shantou Niutianyang Expressway Investment Development Co., Ltd.	336,840.92	14 November 2019	14 November 2019	23 August 2039	Joint and several liability guarantee	Normal performance	Equity pledge	No	No	/	None	No	/

Total amount of guarantees incurred during the reporting period (excluding the guarantees provided to subsidiaries) -86,289.42

Total balance of guarantee as at the end of the reporting period (A) (excluding the guarantees provided for subsidiaries) 731,658.9

**Guarantees provided by the Company to its subsidiaries**

Total amount of guarantees provided to subsidiaries during the reporting period 207,573.45

Total balance of guarantee provided to subsidiaries as at the end of the reporting period (B) 15,314,781.95

**Total guaranteed amount of the Company (including guarantees provided to subsidiaries)**

Total amount of guarantees (A+B) 16,046,440.85

Total guaranteed amount as a percentage of net assets of the Company (%) 37.93

Of which:

Amount of guarantees provided to shareholders, de facto controller and their related parties (C) 0.00

Amount of debt guarantees directly or indirectly provided to the parties with the gearing ratio exceeding 70% (D) 13,304,068.31

Excess amount of aggregate guarantee over 50% of net assets (E) 0.00

Total amount of the above three types of guarantees (C+D+E) 13,304,068.31

Statement on the contingent joint and several liability in connection with unexpired guarantee Not applicable

Explanations on guarantees

1. The aggregate guarantee included the commitment to make up the difference of RMB97,413.1243 million provided to its subsidiaries;
2. As at 31 December 2022, the balance of guarantee of China Railway Group Limited (consolidated) in relation to real estate mortgage was RMB49,788.4402 million.



## SIGNIFICANT EVENTS

## XV. Material Contracts and Their Performance (Continued)

## 3. Management of Cash Assets Entrusted to Third Parties

## (1) Entrusted wealth management

(i) *Overview of entrusted wealth management*  
Not applicable

(ii) *Breakdown of entrusted wealth management*  
Not applicable

(iii) *Impairment provision of entrusted wealth*  
Not applicable

## (2) Entrusted loans

(i) *Overview of entrusted loans*

Unit: '0,000 Currency: RMB

Type	Source of funds	Occurrence amount	Unexpired balance	Overdue amount
Entrusted loans	Self-owned funds	439,280.88	439,280.88	0

## SIGNIFICANT EVENTS

## XV. Material Contracts and Their Performance (Continued)

## 3. Management of Cash Assets Entrusted to Third Parties (Continued)

## (2) Entrusted loans (Continued)

## (ii) Breakdown of entrusted loans

Unit: 0'000 Currency: RMB

Name of trustee	Type of entrusted loan	Entrusted loan amount	Commencement date	Termination date	Source of funds	Source of target	Determination of returns	Annualized yield rate (%)	Expected gains (If any)	Actual gains or losses	Actual recovery	Going through legal procedures or not	Future entrusted loan plan available	Amount of impairment provision (if any)
Beijingxi Railway Station Branch, ICBC	Entrusted loan	120,780.88	2021/1/1	2041/12/30	Self-owned funds	Inner Mongolia Jitong Railway (Group) Co., Ltd. (內蒙古集通鐵路集團)	By agreement	3.81	4,501.75	-		Yes	No	1,761.85
China Railway Finance Co., Ltd.	Entrusted loan	7,500	2020/3/10	2023/3/9	Self-owned funds	Payment of principal and interest by Cenxi-Cangwu Expressway	By agreement	4.75	1,068.75	340.75		Yes	No	28.67
China Railway Finance Co., Ltd.	Entrusted loan	16,500	2020/3/11	2023/3/10	Self-owned funds	Payment of principal and interest by Yulin-Shenmu Expressway	By agreement	4.75	2,351.25	749.66		Yes	No	63.08
China Railway Finance Co., Ltd.	Entrusted loan	21,700	2020/3/11	2023/3/10	Self-owned funds	Payment of principal and interest by Pingzheng	By agreement	4.75	3,092.25	985.91		Yes	No	82.96
China Railway Finance Co., Ltd.	Entrusted loan	67,000	2020/3/10	2023/3/9	Self-owned funds	Payment of principal and interest by Miansui Expressway	By agreement	4.75	9,547.5	3,044.06		Yes	No	256.16
China Railway Finance Co., Ltd.	Entrusted loan	7,500	2020/3/10	2023/3/9	Self-owned funds	Payment of principal and interest by Quanzhou county-Xing'an county Expressway	By agreement	4.75	1,068.75	340.75		Yes	No	28.67
China Railway Finance Co., Ltd.	Entrusted loan	19,350	2020/3/11	2023/3/10	Self-owned funds	Payment by Guangxi Expressway for the acquisition of Yulin-Shenmu Expressway	By agreement	4.75	2,757.38	957.11		Yes	No	73.98
China Railway Finance Co., Ltd.	Entrusted loan	151,750	2020/3/10	2023/3/9	Self-owned funds	Gap of capital dividends from Guangxi Expressway	By agreement	5.23	23,786.81	7,506.05		Yes	No	580.18
China Railway Finance Co., Ltd.	Entrusted loan	27,200	2021/3/8	2024/3/7	Self-owned funds	Payment of principal and interest by Dianzhong	By agreement	4.79	3,904.56	313.78		Yes	No	408.94

## (iii) Impairment provision of entrusted loans

Not applicable

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors

## 1. Material contracts signed during the reporting period

## (1) Infrastructure construction

No.	Signatory	Name of contract	Contract awarded Date of contract	Contract sum <i>(RMB'0,000)</i>	Construction period
<b>Railways</b>					
1	China Railway No. 1 Engineering, China Railway No. 4 Engineering, China Railway No. 10 Engineering, China Railway Major Bridge Engineering, China Railway Tunnel, China Railway Shanghai Engineering	General contracting of sections HSZQ-2, HSZQ-4, HSZQ- 5, HSZQ-6、HSZQ-7, HSZQ- 12 for the construction of the civil engineering and auxiliary projects and the relevant project of the Shanghai-Ningbo section of the newly built Shanghai- Nanjing-Hefei High-speed Railway	November 2022	3,260,782	60-84 months
2	China Railway No. 1 Engineering, China Railway No. 2 Engineering, China Railway No. 3 Engineering, China Railway No. 4 Engineering, China Railway No. 10 Engineering, China Railway Major Bridge Engineering, China Railway Tunnel	Unit cost contracting of sections XCTJ1, XCTJ3, XCTJ5, XCTJ6, XCTJ9, XCTJ11, and XCTJ13 of the civil engineering and auxiliary project of the newly built Xining- Chengdu Railway (Gansu- Qinghai section)	November 2022	1,987,147	2,191-2,556 calendar days
3	China Railway No. 3 Engineering, China Railway No. 4 Engineering, China Railway No. 6 Engineering, China Railway No. 10 Engineering, China Railway Major Bridge Engineering, China Railway Guangzhou	Construction cost contracting of sections SJSJG-4, SJSJG-5, SJSJG- 6, SJSJG-8, SJSJG-9, and SJSJG- 10 of the civil engineering and auxiliary project of the newly built Shenzhen-Jiangmen Railway	November 2022	1,488,925	1,461-2,009 calendar days

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

## 1. Material contracts signed during the reporting period (Continued)

## (1) Infrastructure construction (Continued)

No.	Signatory	Name of contract	Contract awarded Date of contract	Contract sum (RMB'0,000)	Construction period
<b>Highway</b>					
1	China Railway No. 10 Engineering	Section Qimen to the boundary of Anhui and Jiangxi of G0321 Dezhou-Shangrao Expressway	December 2022	386,415	42 months
2	China Railway Tunnel	Section ZLGSTJ-4 of Zhengzhou-Luoyang Expressway	November 2022	225,675	3 years
3	China Railway No. 1 Engineering and other parties	Design and construction general contracting of section Qiantun curve to Laoxian line of Tonghua-Wuhai road of national expressway G230	June 2022	213,877	21 months

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

### 1. Material contracts signed during the reporting period (Continued)

#### (1) Infrastructure construction (Continued)

No.	Signatory	Name of contract	Contract awarded Date of contract	Contract sum <i>(RMB'0,000)</i>	Construction period
<b>Municipal and other works</b>					
1	China Railway, China Railway (Guangzhou) Investment & Development, China Railway No. 1 Engineering, China Railway No. 3 Engineering, China Railway No. 4 Engineering, China Railway No. 6 Engineering, China Railway No. 10 Engineering, China Railway Tunnel, China Railway Guangzhou Engineering	General contracting of section Foshan West Station to Guangzhou North Station of Guangzhou-Foshan ring road of intercity rail transit of Pearl River Delta	October 2022	919,017	60 months
2	China Railway, China Southern Railway Construction Investment, China Railway No. 1 Engineering, China Railway No. 2 Engineering, China Railway No. 4 Engineering, China Railway Electrification, China Railway Guangzhou Engineering and other parties	Construction costs general contracting of section YDZH-8 of the newly built "one ring and one line" intercity railway in east Guangdong province	November 2022	820,974	54 months
3	China Railway No. 2 Engineering, China Railway No. 3 Engineering, China Railway No. 4 Engineering, China Railway Tunnel	Sections TJ-01, TJ-02, TJ-03 and TJ-04 of No.2 subsea tunnel project of Jiaozhou Bay	September 2022	484,708	1,552 calendar days

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

## 1. Material contracts signed during the reporting period (Continued)

## (2) Survey, Design and Consulting Services Business

No.	Signatory	Name of contract	Date of winning the bidding/ contract signature	Contract sum (RMB'0,000)	Construction period
1	China Railway Liuyuan Engineering	Special railway line of the pilot highway and railway port construction project for the innovative development of the "Belt and Road" international logistics system (consulting services throughout the whole process with an agent-construction system)	Won the bidding in October 2022 but the contract has been not signed yet	59,130	To completion acceptance
2	China Railway Eryuan Engineering	General contracting of survey and design of Chengdu to Deyang line railway, a municipal railway (suburbs)	March 2022	48,590	December 2026
3	China Railway Eryuan Engineering	General contracting of survey and design of chengdu to Meishan line railway, a municipal railway (suburbs)	March 2022	36,739	December 2026

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

### 1. Material contracts signed during the reporting period (Continued)

#### (3) Engineering Equipment and Component Manufacturing Business

No.	Signatory	Name of contract	Date of winning the bidding/ contract signature	Contract sum <i>(RMB'0,000)</i>	Construction period <i>(months)</i>
<b>Steel structures</b>					
1	China Railway Baoji Bridge and China Railway Shanhaiguan Bridge	Steel structures of the Huanghe Ultra-long bridge of section YZSG-1 of the Huanghe Expressway (Sections 1-3)	June 2022	67,867	1 July 2022-30 June 2023
2	China Railway Shanhaiguan Bridge and China Railway Baoji Bridge	Manufacturing and processing of steel structures of section YZSG-2 of the Huanghe Expressway	June 2022	51,346	June 2022-August 2024
3	China Railway Baoji Bridge	Contracting for the manufacturing of anchorage beams, manufacturing and installation of steel truss beams and relevant auxiliary structures for section HHQ-3 of the extension project of the Long Huanghe Expressway bridge (approach bridge, main bridge section) of G104 Beijing-Pingtai road in Ji'nan	May 2022	50,022	1 June 2022-31 October 2023

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

## 1. Material contracts signed during the reporting period (Continued)

## (3) Engineering Equipment and Component Manufacturing Business (Continued)

No.	Signatory	Name of contract	Date of winning the bidding/ contract signature	Contract sum <i>(RMB'0,000)</i>	Construction period <i>(months)</i>
<b>Turnout</b>					
1	China Railway Shanhaiguan Bridge	Contract of materials supplied by the customer, under the management of State Railway Group, of the newly built Jinhua-Ningbo railway	June 2022	21,915	The date of delivery is from September 2022 to the completion of the project
2	China Railway Shanhaiguan Bridge	Purchase contract of the civil engineering and auxiliary project of the newly built Weifang-Yantan railway	October 2022	21,519	As required by the customer
3	China Railway Baoji Bridge	Procurement and supply contract of materials supplied by the customer, under the management of State Railway Group, of Jiande-Quzhou section of the newly built Hangzhou-Quzhou railway	July 2022	13,687	To the completion of the project



## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

### 1. Material contracts signed during the reporting period (Continued)

#### (3) Engineering Equipment and Component Manufacturing Business (Continued)

No.	Signatory	Name of contract	Date of winning the bidding/ contract signature	Contract sum <i>(RMB'0,000)</i>	Construction period <i>(months)</i>
<b>Engineering machinery (including track equipment and shields)</b>					
1	CREG	Contract of the purchase project of TBM main body for hard rock and subsequent supporting systems of section CZXZZQ-8 of Ya'an-Linzhi section of the newly built Sichuan-Tibet Railway	July 2022	36,201	First unit: 15 October 2022 Second unit: 15 November 2022
2	CREG	Contract of the purchase project of TBM main body for hard rock and subsequent supporting systems in large sections of Xindu Bridge-Bomi section of the newly built Sichuan-Tibet railway	November 2022	35,801	First unit: 1 August 2023 Second unit: 1 September 2023
3	CREG	Sales contract of the two-model shield tunneling machine, i.e. earth pressure balance or TBM, of section JJZQ-4 of Zhuhai-Zhaoqing High-speed Railway	December 2022	21,900	To 5 March 2023

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

## 1. Material contracts signed during the reporting period (Continued)

## (4) Property development business

No.	Project name	Project location	Project type	Planned area (0'000 square meters)
1	Comprehensive enhancement project of urban environment of Wolong District Central City, Nanyang City (Phase I)	Henan	Urban renovation	213
2	Renovation project of urban villages in Xinhua District of section III of urban renovation of the downtown of Cangzhou City	Hebei	Urban renovation	140
3	Renovation of urban village project in Jinsheng Village, Shihudang Town, Songjiang District	Shanghai	Urban renovation	19.35

## 2 Material infrastructure investment projects (BOT and PPP projects) signed during the reporting period

No.	Name of contract	Signatory	Contract sum (RMB100 million)	Shareholding of the project company	Construction period	Concession period	Signing date
1	Contract of PPP project of the Wuzhou-Yulin-Qinzhou Highway (Yulin-Pubei section)	China Railway Communications Investment Group Co., Ltd and other parties (project companies) ("China Railway Communications Party")	178.57	China Railway Communications Party holds 19.9%, the industrial fund holds 80%, and Transfigure holds 0.1% of equity	3	30	September 2022
2	Franchise agreement of Zizhong-Leshan section and Zizhong-Tonglang Expressway (in Sichuan) of S48 line	China Railway City Investment and Development Group Co., Ltd and other parties (project companies) ("China Railway City Party")	187.19	China Railway City Party holds 49.5%, Sichuan Railway Investment holds 50% and Sichuan Road & Bridge holds 0.5% of equity	3	30	May 2022
3	Contract of PPP project of Benxi-Huanre (boundary of Liaoning province and Jilin province) of Benxi-Ji'an Expressway in Liaoning province	China Railway Group Limited and other parties (project companies) ("China Railway Party")	263.71	China Railway Party holds 51%, and the government contributes and holds 49% on behalf of Liaoning Provincial Transportation Investment Group Co., Ltd	4	40	October 2022

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

## 3. Investment projects (BOT and PPP projects) that were operating during the reporting period

No.	Name of contract	Signatory	Contract sum (RMB100 million)	Signing date	Time of entering the operation period	Operation period
1	PPP project of Hohhot City Transit Line 1 (Phase 1)	China Railway Group Limited and other parties	146.79	September 2016	December 2019	25
2	PPP project of the Xundian-Zhanyi Expressway (Kunming section)	China Railway Group Limited and other parties	61.1	August 2018	January 2020	30
3	PPP project of the Dongchuan-Gele section of the S25 Kunming-Qiaojia Expressway	China Railway Group Limited and other parties	56.9	April 2017	January 2020	30

## 4. Strategic framework agreements signed during the reporting period

No.	Signing date	Agreement name	Agreed investment amount (if any)	Main content of agreements
1	March 2022	Strategic cooperation agreement between the Shandong Provincial People's Government and China Railway Group Limited	To strive to get involved in major projects and contracts for major infrastructure projects of Shandong during the "14th Five-Year Plan" period, and the value of the new contracts are not less than RMB500 billion.	<ol style="list-style-type: none"> <li>To establish a long-term strategic partnership.</li> <li>To cooperate in major areas including expressways, municipal railways, urban rail transit, regular railways, roads, airports, ecological governance, water conservation and hydropower, water affairs and water transportation, urban construction, new infrastructure and new energy.</li> <li>To support the establishment of the Shandong subsidiary directly under China Railway.</li> </ol>

## SIGNIFICANT EVENTS

### XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

#### 4. Strategic framework agreements signed during the reporting period (Continued)

No.	Signing date	Agreement name	Agreed investment amount (if any)	Main content of agreements
2	July 2022	Strategic cooperation agreement between the Anhui Provincial People's Government and China Railway Group Limited	During the "14th Five-Year Plan" period, China Railway plans to invest approximately RMB100 billion in Anhui.	<ol style="list-style-type: none"> <li>1. To cultivate industrial clusters featuring rail transit</li> <li>2. To accelerate the establishment of the Anhui Ecological and Environmental Industry Group</li> <li>3. To develop markets of countries and regions along the "Belt and Road"</li> <li>4. To deepen cooperation in infrastructure</li> <li>5. To cooperate in the R&amp;D of high-speed magnetic levitation technology and construction of experimental engineering</li> <li>6. To promote rural revitalization</li> <li>7. To promote the development in north Anhui province</li> <li>8. To forge ahead with the high-quality development of the construction industry in Anhui</li> </ol>

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

### 5. Particulars of Material Properties

#### (1) Property held for development

Name of building or project	Address	Current land use	Area ( <i>'0,000 square meters</i> )	Floor area ( <i>'0,000 square meters</i> )	State of completion	Expected completion date	Interests of the Company and its subsidiaries
China Railway Caishi Project	South of Jingshidong Road, north of Guangfu Avenue and west of Panlong Road, Licheng District, Jinan City, Shandong Province	Commercial housing land, commercial land	58.81	106.58	Under construction	2027	100%
Guangzhou Nuode Cloud City	North of Jiangfu Road and west of Guanghua Road, Jianggao Town, Baiyun District, Guangzhou City, Guangdong Province	Urban residential land	11.7	35	Under construction	2024	80%
Yipin Garden	Lane 1758, Huqingping Highway, Xujing Town, Qingpu District, Shanghai	Ordinary commercial housing	6.04	15.4	Under construction	2024	100%
Beijing Daxing District Huangcun Town Project	Huangcun Town, Daxing District, Beijing	Public service facilities, underground garage, underground storage, residential, commercial	4.64	19.79	Under construction	2024	100%
China Railway Changchun Expo City	No.6888 Yongchun Street, Yongchun Town, Chaoyang District, Changchun City, Jilin Province	Urban residential land, other land for commercial use, land for cultural facilities	232.71	447.16	Under construction	2031	90%

## SIGNIFICANT EVENTS

## XVI. Description of Other Significant Matters That Have a Significant Impact on the Value Judgments and Investment Decisions Made by Investors (Continued)

## 5. Particulars of Material Properties (Continued)

## (2) Property held for investment

Name	Location	Use	Tenure	Interests of the Company and its subsidiaries
Beijing Nuode Center Phase III Building S1, S2, 16 and 19	No. 1 South Yuren Road, Fengtai District, Beijing	Commercial	November 2054	100%
Tianjin Nuode Center No. 1 Building, No. 2 Building and equipped facilities	No. 50 Lwwei Road, Hebei District, Tianjin	Commercial	January 2054	100%
Guiyang Huaguoyuan Shopping Center	Huaguoyuan, Nanming District, Guiyang City, Guizhou Province	Commercial	April 2052	100%
Guangzhou Nuode Center	No. 477 East Hanxi Avenue, Nancun Town, Panyu District, Guangzhou City, Guangdong	Commercial	May 2053	100%
Lot AT090904, Starting Area, Financial City, Tianhe District	Lot AT090904, Starting Area, Financial City, Huangpu Avenue, Tianhe District, Guangzhou City, Guangdong	Commercial	December 2068	100%
Chengdu Nuode No. 1	Intersection of Guangxi Road and Huanhu Road, Shuangliu District, Chengdu City, Sichuan	Commercial	January 2065	100%
Shanghai Nuode International Plaza	3/5 Block, 219 Lane, Xinzhuang Town, Minhang District, Shanghai	Commercial	March 2064	100%
China Railway Real Estate Qingdao Center	No. 8 Hong Kong Middle Road, South City District, Qingdao, Shandong	Commercial	July 2046	100%
Reeda Plaza	No. 46 South Shengli Road, Heping District, Shenyang, Liaoning	Commercial	April 2051	100%
China Railway South Headquarters Building	No. 3333 Houhai Center Road, Nanshan District, Shenzhen, Guangdong	Commercial	December 2046	100%

# ENVIRONMENTAL AND SOCIAL RESPONSIBILITY

## 1. Environmental Information

Whether environmental protection related mechanisms is established Yes

Funds invested in environmental protection during the Reporting Period (Unit: '0,000) 358,590.336

### (1) Description of environmental protection efforts of the highly polluting companies and their subsidiaries as announced by the environmental protection authorities

Not applicable

### (2) Description of environmental protection efforts of companies other than highly polluting companies

#### (i) Administrative penalties due to environmental issues

In 2022, due to the failure to strictly implement measures to control the dust, sewage discharge and construction environment noise generated in certain construction projects during construction, the Company's subsidiaries were subject to administrative penalties by local environmental protection regulatory authorities. The penalty totalled approximately RMB1.6335 million and involved 30 construction project departments. At present, all the penalties have been rectified and accepted by local regulatory authorities. The Company will further strengthen the Company's ecological and environmental protection. By identifying and evaluating the environmental factors of projects under construction and workplaces, the Company will strengthen the control over the risk sources and emissions of ecological and environmental pollution during production, to effectively protect and improve the living and ecological environment..

#### (ii) Disclosure of other environmental information with reference to highly polluting companies

Not applicable

#### (iii) Reasons for not disclosing other environmental information

Not applicable

### (3) Information on ecological protection, pollution prevention and fulfilment of environmental responsibilities

In strict accordance with the Environmental Protection Law of the People's Republic of China and the Energy Conservation Law of the People's Republic of China, the Regulations on the Administration of Environmental Protection of Construction Projects and other laws and regulations, the Company has implemented the thoughts on ecological civilization, established the concept of green development, practiced the decisions on ecological civilization construction and environmental protection of the Party Central Committee and the State Council, and continued refining the environmental management system guided by "ecological priority, green development". The Company has striven to overcome the challenges brought by peak carbon dioxide emissions and carbon neutral by focusing on the strategic positioning of "China Railway in Five Types", "123456" development strategy and strategic goals of "Four Strong Capabilities and Five Excellent Aspects" and "World Class", and brought green development concept into all aspects and stages of its development. The Company, taking energy-saving technology innovation as support, and energy-saving management and energy resources utilization as focus, has improved risk prevention and pollution emergency response capability, steadfastly followed the high-quality, green and low-carbon development path by putting ecology first, and improved its green construction level. The Company has formulated the China Railway Carbon Peaking Action Plan, established the leadership group of carbon peaking and carbon neutrality, and organized a series of learning on "ensuring carbon peaking and carbon neutral to promote high-quality enterprise development". The Company has guided enterprises to steadily promote carbon peaking, comprehensively propelled green and low-carbon transformation development, and continuously improved the capability of supplying high-quality green products and services. Based on systematic environmental management, the Company has obtained ISO14001 environmental management system certification issued by China Certification Center Inc.

## ENVIRONMENTAL AND SOCIAL RESPONSIBILITY

### 1. Environmental Information (Continued)

#### (3) Information on ecological protection, pollution prevention and fulfilment of environmental responsibilities (Continued)

The main energy consumed by the Company is electricity, gasoline, diesel fuel and natural gas used in the construction and office processes. The Company has been promoting energy saving and efficiency enhancement solidly. In accordance with the provisions of the Regulations on the Supervision and Management of Energy Saving and Emission Reduction and the "14th Five-Year Plan" for Energy Conservation and Emission Reduction, the Company has issued the Quantitative Indicators of Energy Saving and Ecological Environment Protection for 2022. In 2022, the comprehensive energy consumption (comparable price) per ten-thousand yuan of operating income of the Company was 0.0429 ton of standard coal/RMB10,000, 3.16% lower than the same period last year; and the emissions of CO<sub>2</sub> per ten-thousand yuan were 0.1502 ton/RMB10,000, 3.8% lower than the same period last year, successfully completing the established work goals in annual energy conservation and environmental protection of 2022. The following table shows the specific energy consumption.

#### Key Performance Indicators of Energy and Resource Consumption

Energy/Resource type	Indicators	Data in 2022	Year-on-year increase/decrease
Direct energy consumption	Gasoline (10,000 tonnes)	50.0052	8.5%
	Gasoline (ton/RMB10,000)	0.0046	2.2%
	Diesel (10,000 tonnes)	167.5264	5.6%
	Diesel (ton/RMB10,000)	0.015	0
	Natural gas (10,000 standard m <sup>3</sup> )	7,160.4	5.8%
	Natural gas (m <sup>3</sup> /RMB10,000)	0.66	-1.5%
Indirect energy consumption	Electricity (10,000 kwh)	1,130,796	8.2%
	Electricity (10,000 kwh/RMB10,000)	0.0104	1%
Comprehensive energy consumption	Comprehensive energy consumption (10,000 tonnes of standard coal)	482.323	7.5%
	Comprehensive energy consumption (ton of standard coal/RMB10,000 income)	0.0429	-3.2%
	Comprehensive energy consumption (10,000 kwh)	3,924,515	7.5%
	Comprehensive energy consumption (kwh/RMB10,000 income)	361	0.5%
Water	Total new water consumption (10,000 tonnes)	46105.66	0.02%

Note: Based on business characteristic of the Company, it is not applicable to calculate energy consumption density using unit of production (UOP) or per facility. Therefore, the Company adopts comprehensive energy consumption (comparable price) per RMB10,000 operating income to calculate and disclose energy consumption density.



## ENVIRONMENTAL AND SOCIAL RESPONSIBILITY

## 1. Environmental Information (Continued)

## (4) Measures taken to reduce carbon emissions during the reporting period and their effects

Whether to adopt carbon reduction measures	Yes
Reduction in CO <sub>2</sub> emission density (ton/RMB10,000)	3.8%
Types of carbon reduction measures (e.g. using clean energy to generate electricity, using carbon reduction technologies in production, developing new products that can help reduce carbon, etc.)	Stepping up clean energy substitution, improving the level of fossil energy use, driving low-carbon transformation of energy structure, developing and using energy-saving and low-carbon technologies, etc.

To implement the national guidelines and policies regarding energy conservation and emission reduction, the Company thoroughly implemented the concept of green development, promoted green planning and design, introduced a full life cycle green design mode, controlled energy consumption at the source, and instilled the concept of green, low-carbon, and ecological design into the entire process of engineering planning and design. The Company put emphasis on the construction of the system of energy conservation and ecological environment protection. To that end, the Company continued strengthening the identification and evaluation of key environmental factors in construction projects and operation sites, formulated and implemented environmental management plans, and established the ecological and environmental monitoring system. In addition, the Company cemented the management of ecological and environmental risk sources and pollutant emission control during operation, and conducted continuous supervision and inspection. **First, the system of energy conservation and ecological environment protection was improved comprehensively.** The Company launched a special project to improve safety, quality and environmental protection. In response to the new requirements for improving the management system of energy saving and environmental protection, the Company intended to revise and improve the existing administrative measures for energy-saving and environmental protection, to improve the management system of energy saving and environmental protection and its management work. **Second, the statistical monitoring system for energy conservation and ecological environment protection operated properly.** The Company attached great importance to energy conservation and ecological environment protection. In this regard, the Company aligned its efforts with the new energy saving and emission reduction system of central enterprises published by the SASAC, and developed its own the energy conservation and ecological environment protection system. Currently, online reporting has become the norm. Paying continuous attention to the requirements of the SASAC's 14th five-year plan for energy conservation and environmental protection of central enterprises, the Company will improve the statistical monitoring system, and make data statistics of energy conservation and environmental protection. **Third, the goal of energy conservation and ecological environment protection set forth in the "14th Five-Year Plan" was clarified.** In accordance with the requirements of SASAC, the Company calculated the indicators of energy conservation and environmental protection, formed the proposed values of energy saving and emission reduction indicators and submitted them to the SASAC. According to the proposed values, the Company clarified the objectives of energy conservation and environmental protection set forth in the "14th Five-Year Plan" and officially released them. Furthermore, the Company strictly assessed the rewards and punishments and carried out energy conservation and environmental protection set forth in the "14th Five-Year Plan", to achieve the established objectives.

## ENVIRONMENTAL AND SOCIAL RESPONSIBILITY

### 1. Environmental Information (Continued)

#### (4) Measures taken to reduce carbon emissions during the reporting period and their effects (Continued)

##### Key Performance Indicators of Emissions and Waste

Indicators	Data in 2022	Year-on-year increase/decrease
Total amount of CO <sub>2</sub> emission (10,000 tonnes)	1,632.9429	6.7%
CO <sub>2</sub> emission density (ton/RMB10,000)	0.1502	-3.8%
NO <sub>x</sub> emission (ton)	2.94	-41.31%
Smoke (powder) emission (ton)	23.18	5.5%
VOC emission (ton)	1.254	-37.3%
SO <sub>2</sub> (ton)	0	0
Total hazardous waste (ton)	1,340	3.1%
Discharge of hazardous waste per RMB10,000 (kg/RMB10,000)	0.012	-5.1%
Total nonhazardous waste (10,000 tons)	508.85	3.1%
Discharge of nonhazardous waste per RMB10,000 (kg/RMB10,000)	0.05	0

Notes: 1. The Company is a construction enterprise, and its CO<sub>2</sub> emissions are indirect greenhouse gas emissions.

2. Emissions of NO<sub>x</sub>, SO<sub>2</sub>, smoke (powder) and VOC are calculated based on the emissions permits.

3. Due to rounding, the numbers of individual items may differ slightly from the total.

For details about the Company's fulfillment of ecological protection, pollution prevention and control, and environmental responsibilities, please refer to the 2022 Social Responsibility Report and the Environmental, Social and Governance Report of China Railway Group Limited published by the Company on the website of Shanghai Stock Exchange.

## ENVIRONMENTAL AND SOCIAL RESPONSIBILITY

### 2. Social responsibility commitments

As a leader in the construction industry, the Company never forgets its mission of becoming a practitioner, promoter and pioneer of corporate social responsibility. The Company started to construct a scientific, standardized, systematic and effective management system of corporate social responsibilities in 2008, planning social responsibilities in ten aspects, namely governance in accordance with the law, quality services, efficiency creation, employee development, safety supervision, scientific and technological progress, environmental protection, public welfare undertakings, win-win cooperation, and overseas responsibility, and rolling out a series of social responsibility management activities covering its headquarters and subsidiaries in order to achieve the goals of comprehensive coverage, down-to-earth implementation, steady perfection and industrial leading, and make continuous and irreplaceable contributions to the society.

China Railway has participated in the formulation of industry standards such as enterprise ESG disclosure guidelines and evaluation systems, filling the gaps in relevant systems for ESG disclosure of domestic enterprises. We have prepared and released the company's 14th ESG and social responsibility report, which was highly praised by the capital markets of Shanghai and Hong Kong, and won the Best ESG Report Award from "New Fortune". China Railway's ESG practice case was awarded the "Best Practice of Listed Companies" by China Association of Listed Companies; it was successfully selected as "50 Central Enterprises ESG • Social Value Pioneers" and "Central Enterprises ESG • Risk Management Pioneers 50" and Forbes "China ESG 50", which fully demonstrated that China Railway actively fulfilled its social responsibilities and promoted its due responsibility and market recognition for sustainable and high-quality development.

For details about the Company's fulfilment of social responsibilities, please refer to the 2022 Social Responsibility Report and the Environmental, Social and Governance Report of China Railway Group Limited published by the Company on the website of Shanghai Stock Exchange.

External donations, public welfare projects	Quantity/Content	Description
Total investment (RMB'0,000)	8,998	
Of which: funds (RMB'0,000)	8,948	
Cash converted from materials (RMB'0,000)	50	

## ENVIRONMENTAL AND SOCIAL RESPONSIBILITY

### 2. Social responsibility commitments (Continued)

#### Specific description

The Company highly values giving back to the society while developing itself, and actively undertakes social responsibility. In 2022, the Company invested a total of RMB89.98 million in external donations and public welfare projects, including RMB89.48 million of capital and RMB500,000 of cash converted from materials. The Company demonstrated its role as a central enterprise in advancing rural revitalization, and actively participated in disaster relief and rescue in various places. The Company organized and coordinated a total of 230 emergency rescue and relief activities such as the "8.17" Chongqing forest fire and the "9.5" Luding County earthquake. The Company encouraged its employees to participate in voluntary activities, supported basic education, and attached importance to the heritage and protection of Chinese culture, contributing its share to the construction of a harmonious and beautiful society.

### 3. Work of consolidating and expanding poverty alleviation results and rural revitalization

Poverty alleviation and rural revitalization projects	Quantity/ Content	Description
Total investment (RMB'0,000)	8,040	See specific description for details
Of which: funds (RMB'0,000)	7,990	Key projects and the use of funds: The Company invested RMB20 million in the reconstruction project of Zengkou-Panxi Highway along the X004 route in Guidong County; invested RMB5 million to assist the development of the raw white tea industry in Rucheng County; invested RMB15 million to help eight villages in Rucheng County to build beautiful villages and improve rural habitats; invested RMB20 million to build a photovoltaic power station project in Baode County; invested RMB14.50 million to help build a new road project for Angtongxiong Pasture in Tuoba Township, and a reconstruction and extension project for Naitong Village Primary School in Yoba Township.
Cash converted from materials (RMB'0,000)	50	Donated supplies for pandemic prevention in Karuo District.
Number of beneficiaries (persons)	96,000	/
Forms of assistance (such as industrial assistance, employment assistance, education assistance, etc.)	Industrial assistance, employment assistance, consumption assistance, education assistance, etc.	Throughout the year, the Company trained 406 grass-root cadres in total, 123 leaders in rural revitalization, and 1,160 professional technical personnel; purchased RMB22.482 million of agricultural products, and helped sell RMB2.208 million of agricultural products. The Company also launched the activity of "helping you grow with love in my heart" to assist the impoverished students.

## ENVIRONMENTAL AND SOCIAL RESPONSIBILITY

### 3. Work of consolidating and expanding poverty alleviation results and rural revitalization (Continued)

#### Specific description

In 2022, the Company attached great importance to targeted assistance. Specifically, the Company dispatched 6 cadres assuming a temporary post; invested RMB84.63 million of assistance funds; attracted RMB500 million of assistance funds; trained grass-root cadres of 406 person times, leaders in rural revitalization of 123 person times, and professional technical personnel of 1,160 person times; purchased RMB22.482 million of agricultural products, and helped sell RMB2.208 million of agricultural products. Marked achievements were made in targeted assistance. The short video titled "Happy nest", which was based on the change of Tuanwo Village in Baode County, won the nomination award of "Listen to the fellow-villagers talk about the well-off life". Dongshan Village in Rucheng County was awarded as a model beautiful village in Hunan Province; the "Sichu Liukao" model of habitat improvement in Rucheng County fully mobilized local people to participate actively and magnified the efficiency of the use of invested funds. The model was highly recognized in the field verification of the National Rural Revitalization Administration ("NRRRA"). The "Red Rucheng" educational book written by the Company and the children's song "half a quilt of warmth" were granted the award of "Five One Project" in Chenzhou City.

- (1) Vigorously supporting the development of industries, and strengthening the engine of revitalization and development. Stretching Baode County's long sunshine hours and abundant solar energy resources, the Company invested RMB20 million to build a 5MW photovoltaic power station project in Shenshan Village. The project will be completed in early 2023, with an expected operating cycle of 25 years and an average annual income of more than RMB2.5 million, all of which will be used for the development of local public welfare projects and assistance to poor households. Considering the development prospect of the tea industry in Rucheng County, the Company established a development fund the raw white tea industry. The Company invested RMB5 million and plans to invest RMB5 million per year during the "14th Five-Year Plan" period to support the development of the raw white tea industry. Through the town and village linkage model, the Company motivated the local tea farmers to plant tea and increased the driving force for the revitalization of the villages. The project was highly recognized and supported by the tea academician Liu Zhonghua. Given the significant effect of the project of Zhongtie Zhenxing Avenue in Guidong County on the industries of villages and towns along the route, the Company continued investing RMB20 million in the reconstruction project of Zengkou-Panxi Highway (the southern section of Zhongtie Zhenxing Avenue) along the X004 route in Guidong County. It was intended to propel the development of cultural tourism and real estate projects in Zengkou area of Oujiang Town by relieving the pressure of traffic congestion in the vicinity.
- (2) Building ecological civilization model village, and creating a beautiful and livable home. We invested more than RMB15 million to deepen rural construction and improve rural habitats. We implemented special projects for village construction and habitat improvement in 11 villages, including Waisha Village in Maqiao Town, Rucheng County, and Guangming Village in Guidong County, in an effort to create clean, neat and orderly, beautiful and livable homes. Local villagers got actively involved in the construction of their own homes, and their internal dynamics were fully stimulated. The Reshui Village in Rucheng County, through environmental improvement and relying on hot spring resources, attracted the investment of RMB40 million from private enterprises to develop high-end homestay. Dongshan Village was rated as a model beautiful village in Hunan Province.

## ENVIRONMENTAL AND SOCIAL RESPONSIBILITY

- (3) Expanding the training coverage and enhancing the capability and quality of various talents. According to the actual needs of targeted assistance counties, the Company organized the training of various personnel by level and category, and expanded the coverage of training. A total of 406 grass-roots cadres, 123 leaders in rural revitalization, and 1,160 professional and technical personnel were trained throughout the year. By making use of the training platform of the China Railway Party School, 54 grass-roots cadres from targeted assistance counties were organized to participate in the second training class for the grass-roots Party branch secretaries from targeted assistance counties, to further play the role of “bellwethers” of the leaders in rural revitalization. With its technology advantages in the industry, the Company regularly organized model workers and high-end skilled personnel to share their experience in targeted assistance counties, leading the progress of local technical skills and helping Rucheng Vocational High School win the third prize in the National Survey Competition. The Company guided the targeted assistance counties to continue with career training. While implementing the two branded training programs of “Baode Good Driver” and “Everyone Has A Skill” in depth, the Company created the brand of “Baode Good Property”. In addition, the Company helped the first batch of 44 households that had been lifted out of poverty complete relevant skills upgrading training, helping the labor force from the households find a new way to get rich.
- (4) In-depth development of grass-roots Party building, to boost the development of grass-roots Party organizations. The Company always cared and maintained close contact with the grassroots Party members and the public, and carried out Party building activities. Rucheng County invited many times the Party branches of the departments and affiliated units of China Railway No.5 Engineering Group Co., Ltd. to carry out branch building activities locally, and they visited the exhibition hall of “half a quilt of warmth” and the former residence of General Zhu Liangcai and other red classic educational bases. The Company launched the activity of “helping you grow with love in my heart” to assist the impoverished students, and provided targeted assistance to nine students in need in Yanshou Township, supporting them until they graduate from universities. One of the nine students was admitted to Peking University in 2022. Insisting on Party building and taking the opportunity of “welcoming the 20th National Congress, following the Party forever, and striving for a new journey”, the Party branch of Tuanwo Village in Baode County organized ten thematic Party days, five special Party classes, and one life meeting. The Party branch developed a Party building list of 100 items in 15 categories, realizing a two-pronged hard work pattern of grasping positions and data at the same time and advancing rural revitalization through Party building.
- (5) Increasing the purchase and sale of agricultural products in assistance areas with a combination of measures. The annual purchase of agricultural products amounted to RMB22.482 million, and the sales of local agricultural products amounted to RMB2.208 million. First, fully leveraging its own advantages, the Company called on the Labor Union of the affiliated unit and the canteen to communicate on the agricultural products of the assistance areas, setting up a “bridge of love” between the targeted assistance areas and the Company. Second, by opening up external channels, the Company invited supermarkets and fruit chain stores to conduct the on-the-spot investigation, and was partnered with distributors, central enterprises and other sales platforms to broaden the sales channels of local agricultural products. Third, through live-streaming sales, the Company got actively involved in the weekly activity of “helping revitalize agriculture through consumption” organized by the SASAC, and sold goods through the SASAC new media platform State-owned Assets Xiaoxin (“國資小新”).

# DEFINITION AND GLOSSARY OF THE TECHNICAL TERMS

1	BOT	BOT “Build-Operate-Transfer” mode
2	Company, China Railway	China Railway Group Limited
3	CREC	China Railway Engineering Group Company Limited, formerly known as China Railway Engineering Corporation
4	CREG	China Railway Engineering Equipment Group Co., Ltd.
5	CRHEEC	China Railway High-Speed Electrification Equipment Corporation (stock code: 688285.SH)
6	CRHIC	China Railway Hi-Tech Industry Co., Ltd. (stock code: 600528.SH)
7	CRPCC	China Railway Prefabricate Construction Co., Ltd. (stock code: 300374.SZ)
8	Group	the Company and its subsidiaries
9	PPP	“Public-Private-Partnership” mode

## DEFINITION AND GLOSSARY OF THE TECHNICAL TERMS

10	Shield machine	a kind of special construction machinery for tunnel excavation. It is a full-section tunnel boring machine for soft soil or water-rich strata construction
11	TBM	Tunnel Boring Machine
12	Three Transformations	the transformation from “made in China” to “created in China”, the transformation from speed-oriented to quality-oriented and the transformation from Chinese product to Chinese brand
13	Three-year Action of State-owned Enterprise Reform	the “1+N” policy system for the reform of state-owned enterprises and top-level design action
14	TOD	Transit-Oriented Development
15	turnout	a component used for changing the route of a train where a single track splits into two tracks. Turnout is applied in railway tracks
16	“123456” development strategy	Focusing on “one big task”, emphasizing “two principles”, adhering to “three bottom lines”, realising “four strong capabilities and five excellent aspects”, and coordinating “six keys”



# COMPANY INFORMATION

## Directors

### Executive directors

CHEN Yun (*Chairman*)  
CHEN Wenjian  
WANG Shiqi

### Non-executive director

WEN Limin

### Independent non-executive directors

CHUNG Shui Ming Timpson  
ZHANG Cheng  
XIU Long

## Supervisors

JIA Huiping (*Chairman*)  
YUAN Baoyin  
LI Xiaosheng  
WANG Xinhua  
WAN Ming

## Joint company secretaries

HE Wen  
TAM Chun Chung *CPA, FCCA*

## Authorized representatives

WANG Shiqi  
TAM Chun Chung *CPA, FCCA*

## Audit and risk management committee

CHUNG Shui Ming Timpson (*Chairman*)  
WEN Limin  
ZHANG Cheng

## Remuneration committee

XIU Long (*Chairman*)  
WEN Limin  
ZHANG Cheng

## Strategy and investment committee

CHEN Yun (*Chairman*)  
CHEN Wenjian  
CHUNG Shui Ming Timpson  
ZHANG Cheng  
XIU Long

## Nomination committee

CHEN Yun (*Chairman*)  
CHUNG Shui Ming Timpson  
XIU Long

## Safety, health and environmental protection committee

CHEN Wenjian (*Chairman*)  
WANG Shiqi  
WEN Limin  
ZHANG Cheng  
XIU Long

## COMPANY INFORMATION

### Registered office

918, Block 1  
No. 128 South 4th Ring Road West  
Fengtai District  
Beijing 100070  
PRC

### Principal place of business in Hong Kong

Unit 1201-1203  
12/F, APEC Plaza  
49, Hoi Yuen Road, Kwun Tong  
Kowloon, Hong Kong

### Auditors

#### Domestic

PricewaterhouseCoopers Zhong Tian LLP  
11/F, PricewaterhouseCoopers Center  
Link Square 2, 202 Hu Bin Road  
Huangpu District  
Shanghai, PRC

#### International

PricewaterhouseCoopers  
22/F, Prince's Building  
Central, Hong Kong

### Legal advisors

#### For PRC Law

Jia Yuan Law Firm  
F407, Ocean Plaza  
158, Fuxing Men Nei Street  
Beijing 100031  
PRC

#### For Hong Kong Law

Linklaters  
11/F, Alexandra House  
Chater Road  
Hong Kong

### Shares registrars

#### A Shares

China Securities Depository and Clearing Corporation Limited, Shanghai Branch  
No. 188, South Yanggao Road  
Pudong New Area, Shanghai  
PRC

#### H Shares

Computershare Hong Kong Investor Services Limited  
17M Floor, Hopewell Centre  
183 Queen's Road East  
Wanchai, Hong Kong

### Listing information

#### A Shares

Place of listing: Shanghai Stock Exchange  
Stock name: China Railway  
Stock code: 601390

#### H Shares

Place of listing: The Stock Exchange of Hong Kong Limited  
Stock name: China Railway  
Stock code: 390

### Principal bankers

The Export-Import Bank of China  
Industrial and Commercial Bank of China  
China Construction Bank  
Agricultural Bank of China  
Bank of China  
Bank of Communications  
China Minsheng Bank  
China Merchants Bank  
China CITIC Bank

### Company website

<http://www.crec.cn>



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