



(REPORT OF THE DIRECTORS)







In 2023, with the accelerated development of the new round of sci-tech revolution and industrial transformation represented by artificial intelligence (AI) and quantum technology among others, the building of Digital China continued to advance. Demands for digitalisation from the economy and society have been constantly upgrading, while the digital economy with data as a key element boomed, contributing to a vast market space. Based on the new development stage, the Company implemented the new development principles completely, accurately and comprehensively, while proactively serving and integrating into the new development pattern. In the process of supporting the advancement of Chinese modernisation, the Company firmly seized opportunities arising from the market

development, resolutely fulfilled its responsibilities in building Cyberpower and Digital China, as well as safeguarding network and information security, while fully and deeply implementing its Cloudification and Digital Transformation strategy. The Company fully leveraged its edges in cloud-network integration, further advanced the building of a service-oriented, technology-oriented, and secured enterprise, continued to achieve breakthroughs in sci-tech innovation, and fully completed its deployment in strategic emerging businesses. The Company further upgraded its digital information infrastructure, sped up the formation of new quality productive forces and accelerated the growth of new momentum for market development. The Company deepened corporate reforms, with continuous enhancement of governance capabilities and levels, propelling its high-quality development to a new level.



MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

#### 1. OVERALL RESULTS

In 2023, the Company's operating revenues amounted to RMB513.6 billion, representing an increase of 6.7% year-on-year. Service revenues¹ amounted to RMB465.0 billion, representing an increase of 6.9% year-on-year, maintaining growth for 11 consecutive years. EBITDA² amounted to RMB136.8 billion, representing an increase of 5.0% year-on-year. Net profit³ amounted to RMB30.4 billion, representing an increase of 10.3% year-on-year, and the basic earnings per share were RMB0.33. Capital expenditure was RMB98.8 billion and free cash flow⁴ reached RMB13.0 billion.

The Company attaches great importance to shareholder returns and strives to enhance its profitability and cash flow generation capabilities. Taking the Company's profitability into full consideration, alongside cash flow levels and capital needs for its future development, the Board of Directors has decided to recommend at the Annual General Meeting that a final dividend of 2023 of RMB0.090 per share (pre-tax) shall be declared. Together with the 2023 interim dividend of RMB0.1432 per share (pre-tax), which has been already distributed, the full year dividend of 2023 amounts to RMB0.2332 per share (pre-tax), and the aggregate amount of the full year dividend increased by 19.0% year-on-year. This represents over 70% of the profit attributable to equity holders of the Company for the year, successfully fulfilling the profit distribution commitment made during the Company's A Shares issuance. Within three years from 2024, the profit distributed in cash will gradually increase to above 75% of the profit attributable to equity holders of the Company for the year, striving to create more value for shareholders.

Over the past three years since its A Shares listing, the Company seized opportunities, upheld fundamental principles and broke new ground, and carried out expansion and upgrades, successfully fulfilling its commitment made during A Shares issuance, and continuously sharing new development achievements with shareholders, customers and the society. Service revenues maintained good growth and the compound growth rate for three years was higher than the industry average. The proportion of Industrial Digitalisation within incremental service revenues increased by 24.5 p.p. to reach 70.4%. Profitability remained strong, with net profit achieving double-digit growth for three consecutive years. Shareholders' return increased significantly, with the dividend payout ratio increasing to over 70% within three years, and the compound growth rate of dividend per share for three years reaching 31%, being the highest in the industry. The market capitalisation management achieved remarkable results, with its market capitalisation at the end of 2023 increasing to 3.2 times more than that at the end of 2020.

# 2. FULLY IMPLEMENTED CLOUDIFICATION AND DIGITAL TRANSFORMATION STRATEGY, WITH NEW ACHIEVEMENTS IN CORPORATE HIGH-QUALITY DEVELOPMENT

In 2023, the Company firmly seized opportunities arising from growing demands for digital transformation and intelligent upgrades from the economy and society, gave full play to its edges in cloud-network integration and pushed forward upgrades of digital information infrastructure. Insisting on the leading role of sci-tech innovation, while harnessing driving forces from reforms and opening up, the Company effectively stimulated the vitality of its talent teams, comprehensively promoted green transformation and development, continued satisfying customers' desires for a better new digital life, with its customer perception and service reputation continuing to elevate. Business revenue maintained steady growth and its operating capabilities were further strengthened, achieving new results in corporate highquality development.

Service revenues are calculated based on operating revenues minus sales of mobile terminals, sales of wireline equipment and other non-service revenues.

<sup>&</sup>lt;sup>2</sup> EBITDA is calculated based on operating revenues minus operating expenses plus depreciation and amortisation.

Net profit represents profit attributable to equity holders of the Company.

Free cash flow is calculated based on EBITDA minus capital expenditure, income tax and depreciation charge for right-of-use assets other than land-use-rights.

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)



Chairman Ke Ruiwen presented at Digital Technology Ecosystem Conference

# 2.1 Continued to achieve new breakthroughs in sci-tech innovation to accelerate the formation of new quality productive forces

Anchoring on its vision and mission of building a technology-oriented enterprise, the Company promoted corporate high-quality development driven by sci-tech innovation. Focusing on digital information infrastructure, the Company strengthened breakthroughs in key core technologies. With network as the foundation and cloud as the core, the Company promoted cloud-network integration and grasped the development direction of Al. Centring on four major technical directions of cloud, network, Al and quantum/security, the Company carried out deployment focusing on seven strategic emerging industries including cloud computing and computing power, new generation information and communications, Big Data, Al, security, quantum and digital platform, as well as future industries.

The Company increased the input of "new" elements. Research and development (R&D) expenses<sup>5</sup> increased from RMB4.7 billion in 2020 to RMB13.1 billion in 2023,

representing an increase of 175.6% for three years. The Company further strengthened the recruitment of highend sci-tech talents. The aggregate number of leading sci-tech talents reached 138 in 2023, representing an increase of 392.9% for three years. The Company further intensified its efforts in the transformation of its workforce. The number of R&D personnel reached approximately 33,000, representing an increase of 174.5% for three years, with its proportion increasing to 11.8% from 4.2% in 2020. The Company led the "new" digital information infrastructure. Focusing on key areas such as cloud, network, AI, security and quantum, the Company strove to build a digital base with independent control of key core technologies and accelerated the construction of digital information infrastructure with cloud-network integration as the core feature through the integration of various elements. The Company created "new" digital tools to empower the digital, intelligent and green corporation transformation. Driven by data and through AI empowerment, the Company continuously elevated the digital level of R&D, cloudnetwork operation as well as marketing services, to vigorously promote the upgrade of corporate services as well as costs reduction and efficiency enhancement.

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Giving full play to the collaborative edges of the RDO<sup>6</sup> system, the Company vigorously promoted the conversion and industrialisation of achievements. The number of invention patent applications exceeded 5,000 throughout the year. The Company's proprietary IT system and business platforms accounted for 45.0%, up by 6.0 p.p. year-on-year. The Company initiated 98 projects in international standardisation organisations, ranking at the forefront among global operators. The Company achieved a series of groundbreaking sci-tech innovative achievements, which accelerated the formation of new quality productive forces, effectively boosting the rapid development of strategic emerging businesses and offering strong driving forces for the dual engines of fundamental businesses and Industrial Digitalisation business.

# 2.2 Adhering to customer-oriented principles, with constant driving forces from dual engines

## Steady growth in fundamental businesses with brand-new upgrades as well as integration and mutual promotion

The Company proactively promoted upgrades of connectivity, applications, and user experience within its fundamental businesses, accelerated the brand-new upgrades of 5G and Smart Family, strengthened the integration and mutual promotion of smart community and digital village platforms and continued addition of high-quality digital products and scene-based services. In terms of the brand-new 5G, the Company launched innovative and featured applications such as 5G Mobile Phones with Direct Satellites Connection and 5G Quantum-encrypted Calls and further promoted the scale development of computing products such as 5G Cloud Computer. The Company accelerated the intelligent upgrade of applications such as 5G Communications Assistant and Colour Ringback Tone with Video. The Company stepped up the promotion of applications such as 5G Enhanced Calls and 5G Message to further consolidate its differentiated development edges. In terms of the brand-new Smart Family, the Company continued to promote the enhancement of capabilities of Gigabit network and scale penetration, sped up Gigabit customers' upgrade to FTTR. The Company further enriched cloud broadband applications such as Cloud Storage, Cloud Playback and Cloud Video, sped up the promotion of family AI and security products such as e-Surfing Webcam and Smart Smoke Detection, and further upgraded applications and services of Wholehome intelligence. In terms of integration and mutual promotion, the Company further promoted the capabilities enhancement of digital platforms such as smart community and digital village. By accelerated addition of applications and services of platforms such as subdistrict cloud and town cloud, convenient living circles, as well as elderly and child care, the Company promoted the integration and mutual promotion of multiple scenes such as rural and community management, community services and family applications to drive the scale development and value enhancement of fundamental businesses. In 2023, revenues from the Company's fundamental businesses grew steadily with subscriber scale and value rising continuously. Mobile communications service revenues amounted to RMB195.7 billion, representing an increase of 2.4% year-on-year. Of which, revenues from mobile value-added and applications amounted to RMB25.8 billion, representing an increase of 12.4% year-on-year. The net addition of mobile subscribers was 16.59 million, maintaining the industry-leading position for six consecutive years, and bringing the total number of subscribers to 408 million. Mobile ARPU<sup>7</sup> reached RMB45.4, representing an increase of 0.4% year-on-year. Wireline and Smart Family service revenues amounted to RMB123.1 billion, representing an increase of 3.8% year-on-year. Of which, revenue from the Smart Family business reached RMB19.0 billion, representing an increase of 12.8% year-on-year. The number of broadband subscribers reached 190 million with a net addition of 9.26 million. Broadband blended ARPU8 reached RMB47.6, representing an increase of 2.8% year-on-year.

<sup>&</sup>lt;sup>6</sup> RDO: fundamental research (R), applied technological research and development (D) and operational development (O).

<sup>7</sup> Mobile ARPU = monthly average revenues from mobile services/the average number of mobile subscribers.

<sup>&</sup>lt;sup>8</sup> Broadband blended ARPU = monthly average revenues from broadband access, e-Surfing HD and Smart Family applications and services/the average number of broadband subscribers.

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## Rapid growth of Industrial Digitalisation business by firmly seizing opportunities arising from the integration of digital technologies and real economy

Leveraging its edges in cloud-network integration, capabilities from strategic emerging technologies, customer resources and localised services, the Company further enhanced its customer service capabilities while constantly promoted ecological cooperation to achieve leadership in terms of both capabilities and scale in key industries. This boosted the rapid development of its Industrial Digitalisation business. The Company's government and enterprise services cover all major industries of the national economy. The number of government and enterprise customers continued to increase, with an increase of 11.3% year-on-year. China Telecom Cloud continued to achieve breakthroughs in key core technologies and further consolidated its leading market and customers scale. In the field of 5G applications, the Company fully created industry-leading scene-based customised network solutions to empower use cases such as HD video, data collection and control, unmanned inspection, dual domain switch and Internet of Vehicles. The number of newly added projects of 5G industry applications for the year increased by 106.3% year-on-year, with the aggregate number surpassing 31,000. The Company further upgraded its e-Surfing Artificial Intelligence of Things (AloT) platform, providing one-stop IoT services comprising device access, connectivity management and application empowerment. This helps to achieve cross-field and cross-industry collaboration under the scene of Internet of Everything. The number of terminal users exceeded 520 million. The Company's e-Surfing Internet of Video Things (IoVT) effectively supported the building of smart cities, with the aggregate number of subscribers for applications such as Kitchen Monitoring and e-Surfing Emergency Response exceeding 77 million. Focusing on over 10 key industries such as government administration, industry and education and more than 100 subdivisions, the Company intensified its efforts in R&D, construction as well as continued iteration of platforms, with emerging technologies as the core foundation. In 2023, the Company's Industrial Digitalisation business maintained rapid growth, with its revenue reaching RMB138.9 billion, representing an increase of 17.9% year-on-year and accounting for 29.9% of service revenues, up by 2.8 p.p. over last year. Its incremental contribution to service revenues increased to 70.4% from 51.6% in 2021. The revenue of the Company's China Telecom Cloud

amounted to RMB97.2 billion, representing an increase of 67.9% year-on-year. Revenues from international businesses exceeded RMB13.7 billion.

# 2.3 Fully completed the deployment of strategic emerging businesses, with further strengthened new market momentum

## China Telecom Cloud empowered thousands of industries with "computing power" and embarked on a new journey with "intelligence"

The Company developed China Telecom Cloud as the source of original cloud computing technologies with high quality and made constant breakthroughs in key technologies. With its proprietary cloud operating system TeleCloudOS 4.0 as the core, the Company has fostered a full-stack cloud technologies and products system that is technologically advanced, independent and controllable, building a cloud foundation that features multi-chip architecture in one cloud, polymorphism and multi-type computing in one cloud. China Telecom Cloud served thousands of industries for cloud migration and the use of cloud, ranking among the top in the market, with China Telecom Cloud being the framework of national cloud fully taking shape. Focusing on new requirements to cloud service providers in the era of large models, China Telecom Cloud has fully upgraded to an intelligent cloud. The Company developed "Yunxiao", an intelligent computing acceleration platform integrating cloud, intelligent computing and supercomputing, providing the supreme computing power and highly-efficient operation and maintenance tools adapting to AI use cases. The Company also launched "Huiju", a one-stop intelligent computing service platform, providing large model developers with a training and inferencing tool chain that is one-stop, fully linked, low-threshold and highly secured. The Company upgraded "Xirang", a computing power distribution network platform, to fully support the unified access, packaging and scheduling of general computing, intelligent computing, and supercomputing, providing computing power operators with computing power connection and trading services. This has facilitated better utilisation of computing power resources, the realisation of computing power inclusion, the efficiency enhancement of computing power supply and the interconnection of computing power from multiple parties. The Company carried out R&D of "Zhenshi 3.0

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engine", a new-generation image and streaming fusion<sup>9</sup> algorithm, driving the growth of cloud computer users by more than two times year-on-year, ranking first in China's DaaS market, with a market share of nearly 40%. China Telecom Cloud maintained its leading market positions, including the No.1 ranking in government and administration public cloud infrastructure and the No. 1 ranking in the global telco cloud. China Telecom Cloud was the only one among the top three players in the domestic public cloud laaS and laaS+PaaS market to have achieved continuous growth in market share<sup>10</sup>.

## Empowered the digital transformation of the economy and society at depth with the use of "data" and injection of "intelligence"

The Company firmly seized the development opportunities in the era of AI and accelerated R&D of technologies as well as launch of applications in fields of Al and Big Data by fully leveraging the multiplier effect of data elements. The Company created the "1+N+M"11 Xingchen large models series product portfolio and established the base for the general-purpose large foundation model, covering four major capabilities including language, speech, visual and multimodal capabilities, while achieving open source. The Company rolled out 12 large vertical models in vertical fields such as government administration, education and transportation, while empowering more than 600 projects for use cases such as grassroots governance, smart customer service and smart city. The Company released "Xingchen MaaS platform", providing customers with services such as one-stop large model R&D and applications including computing power, algorithms, data and tools. The Company launched 9 large models for its own use focusing on internal production and operation including network operation, operational analysis and code R&D to help itself accelerate digital transformation and push forward costs reduction and efficiency enhancement. The Company also strengthened R&D of core technologies of Big Data, sped up the deployment in the data elements market. Focusing on four major fields including Big Data PaaS, data core platform, data trading and flow and data security, the Company strove for breakthroughs in core technologies and passed the DCMM5 level certification, the highest level in national data governance. The total number of Big Data API accessed reached 4.6 billion times throughout the year, representing an increase of 45% year-on-year. The Company developed more than 50 "Xinghai Big Data" products to offer services such as financial risk control and regional insights. "Lingze data elements 2.0 platform" provided data trading service covering the whole business process and was ranked No.1 among service providers of the data elements ecology in 2023<sup>12</sup>. The Company's "data product supermarket" has been promoted and launched in 9 provinces and cities, supporting the aggregation, development and trading of data resources for customers.

#### Further elevated the level of integrated security protection capabilities by "forging shields with quantum"

The Company continued to build an integrated end-to-end collaborative security protection system. It has developed security capabilities and services in 7 major categories and more than 50 subdivisions around key products such as Anti-DDoS Cloud Dam and Security Brain. Its Anti-DDoS Cloud Dam maintained the No. 1 ranking in terms of market share in China and was included in Gartner's list of global top service providers selection. The Company built the industry's first managed security service platform at the operator level, creating an "O2O" integrated managed security service model featuring "cloud operation experts + localised services". The Company intensified its efforts in achieving breakthroughs of original technologies in the field of quantum. Its quantum computing cloud platform, "Tianyan", achieved super fusion<sup>13</sup> which enabled the significant increase in the processing speed of superconducting quantum computers. The Company built quantum communications infrastructure at the municipal level with "quantum-network integration", providing industry customers with security services such as information transmission and data storage. The Company strengthened professional consolidation and

Image and streaming fusion: with an aim to provide the best user experience, the cloud computer dynamically balances multiple dimensions such as image quality and smoothness and automatically selects desktop compression and transmission algorithms, according to the network and desktop application status.

Source of market share data of China Telecom Cloud: IDC.

<sup>11 1+</sup>N+M: 1 refers to the general-purpose large foundation model. N refers to the number of large vertical models. M refers to the number of large models for own use.

Source of rankings of data elements service providers: Internet Weekly.

Super fusion: the fusion of the supercomputing power of China Telecom Cloud and superconducting quantum computing capabilities with 176 quantum bits.

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forward-looking deployment in the field of quantum technology, initiated the acquisition of Quantumctek Co., Ltd., strengthened breakthroughs in technological and application innovation, and expanded the space for quantum business development.

### Innovative breakthroughs in new-generation information and communications technologies

The Company continued to deepen the cultivation of new-generation information and communications technologies to provide more versatile all-domain access capabilities. It further promoted the capabilities building and application innovation of the aerial-ground integrated information network. The Company created the industry's first "Satellite as a Service S+" concept and continued to achieve breakthroughs in key technologies in fields such as satellite network system operation. The Company launched the world's first commercial service of "Mobile Phones with Direct Satellites Connection" at the operational product level, which supports direct satellites connection for consumer-grade 5G terminals with two-way voice calls and text messages. This provided emergency response and communications assurance for industries such as maritime transport, industry and rescue as well as for public users. The Company proactively planned for innovations in key directions of 5G-A, carried out deployment in carrier aggregation, pushed forward the innovative application of cross-domain unified scheduling of resources from the time, frequency and spatial domain, significantly enhancing user experience. The Company completed the scale trial for RedCap on current network with multiple frequencies, multiple carriers and multiple manufacturers, created demonstrative applications in a number of industries such as steel, petrochemical and port, and pushed forward the deployment for scale commercialisation. The Company took the lead to complete the 5G NR NTN test and verification based on real satellites. The Company carried out trials for technologies such as low-altitude communications, sensing and communications integration and NTN, to accelerate the maturity for 5G-A commercialisation. The Company strove for breakthroughs of R&D for key technologies in 6G. The Company continued to take the lead in setting standards in key fields such as super uplinks, enhanced coverage, as well as co-building and co-sharing. The Company carried out proprietary R&D of the simulated verification system for 6G, realising compatibility to potential key features of 6G, and creating practice and innovation demonstration based on current network environments in areas such as aerialground integration and near-field cellular.

### Effectively empowering customers' digital transformation and upgrades with digital platforms

The Company further intensified its efforts in technological R&D and function iteration of digital platforms and developed more than 110 key digital platforms to empower the digital transformation and upgrades at scale for customers from fields such as government administration, enterprises, education, healthcare and finance. In the field of digital government administration, the Company strengthened technological empowerment and product integration and innovation services, continued to provide and upgrade resources pools and platforms of China Telecom government administration cloud, and has already provided more than 20 provinces and over 220 cities with various integrated applications such as access to services via a single website, management via a single website, collaboration via a single website as well as urban operation, management and services. In the field of new industrialisation, the Company provided network-based connectivity for various enterprises through 5G definitive network and proprietary industrial PON. In terms of intelligent transformation, the Company built a unified database for industrial protocols and statutes and achieved scale application of its proprietary e Cloud Collection terminals in 15 industries, realising real-time and accurate collection of production data. At the same time, leveraging its proprietary e Cloud Control platform, the Company vigorously promoted cloud-based decoupling and the application of AI for PLC, and has launched 12 use cases for industries such as tobacco and steel, achieving unified control among equipment. In the field of healthcare, the Company assisted the Health Commissions at all levels to build the universal health information platform and the close-type county-level medical community to realise the interconnection of regional healthcare data, with a coverage of 25 provinces. In many other fields such as education, transportation and logistics, culture and tourism, smart community, and digital village, the Company continued to build and deepen the application capabilities of industry-specific platforms.

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## 2.4 Expedited the intelligent upgrade of digital information infrastructure

The Company accelerated the intelligent transformation of digital information infrastructure and consolidated digital foundation to forge key cornerstones for the development of new quality productive forces. The Company proactively built the distributed computing power infrastructure with cloud-intelligence integration, training-inferencing integration as well as cloudnetwork-edge-terminal coordination. Focusing on the hub node regions of the national integrated computing power network, the Company strengthened the building of intelligent computing capabilities. The Company added 8.1 EFLOPS of intelligent computing power throughout the year, bringing the total to 11.0 EFLOPS, representing an increase of 279.3%. Nodes in Beijing, Shanghai, Jiangsu, Guizhou, Ningxia and Inner Mongolia have already possessed training resources of over a thousand GPUs. In regions such as Beijing-Tianjin-Hebei, the Yangtze River Delta and Guangdong-Hong Kong-Macau where the large model industry, technologies and talents concentrate, the Company accelerated the deployment of the new generation large-scale intelligent computing clusters. The liquid-cooling intelligent computing centre with ten-thousand GPUs in one single pool in Shanghai will be in operation in 2024. The Company advanced the revolution and upgrades of datacentres to become Artificial Intelligence Datacentres (AIDC). The Company proactively built the new-generation datacentres that support the hybrid mode of air and liquid cooling with "Two-Elastic-One-Optimised"14, achieving elastic and adaptive capabilities that enable the average power for one single cabinet to range from 2kW to 50kW+, flexibly meeting requirements for the scale and centralised deployment of general computing, intelligent computing, and supercomputing power. The Company built a network of intelligent computing centres that is highspeed, lossless, and elastic, while also optimised its DCI networks with large bandwidth, wide coverage, low latency and high reliability. The Company continued the building of latency circles with 1ms/10ms/15ms latency for the east-west direction traffic and 1ms/5ms/20ms latency for the south-north direction traffic<sup>15</sup>. The average mutual access latency among hub nodes of "East-to-West Computing Resource Transfer" was

reduced by more than 10% year-on-year. The Company steadily pushed forward the building of general computing power capabilities, with the number of cities covered by "One-City-One-Pool" reaching 280 and the number of edge nodes surpassing 1,000. The Company added 1.0 EFLOPS of general computing power throughout the year, bringing the total to 4.1 EFLOPS<sup>16</sup>, representing an increase of 32.3%. The Company's security capability pools carried out software and hardware decoupling for industry mainstream security products to achieve unified configuration, setting, operation, maintenance and management, as well as flexible output of customised security capabilities, with its business covering more than 200 cities. The Company fully strengthened the digital transformation and construction of its cloud-network. It completed the full launch and application of its proprietary new generation cloud-network operating system that enables SDNbased, scalable and unified control of major networks such as IP, transmission and 5G. The Company also accelerated the application of new technologies, such as Al large models to the cloud-network operating system. The Company released "Qiming", the first large network model within the information and communications sector, to empower scenes such as emergency scheduling, network optimisation and product delivery. The overall level of automation and intelligence of its cloud-network operation reached L3 while the level of automation and intelligence of some scenes such as 5G Core reached L4, further enhancing its cloud-network operation capabilities.

The Company continued to deepen network co-building and co-sharing with China Unicom to continuously enhance the depth and breadth of its 5G coverage. It also accelerated the consolidation and co-sharing of "one single 4G mid-band network" to jointly create 4G/5G co-shared networks that lead in terms of user experience, efficiency, and technologies. The cumulative savings of investment for both parties reached over RMB340 billion, while the annualised savings of operating costs exceeded RMB39 billion. The number of newly built 5G base stations was over 220,000 throughout the year, and the number of 5G base stations in use exceeded 1.21 million, achieving contiguous

Two-Elastic-One-Optimised: elastic power supply, elastic cooling, optimised air distribution.

<sup>15</sup> East-west direction traffic: data traffic between datacentres. South-north direction traffic: data traffic between external users and datacentres.

The industry's common calculation method has been applied for computing power. Intelligent computing power is calculated using FP16, while general computing power is calculated using FP32.

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coverage for townships and above, as well as effective coverage for developed administrative villages. The number of co-shared 4G mid-band base stations exceeded 2 million, with the mid-band co-sharing rate exceeding 90%. The two parties jointly promoted the precise construction and optimisation in key locations such as airports, high-speed railways and hospitals. As a result, the satisfaction rate of its mobile network quality increased steadily with benefits of co-building and co-sharing being further unleashed. In addition, the Company proactively pushed forward the refarming of its 800MHz spectrum and obtained approval in August 2023 to refarm its 800MHz spectrum for 5G use. As of January 2024, the Company has built 250,000 800MHz base stations with 4/5G integrated service capabilities, significantly enhancing network coverage and user experience in rural areas.

# 2.5 Deepened corporate reforms and opening up on all fronts to continue unleashing vitality for high-quality development

The Company deepened reforms in key fields and processes on all fronts, fully and successfully completed the three-year action programme of state-owned enterprise (SOE) reforms, and planned and pushed forward key tasks in the new round of deepening and enhancing action of SOE reforms. The Company strengthened the building of customer-oriented organisations, processes and mechanisms, and continued to foster comprehensive edges in system integration aggregating professional capabilities, industry capabilities, ecological capabilities as well as sales and servicing capabilities. The Company continued to optimise the building of its organisational system, strengthened functional reforms of its headquarters to further enhance the impact on fields such as sci-tech innovation, business promotion, talent development and corporate governance. The Company fully promoted the optimisation of main processes with cloud core platform as the hub and elevated the level of end-to-end integration delivery, operation and service. The Company established the AI company, quantum technology group, IoVT company and unmanned technology company. Four industry business groups (BGs) for government and enterprise including healthcare, education, finance as well as government administration took the lead in achieving market-oriented and corporate operation. This has given full play to the autotomy in areas such as industrial cooperation, talent recruitment as well as compensation and incentives, elevating the level of

sci-tech breakthroughs, market expansion and professional capabilities. The Company also accelerated the digital and intelligent transformation of its operation and management, optimised its corporate data governance system, enhanced the value of data elements and created an intelligent, agile, and highly efficient digital sales and marketing service model. The proportion of user acquisition for fundamental businesses from online increased by 11.5 p.p. year-on-year, while the proportion of AI smart customer service increased by 12.6 p.p. year-on-year. The Company's proprietary smart AI system enabled precise energy savings, resulting in annualised electricity savings of approximately 800 million kWh for AI facility rooms and base stations. Through strengthened digitalisation of elements and smart management, the Company's operating efficiency continued to increase. The Company deepened market-oriented reforms of organisations and mechanisms, promoted the implementation of mechanisms such as "open bidding for selecting the best candidates" in the field of sci-tech innovation. The Company vigorously implemented the project of promoting corporate strength through talents and achieved breakthroughs in the recruitment of strategic top talents in fields such as cloud computing, AI and quantum. Through innovative mechanisms such as the chief technician system, the talent special zone and the talent workstation, the Company created a big stage for experts and talents to carry out their work and get the job done. The Company further deepened reforms of talent development system and mechanism and laid a solid talent foundation for the high-quality development and strategy implementation of the Company. Insisting on balancing responsibilities, rights and interests with a dual emphasis on using incentives and constraints, the Company refined its market-oriented employment mechanism, optimised its remuneration mechanism to become more precise, flexible, standardised and efficient to fully stimulate the vitality of employees.

The Company expedited the open cooperation at a high level, creating win-win ecological patterns in areas such as sci-tech innovation, exchange of talents and business ecology. The number of members of the World Broadband Association (WBBA) increased to 77, spanning 32 countries in 5 continents. The association published the WBBA World Cloud-Network Broadband Industry Development Report and World Cloud-network Development Index to advance global cooperation in digital governance. The Company continued to deepen collaboration among industry, academia, and research institutes, establishing joint laboratories with leading

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Chairman Ke Ruiwen introduced China Telecom's efforts in supporting the high-quality development of the computing power industry

scientific research institutions and enterprises to achieve breakthroughs in key technologies such as intelligent computing network, satellite Internet and large models. The Company also strengthened the exchange and cooperation of talents, joining hands with leading universities to carry out joint academia-enterprise training projects with a focus on the field of emerging technologies. The Company carried out business and channel cooperation in key areas, promoting cooperation across the industrial chain and supply chain to further extend into the upstream and downstream of the innovation chain and service chain, while supporting the co-development of products and applications as well as the co-sharing of earnings and value. The Company deepened the cultivation of international businesses, with its business covering major countries and regions around the world. The Company has established 53 branches overseas, serving customers' growing demands for services such as communications, Internet, cloud computing and digital transformation in the international market. The Company accelerated the construction of overseas digital information infrastructure, with the total capacity of its international transmission network backbone reaching nearly 115Tbps, of which over 50% was along "the Belt and Road" direction. The Company has more than 6,000 cabinets in nearly 30 overseas

facility rooms around the world. The Company vigorously pushed forward China Telecom Cloud's expansion into the overseas markets. The number of newly added China Telecom Cloud global CDN nodes was 15 for the year. The Company also proactively promoted the launch of strategic emerging businesses such as satellite communications and IoT in overseas markets.

# 2.6 Insisted on the green development principles to empower green transformation of the economy and society

In line with the global trends of green and low-carbon transformation, the Company proactively implemented the green development principles. Focusing on the national "dual carbon" goals, the Company promoted corporate low-carbon operation and empowered the green development of the whole society. The Company deepened efforts to achieve breakthroughs in key green and low-carbon technologies as well as the conversion of achievements. The Company has developed a series of proprietary green and low-carbon products such as e Secure Energy, e Energy Saving, e Extreme Cooling and 5G Integrated Smart Power Supply Cabinet. The Company established and optimised a green and low-carbon standard system, participated in setting

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nearly 30 national, industry and enterprise standards in total in areas of dual carbon, and established a green and zero-carbon innovative experimental base in Qinghai. The Company continued to accelerate the green upgrade of cloud-network and created efficient, intelligent, green and low-carbon networks with end-to-end dynamic adjustability as well as automated energy-saving. Through co-building and co-sharing, as well as various energy saving measures, the Company reduced its greenhouse gas emissions by more than 13 million tons, while greenhouse gas emissions per unit of total volume of telecommunications services decreased by 19.6% year-on-year. The Company also supported the society to reduce greenhouse gas emissions by over 100 million tons. By continued optimisation of energy consumption structure, the consumption volume of green electricity with "integration of trading of permit and electricity" throughout the year exceeded 1.1 billion kWh, representing an increase of nearly 3 times year-on-year. The Company intensified the recycling of resources and optimised the building of green packaging and waste disposal systems. The Company enhanced the green elements in digital products and launched a series of green and low-carbon products and solutions. The Company rolled out green products such as Green Cloud Drive, Green Cloud Computer and Zero-carbon Datacentres. The Company also developed green and environmental protection solutions such as the management platform of energy consumption and carbon emissions, the monitoring and management system of air/water pollution source and the biodiversity monitoring platform. The number of project signings exceeded 3,000, serving customers from industries such as government, industrial manufacturing and construction. This empowered application fields such as ecological protection, pollution prevention and control, energy conservation and carbon reduction, supporting the green and low-carbon transformation of thousands of industries.

# 3. PROACTIVELY UNDERTOOK SOCIAL RESPONSIBILITIES WHILE CONTINUOUSLY ENHANCED CORPORATE GOVERNANCE

The Company successfully completed communications assurance tasks for key events. It utilised satellite communications, drones and other technologies to effectively assist flood fighting and disaster relief efforts during times of natural disasters such as the

Beijing-Tianjin-Hebei flood and Jishishan earthquake. The Company effectively supported rural revitalisation, popularised digital services and narrowed the digital divide between urban and rural areas. The Company promoted the building of digital villages, with the penetration rate of administrative villages exceeding 60%. The Company has achieved the highest rating for the review and assessment of targeted support carried out by central units for 5 consecutive years. The Company has been committed to social welfare and proactively helped the disabled and underprivileged. The Company initiated the launch of "Public Welfare Union of Caring Stations", and 96 of its "Caring Stations" have been awarded the title of "Most Beautiful Trade Union Outdoor Worker Service Station" by the All-China Federation of Trade Unions. The Company protected the rights and interests of its employees in accordance with the law, and created a comprehensive system for employee care, while continuing to enhance its institutional safeguards. The Company created career development paths for employees and strove to achieve the mutual growth of employees and the Company.

Insisting on high-standard corporate governance while adhering to excellent, prudent and effective corporate governance principles, the Company maintained compliance and efficient operation of its Shareholders Meeting, Board of Directors and Supervisory Committee, and continued to optimise its corporate governance system, while cultivating and further reinforcing the culture of compliance. The Company also further enhanced its risk prevention level with more stable corporate operation. The Company attaches great importance to the management of market capitalisation and held roadshows and reverse roadshows activities for domestic and overseas investors and equity analysts. The Company continued to increase the frequency of communications between the Company and investors, while also enriched the forms of communications, creating multi-dimensional and matrix investor communications channels. The Company actively listened to the voice of investors, proactively fulfilled various commitments made to the capital market and effectively safeguarded the best and long-term interests of its shareholders. The Company received high affirmation and recognition from domestic and international capital markets and industry organisations for its relentless efforts and outstanding performance. It was voted as the "Most Honoured Companies in Asia" for the 13th consecutive year in the "All-Asia-Executive Team Poll 2023" organised by Institutional Investor. The

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

Company also received top rankings in the "Best Board of Directors", "Best IR Team" and "Best ESG" categories. Furthermore, the Company was awarded "Best Investor Relations Team" and "Best Social Responsibility Initiative" in *The Asset*'s "ESG Corporate Awards 2023". It was accredited "Golden Bull Most Investment Value Award" and "Golden Bull Award for Hong Kong Stocks" in the Golden Bull Award poll organised by *China Securities Journal*. At the same time, the Company was awarded the "Best Practise of the Board of Directors for Listed Companies in 2023" by the China Association for Public Companies.

#### 4. OUTLOOK

In a boat race, those who row the hardest will win. When a thousand boats set sail, the boat which advances bravely will win. China has edges such as great market potential, complete industrial system and versatile high-quality human resources. With the rapid formation and accelerated growth of new momentum, the intrinsic impetus and vitality for development are further strengthened. With the rapid development of digital technologies such as AI, cloud computing, Big Data, and quantum information, new technologies and applications continue to emerge. Digital and intelligent transformation of the economy and society is in great demand, which will bring greater space for the development of the industry. The Company is in an important period of opportunities of promoting high-quality development. Facing the future, the Company will proactively seize the development trends of the new round of sci-tech revolution and industrial transformation and firmly seize opportunities arising from the development of industries in the process of supporting the advancement of Chinese modernisation. The Company will continue to deeply implement its Cloudification and Digital Transformation strategy, anchoring its mission and vision of building a service-oriented, technology-oriented, and secured enterprise. With network as the foundation and cloud as the core, the Company will grasp the direction of AI development and innovate the supply of products and services. The Company will satisfy the demands for digitalisation from thousands of families and thousands of industries leveraging "network + cloud + AI +

applications". The Company will put sci-tech innovation at a more prominent position and further open up the big cycle of technology, product and industry. The Company will accelerate the fostering and development of new quality productive forces according to its own conditions, speed up the scale expansion of strategic emerging businesses and further create new momentum and edges for development. The Company will deepen the transformation and upgrades of its digital information infrastructure, enhance the green and low carbon capabilities of its cloud-network, and build the key foundation for Digital China. The Company will deepen reforms and opening up on all fronts, comprehensively push forward high-quality development, and further enhance its core functions and core competitiveness. The Company will accelerate the building of a world-class enterprise, further enhance corporate value and proactively bring returns to shareholders.

Finally, on behalf of the Board of Directors, I would like to take this opportunity to express our sincere appreciation to all shareholders and customers for their continued support, and our sincere thanks to all our employees for their hard work and contributions. Furthermore, I would also like to extend our sincere gratitude towards Mr. Xia Bing for his outstanding contributions to the Company's transformation and upgrades as well as continued development made during his tenure.

Ke Ruiwen

Chairman and Chief Executive Officer Beijing, China

26 March 2024

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

# 2. OVERVIEW OF THE COMPANY'S INDUSTRY DURING THE REPORTING PERIOD

#### 1. INDUSTRY OVERVIEW

In 2023, the volume and revenue of telecommunications businesses of the communications industry achieved a steady growth, with positive growth in investment for five consecutive years. The construction of new network infrastructure such as computing power was accelerated, and the scale of 5G and Gigabit subscribers maintained rapid growth, making solid progress in high-quality development.

The development of the telecommunications industry achieved significant enhancement of quality and efficiency. Firstly, both volume and revenue of telecommunications businesses achieved growth. The total volume of telecommunications businesses calculated based on the price of the previous year increased by 16.8% year-on-year, which strongly drove the recovery and growth of the service industry. The revenue from telecommunications businesses for the year amounted to RMB1.68 trillion, representing an increase of 6.2% year-on-year. Secondly, the supporting role of emerging businesses was consolidated. The industry achieved prominent results in expanding the digital transformation services, with the business structure showing the characteristics of being driven by "three wheels" including mobile Internet, wireline broadband access and emerging businesses such as cloud computing. Thirdly, new breakthroughs in promoting industrial development were achieved through sci-tech innovation. By increasing efforts in sci-tech R&D, the industry made advanced deployment in emerging fields, strengthened key technological R&D, and achieved a number of innovation breakthroughs.

The industry appropriately advanced the deployment of new infrastructure on a large scale. Firstly, the coverage of "dual-Gigabit" networks continued to optimise. FTTR moved to the user promotion stage, propelling the launch of Smart Family applications such as HD Video and Smart Home. The Gigabit fibre network supported thousands of industries and empowered the digital transformation of the society. Secondly, the computing power network achieved an initial leap. The industry strengthened the coordinated enhancement of computing power, storage capacity and network bandwidth, creating a all-fibre foundation with the integration of computing power network and

cloud-network integration. The industry carried out coordinated deployment of general computing power and intelligent computing power, commenced the construction of the ultra-large-scale intelligent computing centre, and continuously optimised the supply structure of computing power. Thirdly, the industry built an AI infrastructure system. The industry explored new models of AI applications through the combination of internal application and external empowerment, promoted the integrated development of "cloud, network and intelligence", and comprehensively transformed to the "AI+" strategy.

The proportion of dual-Gigabit and IoT users increased rapidly. Firstly, 5G mobile phone users accounted for nearly half of the total. By the end of 2023, the number of mobile phone users in China reached 1,727 million. The 5G migration of mobile phone users accelerated, with the number of 5G mobile phone users reaching 805 million. Secondly, Gigabit users accounted for more than a quarter. By the end of 2023, the number of wireline broadband access users reached 636 million, while the number of users with access speed of 1000Mbps and above reached 163 million. Thirdly, the proportion of IoT terminal connections was nearly 60%. By the end of 2023, the total number of mobile network terminal connections in China reached 4.059 million, of which the number of cellular IoT terminal users reached 2,332 million, and cellular IoT terminals were widely used in public services, Internet of Vehicles, smart retail, smart home and other fields.

The development and upgrade of converged applications accelerated. Firstly, data traffic consumption continued to be active. In 2023, the access data traffic of mobile Internet users reached 301.5 billion GB, representing an increase of 15.2% over last year. the average access data traffic per user per month (also known as dataflow of usage, DOU) reached 16.85 GB, representing an increase of 10.9% over last year. Secondly, the expansion of industry converged applications deepened. 5G industry applications evolved from single demonstration to large-scale replication in some fields. The number of 5G application cases exceeded 94,000. 5G applications have been integrated into 71 out of the 97 national economic categories, covering 70% of major industries, and achieving scale replication in industries such as mining, electricity and ports. The coverage of 31 provinces (regions and municipalities) and all prefecture-level cities has been achieved.

Note: The above data are from MIIT's Statistical Communique of the Communications Industry in 2023 and its interpretations.

#### MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)



Management introduced the development of China Telecom's strategic emerging businesses

# 2. SIGNIFICANT IMPACT OF NEW LAWS, ADMINISTRATIVE REGULATIONS, DEPARTMENTAL RULES AND INDUSTRY POLICIES ON THE INDUSTRY

During the Reporting Period, a number of laws, administrative regulations, departmental rules and departmental normative documents were promulgated and implemented, introducing new requirements for the development and compliance operation of the industry.

On 29 December 2023, the *Company Law of the People's Republic of China* was amended and adopted at the seventh meeting of the Standing Committee of the 14th National People's Congress, which will come into effect on 1 July 2024. The newly revised *Company Law* improved the company capital system, establishment and withdrawal system, relevant provisions of state-funded companies and relevant provisions of corporate bonds, optimised corporate governance, strengthened the protection of shareholders' rights, and strengthened the responsibilities of controlling shareholders, actual controllers, directors, supervisors and senior management.

On 16 October 2023, the State Council promulgated the *Regulation on the Protection of Minors in Cyberspace* (the "*Regulation*"), which came into effect on 1 January 2024. The *Regulation* put forward requirements for Internet products and services providers, personal information processors, intelligent terminal product manufacturers and sellers in terms of promoting the Internet literacy of minors, strengthening the construction of Internet information and content, protecting personal information of minors, and preventing minors from addicting to the Internet.

On 10 March 2023, the State Administration for Market Regulation promulgated the Provisions on the Examination of Concentrations of Undertakings, the Provisions on Prohibiting Monopoly Agreements and the Provisions on Prohibiting Abuse of Dominant Market Positions, which became effective on 15 April 2023. The Provisions on the Examination of Concentrations of Undertakings took into account the overall situation of practices, adding capabilities to master and control data processing as a new special consideration when the market regulatory authorities analyse and make decisions on market control, market entry and additional restrictive conditions. The Provisions on Prohibiting Monopoly Agreements improved relevant regulations on the development of data, algorithms and other technologies, and required that operators shall not use data and algorithms, technologies and platform rules to reach relevant monopoly agreements. The *Provisions on* Prohibiting Abuse of Dominant Market Positions strengthened the restrictions on the abuse of dominant market positions in the field of data, and clarified that operators with dominant market positions shall not use data and algorithms, technologies and platform rules to engage in related abuse of dominant market positions.

On 25 June 2023, the State Administration for Market Regulation issued the *Provisions on Prohibiting the Abuse of Intellectual Property Rights to Exclude or Restrict Competition*, which became effective on 1 August 2023. The *Provisions on Prohibiting the Abuse of Intellectual Property Rights to Exclude or Restrict Competition* expanded the connotation of "abuse of intellectual property rights to exclude or restrict competition", improved the rules for determining monopolistic conducts by means of exercising intellectual property rights, and strengthened the regulation of typical and special monopolistic conducts in the field of intellectual property rights.

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On 10 July 2023, seven departments including the Cyberspace Administration of China jointly announced the *Interim Measures for the Management of Generative Artificial Intelligence Services* (the "*Interim Measures*"), which came into effect on 15 August 2023. The *Interim Measures* regulated the development and governance of generative AI technologies and contents such as service specifications of generative AI service providers.

On 3 January 2023, 16 departments including the Ministry of Industry and Information Technology jointly issued the *Guiding Opinions on Promoting the Development of the Data Security Industry*, which proposed that by 2025, the fundamental capabilities and comprehensive strength of the data security industry shall be significantly enhanced, the industry ecology and innovation system shall be initially established, and the product and service supply capabilities shall be greatly improved. By 2035, the data security industry shall enter a prosperous and mature stage, the data security industry policy system shall be further improved, and the awareness and application capabilities of data security applications in various fields shall be significantly improved.

On 13 March 2023, the Ministry of Industry and Information Technology issued the *Regulations on Handling Reports on Illegal Acts in the Telecommunications Field* (the "*Regulations on Handling Reports*"), which came into effect on 1 June 2023. The *Regulations on Handling Reports* clarified the basic requirements, acceptance requirements, handling procedures, processing time limit and other contents for the telecommunications authorities in handling reports on illegal acts in the telecommunications sector, and optimised the supervision mechanism for the compliance operation of telecommunications operators in accordance with the law.

On 1 August 2023, the Ministry of Finance issued the *Interim Provisions on Accounting Treatment Relating to Enterprises' Data Resources* (the "*Interim Provisions*"), which came into effect on 1 January 2024. The *Interim Provisions* clarified the conditions for the recognition of data resources and the relevant accounting treatment, and required enterprises to conduct accounting recognition, measurement and reporting of data resources-related transactions and matters in accordance with the provisions, and present and disclose them in the balance sheet accordingly.

The Company will conscientiously implement the relevant newly issued and revised laws, administrative regulations, departmental rules and industry policies, and proactively follow and study the relevant upcoming laws, administrative regulations, departmental rules and industry policies to ensure that the relevant business operations are in compliance with laws and regulations and that the Company operates in compliance with laws and regulations.

## 3. BUSINESS OF THE COMPANY DURING THE REPORTING PERIOD

In 2023, the Company firmly seized opportunities arising from the growing demands for digital transformation and intelligent upgrade of the economy and society, gave full play to its edges in cloud-network integration and adhered to the green development principles. The Company insisted on the leading role of sci-tech innovation, harnessed driving forces from reforms and opening up, and further upgraded the digital intelligent applications and services for 2C/2H/2B/2G customers. Business revenues achieved steady growth, with continuous enhancement of operating capabilities, and new achievements in corporate high-quality development.

With accurate insight into user demands, the Company proactively promoted upgrades of connectivity, applications, and user experience within its fundamental businesses. The Company further accelerated the brand-new upgrades of 5G, launched innovative and featured applications such as 5G Mobile Phones with Direct Satellites Connection and 5G Quantum-encrypted Calls, and continued to promote the intelligent upgrade of applications such as 5G Communications Assistant and Colour Ringback Tone with Video, so as to consolidate differentiated development advantages. The Company further accelerated the brand-new upgrades of Smart Family, continued to promote the enhancement of capabilities of Gigabit network and scale penetration and strengthened the expansion of Smart Family applications and service upgrades. The Company enriched cloud broadband applications such as Cloud Storage, Cloud Playback and Cloud Video, strengthened the promotion of family AI and security products such as e-Surfing Webcam and Smart Smoke Detection, and accelerated the upgrade of applications and services of Whole-home Intelligence. The Company continued to deepen the integration and mutual promotion of digital platforms such as smart community and

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

digital village. By accelerated addition of applications and services of platforms such as subdistrict cloud and town cloud, convenient living circles, as well as elderly and child care, the Company drove the scale development and value enhancement of fundamental businesses. In 2023, the number of the Company's mobile subscribers reached 408 million, with a net addition of 16.59 million, maintaining the industry-leading position for six consecutive years. Mobile ARPU reached RMB45.4, representing an increase of 0.4% year-on-year. The number of broadband subscribers reached 190 million, with a net addition of 9.26 million. Broadband blended ARPU reached RMB47.6, representing an increase of 2.8% year-on-year.

Leveraging its edges in cloud-network integration, capabilities from strategic emerging technologies, customer resources and localised services, the Company has fully completed its deployment in seven strategic emerging industries such as cloud computing and computing power, AI, security, digital platform, Big Data, quantum, and new generation information and communications. The Company continued to optimise and strengthen 5G industry applications, and accelerated the development of industry-leading 5G scene-based customised network solutions. The Company continued to upgrade the industry digital platforms and continuously strengthened the service capabilities of platforms such as the e-Surfing Artificial Intelligence of Things (AloT) and the e-Surfing Internet of Video Things. The Company promoted the rapid development of Industrial Digitalisation business, achieved breakthroughs in the scale of strategic emerging businesses, and empowered thousands of industries. In 2023, the Company's Industrial Digitalisation business maintained a rapid development trend, with its revenue reaching RMB138.9 billion, representing an increase of 17.9% year-on-year, accounting for 29.9% of service revenues, up by 2.8 p.p. over last year. Its incremental contribution to service revenues increased to 70.4% from 51.6% in 2021. The revenue of China Telecom Cloud amounted to RMB97.2 billion, representing an increase of 67.9% year-on-year.

For detailed business analysis of the Company, please refer to "5. MAJOR OPERATION DURING THE REPORTING PERIOD" in this section.



Management introduced China Telecom's achievements in sci-tech innovation

#### 4. ANALYSIS OF CORE COMPETITIVENESS DURING THE REPORTING PERIOD

During the Reporting Period, based on its own resource endowment, edges and characteristics, China Telecom strengthened sci-tech innovation, accelerated the formation of new quality productive forces, and proactively fulfilled responsibilities in building Cyberpower and Digital China, as well as maintaining network and information security. The Company fully and deeply implemented its Cloudification and Digital Transformation strategy, continued to build a service-oriented, technology-oriented and secured enterprise, effectively enhanced corporate core competitiveness, and accelerated the building of a world-class enterprise.

## ACCELERATED UPGRADE OF DIGITAL INFORMATION INFRASTRUCTURE

The Company continued to deepen co-building and co-sharing and promoted the quality and efficiency enhancement of "dual-Gigabit". The number of 5G base stations in use exceeded 1.21 million, achieving contiguous coverage for townships and above, as well as effective coverage for developed administrative villages. Focusing on the hub node regions of the national integrated computing power network, the Company

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strengthened the building of intelligent computing capabilities. At present, nodes in Beijing, Shanghai, Jiangsu, Guizhou, Ningxia and Inner Mongolia have already possessed training resources of over a thousand GPUs, and the liquid-cooling intelligent computing centre with ten-thousand GPUs in one single pool in Shanghai will be in operation in 2024. The Company advanced the revolution and upgrades of datacentres to become AIDC and proactively built the new-generation datacentres that support the hybrid mode of air and liquid cooling with "Two-Elastic-One-Optimised", achieving elastic and adaptive capabilities that enable the average power for one single cabinet to range from 2kW to 50kW+. The Company built a network of intelligent computing centres that is high-speed, lossless, and elastic, while also optimised its DCI networks with large bandwidth, wide coverage, low latency and high reliability. The Company continued the building of latency circles with 1ms/10ms/15ms latency for the east-west direction traffic and 1ms/5ms/20ms latency for the south-north direction traffic. The average mutual access latency among hub nodes of "East-to-West Computing Resource Transfer" was reduced by more than 10% year-on-year. Green and low-carbon achievements have begun to manifest. Through co-building and co-sharing, as well as various energy saving measures, the Company reduced its greenhouse gas emissions by more than 13 million tons, while greenhouse gas emissions per unit of total volume of telecommunications services decreased by 19.6% year-on-year. The consumption volume of green electricity with "integration of trading of permit and electricity" throughout the year exceeded 1.1 billion kWh, representing an increase of nearly 3 times year-on-year. The Company fully strengthened the digital transformation and construction of its cloud-network. It completed the full launch and application of its proprietary new generation cloud-network operating system that enables SDN-based, scalable and unified control of major networks such as IP, transmission and

## FULLY COMPLETED DEPLOYMENT IN STRATEGIC EMERGING BUSINESSES

The Company insisted on taking industrial control as its own responsibility, proactively gave play to the leading role of industry and the promotion driven by integration, and focused on the deployment of seven strategic emerging industries and future industries. In terms of cloud computing and computing power, with its proprietary cloud operating system TeleCloudOS 4.0 as the core, the Company has fostered a full-stack cloud technologies and products system that is technologically advanced, independent and controllable, building a cloud foundation that features multi-chip architecture in one cloud, polymorphism and multi-type computing in one cloud. China Telecom Cloud served thousands of industries for cloud migration and the use of cloud, ranking among the top in the market, with China Telecom Cloud being the framework of national cloud fully taking shape. In terms of Big Data, focusing on four major fields including Big Data PaaS, data core platform, data trading and flow and data security, the Company strove for breakthroughs in core technologies and passed the DCMM5 level certification, the highest level in national data governance. The total number of Big Data API accessed reached 4.6 billion times throughout the year, representing an increase of 45% year-on-year. In terms of AI, the Company created the "1+N+M" Xingchen large models series product portfolio and established the base for the general-purpose large foundation model, covering four major capabilities including language, speech, visual and multimodal capabilities, while achieving open source. In terms of security, its Anti-DDoS Cloud Dam maintained the No. 1 ranking in terms of market share in China and was included in Gartner's list of global top service providers selection. In terms of quantum, the Company built quantum communications infrastructure at the municipal level with "guantum-network integration", providing industry customers with security services such as information transmission and data storage. The Company strengthened professional consolidation and forward-looking deployment in the field of quantum technology, and initiated the acquisition of Quantumctek Co., Ltd. In terms of digital platforms, the Company promoted the construction of a group-wide unified technology stack and created more than 110 industry digital platforms. In the area of next-generation information and communications, the Company fully

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created industry-leading scene-based customised network solutions in the field of 5G applications to empower use cases such as HD video, data collection and control, unmanned inspection, dual domain switch and Internet of Vehicles. The Company further upgraded its e-Surfing Artificial Intelligence of Things (AIoT) platform, providing one-stop IoT services comprising device access, connectivity management and application empowerment. This helps to achieve cross-field and cross-industry collaboration under the scene of Internet of Everything. The number of terminal users of its e-Surfing AIoT exceeded 520 million.

## STEADY ENHANCEMENT IN PRODUCT AND SERVICE CAPABILITIES

The Company adhered to the customer-oriented principle and continued to promote the building of a service-oriented enterprise. Focusing on meeting people's needs for a better digital life, the Company insisted on the driving forces from dual engines of fundamental businesses and Industrial Digitalisation business and provided higher quality digital products and services. The Company launched the brand-new 5G brand and continuously rolled out featured applications such as 5G Mobile Phones with Direct Satellites Connection and 5G Quantum-encrypted Calls. The Company vigorously promoted the Gigabit fibre broadband to households, deepened the integration and mutual promotion of digital platforms such as smart community and digital village, and expanded multi-scene applications such as rural and



Management introduced China Telecom's new 5G applications

community management, community services and family services. The scale of smart communities increased by 46% year-on-year, and the scale of digital villages increased by 48% year-on-year. The Company innovated and upgraded the new model of 5G customised network services, and the number of new projects of 5G industry applications in the year increased by 106.3% year-on-year, bringing the aggregate number to exceed 31,000. The Company continued to enhance customer experience and comprehensively promoted the digital and intelligent upgrade of customer services.

## NEW BREAKTHROUGHS IN SCI-TECH INNOVATION CAPABILITIES

The Company firmly grasped opportunities arising from the new round of sci-tech revolution and industrial transformation and accelerated the building of a technology-oriented enterprise. The Company continued to increase sci-tech innovation efforts, with the incremental revenue contribution from sci-tech innovation continuing to increase. The distributed cloud operating system of China Telecom Cloud, TeleCloudOS 4.0, won the first prize of Science and Technology Award of China Institute of Communications in 2023. The Company built a four-level cross-centre and cross-region Al computing power layout comprising core + province + edge + terminal, creating high-quality digital products and services. The Company launched the Lingze data elements service platform, upgraded the "Yunxiao" intelligent computing acceleration platform integrating cloud, intelligent computing and supercomputing and launched the one-stop intelligent computing service platform "Huiju". The Company released the "Xingchen" large language model at the hundred-billion parameter grade, as well as a series of large vertical models for education, emergency and transportation. The Company developed the computing power distribution and scheduling platform "Xirang" to schedule cross-operating-entities and heterogeneous cloud computing infrastructure through DCI networks with large bandwidth, low latency and high reliability. The Company intensified its efforts in achieving breakthroughs of original technologies in the field of quantum. Its quantum computing cloud platform, "Tianyan", achieved super fusion. The Company realised the world's first two-way voice calls and text messages sending and receiving communications service for consumer-grade mobile phones with direct satellites connection. The breakthroughs in sci-tech innovations propelled the rapid development of strategic emerging businesses. In the field of sci-tech innovation, the Company promoted the implementation of systems such

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

as the "open bidding for selecting the best candidates" and solidly promoted the building of sci-tech talent teams.

# CONTINUOUS CONSOLIDATION OF SECURE AND CONTROLLABLE CAPABILITIES

The Company solidly promoted the building of a secured enterprise to achieve benign interaction of high-quality development and high-level security. The network security operating system has gradually matured, and the data security work system has basically taken shape. The Company built the industry's first managed security service platform at the operator level, creating an "020" integrated managed security service model featuring "cloud operation experts + localised services". The Company took the lead in the industry to build a digital security situational awareness system, with its accuracy increasing to 98%. The Company created a collaborative protection system for digital security ecology and built the first ecological platform for network security. The Company expanded key products such as Security Brain and Security Cat and provided customers with comprehensive and managed security services. The Company built the leading quantum-encrypted communications metropolitan network. The Company also built an anti-fraud risk model for all users and realised the daily full risk assessment for 470 million users. The Company incorporated the blacklist data of communications/banks, such that newly plugged in sim cards for terminals involved would be shut down in minutes.

## 5. MAJOR OPERATION DURING THE REPORTING PERIOD

The Company fully grasped the opportunities arising from the digital transformation of the economy and society, proactively explored new scenes, new business formats and new models, and continuously upgraded the digital innovative applications for 2C/2H/2B/2G customers. The Company accelerated the integrated development of fundamental businesses and strategic emerging businesses, achieving new results in corporate development.

In 2023, the Company's operating revenues amounted to RMB513.6 billion, representing an increase of 6.7% year-on-year. Of which, service revenues amounted to

RMB465.0 billion, representing an increase of 6.9% year-on-year, maintaining favourable growth for 11 consecutive years.

# THE COMPANY SPED UP THE BRAND-NEW UPGRADES OF 5G AND CONTINUOUSLY ENHANCED USER EXPERIENCE OF 5G INNOVATIVE APPLICATIONS FOR INDIVIDUAL CUSTOMERS, ACHIEVING A STEADY INCREASE OF SCALE AND VALUE OF MOBILE SUBSCRIBERS.

The Company deeply understood the needs of users in the digital era, comprehensively built 5G superior network, and continuously enhanced 5G network coverage and service quality. The Company accelerated the brand-new upgrades of 5G, continuously enhanced customer experience, and steadily increased the scale and value of mobile subscribers.

The Company accelerated the creation of differentiated advantages in 5G communications and connectivity. The Company launched innovative and featured applications such as 5G Mobile Phones with Direct Satellites Connection and 5G Quantum-encrypted Calls, and strengthened the promotion of applications such as 5G Enhanced Calls and 5G Message to provide users with more secure and more versatile voice calls and text messaging services.

The Company accelerated the integration and innovation of 5G with computing power and Al. The Company continued to promote the scale development of computing power products such as 5G Cloud Computers, and continuously promoted the intelligent upgrade of applications such as 5G Communications Assistant and Colour Ringback Tone with Video to meet more expectations from users for personalised, diversified and quality information services.

In 2023, the Company's mobile communications service revenues reached RMB195.7 billion, representing an increase of 2.4% year-on-year. Of which revenue from mobile value-added and application services reached RMB25.8 billion, representing an increase of 12.4% year-on-year. The net addition of mobile subscribers was 16.59 million, maintaining the industry-leading position

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

for six consecutive years, and bringing the total number of subscribers to 408 million. Mobile ARPU reached RMB45.4, representing an increase of 0.4% year-on-year.

THE COMPANY ACCELERATED
UPGRADES OF GIGABIT AND SMART
FAMILY APPLICATIONS AND
CONTINUOUSLY STRENGTHENED THE
INTEGRATION AND INNOVATION OF
DIGITAL PLATFORMS SUCH AS SMART
COMMUNITY AND DIGITAL VILLAGE,
RESULTING IN A STEADY INCREASE IN
BROADBAND REVENUE, SUBSCRIBER
SCALE AND BLENDED ARPU.

The Company proactively followed the new trend of digital life development, relied on its resource endowment, edges and characteristics such as cloud-network integration, and continued to promote the enhancement of capabilities of Gigabit network and scale penetration. The Company strengthened the expansion of Smart Family applications and service upgrades, deepened the integration and mutual promotion of digital platforms such as smart community and digital village, and continued to enhance user perception, resulting in a steady increase in broadband revenue, subscriber scale and blended ARPU.

The Company continuously accelerated the development of Gigabit fibre network. The Company accelerated Gigabit customers' upgrade to FTTR and created the ultimate experience of family networking by providing high-quality fibre network with full coverage and increased speed, so as to consolidate the digital infrastructure for Smart Family and meet family users' demands for access with larger bandwidth, greater connectivity and lower latency. The Company continuously upgraded new applications for Smart Family. Based on cloud-network integration, the Company further enriched cloud broadband applications such as Cloud Storage, Cloud Playback and Cloud Video, sped up the promotion of family AI and security products such as e-Surfing Webcam and Smart Smoke Detection, and further upgraded applications and services of Whole-home Intelligence. The Company continuously deepened the integration and mutual promotion of digital platforms such as smart community and digital village. The Company further promoted the capabilities enhancement of digital platforms such as smart community and digital village. By accelerated addition of applications and services of platforms such as subdistrict cloud and town cloud, convenient living circles, as well as elderly and child care, the Company promoted the integration and mutual promotion of multiple scenes such as rural and community management, community services and family applications to drive the scale development and value enhancement of fundamental businesses. In 2023, the Company's Wireline and Smart Family service revenues amounted to RMB123.1 billion, representing an increase of 3.8% over last year. Of which, revenue from Smart Family business amounted to RMB19.0 billion, representing an increase of 12.8% year-on-year. The number of broadband subscribers reached 190 million with a net addition of 9.26 million. Broadband blended ARPU reached RMB47.6, representing an increase of 2.8% year-on-year.

# THE COMPANY INCREASED EFFORTS IN SCI-TECH INNOVATION, PROMOTED THE BREAKTHROUGHS OF STRATEGIC EMERGING BUSINESSES SCALE TO FORM NEW MOMENTUM, WITH RAPID GROWTH OF INDUSTRIAL DIGITALISATION REVENUE.

With deepened development of the new round of sci-tech revolution and industrial transformation, the Company proactively grasped customers' growing demands for digitalisation, intelligence, greenness and security, and fully completed deployment in seven strategic emerging industries, including cloud computing and computing power, Al, security, digital platform, Big Data, quantum and new generation information and communications. The Company obtained leading advantages in cloud, quantum, satellites and other fields, while it further consolidated its foundations in fields such as security, AI and Big Data, boasting huge potential in the future. Based on its advantages of cloud-network integration, customer resources and localised services, the Company further strengthened its service capabilities for industry customers, achieving dual leadership in terms of scale and capabilities of digital platforms in key industries, as well as high-quality development of Industrial Digitalisation business.

The cloud computing and intelligent computing power continued to upgrade. The Company developed China Telecom Cloud as the source of original cloud computing technologies with high quality and made

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constant breakthroughs in key technologies. With its proprietary cloud operating system TeleCloudOS 4.0 as the core, the Company has fostered a full-stack cloud technologies and products system that is technologically advanced, independent and controllable, building a cloud foundation that features multi-chip architecture in one cloud, polymorphism and multi-type computing in one cloud. China Telecom Cloud served thousands of industries for cloud migration and the use of cloud, ranking among the top in the market, with China Telecom Cloud being the framework of national cloud fully taking shape. Focusing on new requirements to cloud service providers in the era of large models, China Telecom Cloud has fully upgraded to an intelligent cloud. The Company developed "Yunxiao", an intelligent computing acceleration platform integrating cloud, intelligent computing and supercomputing, providing the supreme computing power and highly-efficient operation and maintenance tools adapting to AI use cases. The Company also launched "Huiju", a one-stop intelligent computing service platform, providing large model developers with a training and inferencing tool chain that is one-stop, fully linked, low-threshold and highly secured. The Company upgraded "Xirang", a computing power distribution network platform, to fully support the unified access, packaging and scheduling of general computing, intelligent computing, and supercomputing, providing computing power operators with computing power connection and trading services. This has facilitated better utilisation of computing power resources, the realisation of computing power inclusion, the efficiency enhancement of computing power supply and the interconnection of computing power from multiple parties. The Company carried out R&D of "Zhenshi 3.0 engine", a new-generation image and streaming fusion algorithm, driving the growth of cloud computer users by more than two times year-on-year, ranking first in China's DaaS market, with a market share of nearly 40%. China Telecom Cloud maintained its leading market positions, including the No.1 ranking in government and administration public cloud infrastructure and the No. 1 ranking in the global telco cloud. China Telecom Cloud was the only one among the top three players in the domestic public cloud laaS and laaS+PaaS market to have achieved continuous growth in market share. In 2023, revenue from China Telecom Cloud amounted to RMB97.2 billion, representing an increase of 67.9% year-on-year.

The R&D and application launch of AI and Big Data technologies were continuously strengthened. In terms of AI, the Company created the "1+N+M" Xingchen large models product portfolio and established the base for the general-purpose large foundation model, covering four major capabilities including language, speech, visual and multimodal capabilities, while achieving open source. The Company rolled out 12 large vertical models in vertical fields such as government administration, education and transportation, while empowering more than 600 projects for use cases such as grassroots governance, smart customer service and smart city. The Company released "Xingchen MaaS platform", providing customers with services such as one-stop large model R&D and applications including computing power, algorithms, data and tools. The Company launched 9 large models for its own use focusing on internal production and operation including network operation, operational analysis and code R&D to help itself realise operation digitalisation, business digitalisation and management digitalisation. In terms of deployment in the data element market, the Company released the "Lingze data elements 2.0 platform" to provide data trading service covering the whole business process. The Company built the benchmark project of "data product supermarket", supporting the aggregation, development and trading of data resources in various regions, and helping thousands of industries accelerate the transformation and upgrades of business digitalisation, operation digitalisation and management digitalisation.

Further elevated the level of integrated security protection capabilities by "forging shields with quantum". The Company continued to build an integrated end-to-end collaborative security protection system. It has developed security capabilities and services in 7 major categories and more than 50 subdivisions around key products such as Anti-DDoS Cloud Dam and Security Brain. Its Anti-DDoS Cloud Dam maintained the No. 1 ranking in terms of market share in China and was included in Gartner's list of global top service providers selection. The Company built the industry's first managed security service platform at the operator level, creating an "O20" integrated managed security service model featuring "cloud operation experts + localised services". The Company intensified its efforts in achieving breakthroughs of original technologies in the field of quantum. Its quantum computing cloud platform, "Tianyan", achieved super fusion. The Company built quantum communications infrastructure at the municipal level with "quantum-network integration", providing

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industry customers with security services such as information transmission and data storage. The Company strengthened professional consolidation and forward-looking deployment in the field of quantum technology, initiated the acquisition of Quantumctek Co., Ltd., strengthened breakthroughs in technological and application innovation, and expanded the space for quantum business development.

5G industry applications continued to be optimised and strengthened. Driven by the "cloud-, network-, Aland security-integrated" initiatives, the Company leveraged exclusive networks, nearby storage, and the new architecture of edge distribution to achieve the instant access to cloud for data traffic of 5G applications. The Company carried out proprietary R&D of intelligent applications such as 5G AI quality inspection and 5G data collection and control. The Company built the industry's first proprietary customer self-service operation platform for 5G customised networks and created industry-leading scene-based customised network solutions. The number of new projects of 5G industry applications in the year increased by 106.3% year-on-year, bringing the aggregate number to exceed 31.000.

### Effectively empowering customers' digital transformation and upgrades with digital platforms.

The Company further intensified its efforts in technological R&D and function iteration of digital platforms and developed more than 110 key digital platforms to empower the digital transformation and upgrades at scale for customers from fields such as government administration, enterprises, education, healthcare and finance. In the field of digital government administration, the Company strengthened technological empowerment and product integration and innovation services, continued to provide and upgrade resources pools and platforms of China Telecom government administration cloud, and has already provided more than 20 provinces and over 220 cities with various integrated applications such as access to services via a single website, management via a single website, collaboration via a single website as well as urban operation, management and services. In the field of new industrialisation, the Company provided network-based connectivity for various enterprises through 5G definitive network and proprietary industrial PON. In terms of intelligent transformation, the Company built a unified database for industrial protocols and statutes and achieved scale application of its proprietary e Cloud

Collection terminals in 15 industries, realising real-time and accurate collection of production data. At the same time, leveraging its proprietary e Cloud Control platform, the Company vigorously promoted cloud-based decoupling and the application of AI for PLC, and has launched 12 use cases for industries such as tobacco and steel, achieving unified control among equipment. In the field of healthcare, the Company assisted the health committees at all levels to build the universal health information platform and the close-type county-level medical community to realise the interconnection of regional healthcare data, with a coverage of 25 provinces. In many other fields such as education, transportation and logistics, culture and tourism, smart community, and digital village, the Company continued to build and deepen the application capabilities of industry-specific platforms.

In 2023, the Company's Industrial Digitalisation business maintained rapid growth, with its revenue reaching RMB138.9 billion, representing an increase of 17.9% year-on-year and accounting for 29.9% of service revenues, up by 2.8 p.p. over last year. Its incremental contribution to service revenues increased to 70.4% from 51.6% in 2021.

# THE COMPANY ACCELERATED THE ENHANCEMENT OF NETWORK QUALITY, PROMOTED THE DIGITAL TRANSFORMATION OF CHANNELS, MARKETING AND SERVICES, AND CONTINUOUSLY ENHANCED CORPORATE DIGITAL AND INTELLIGENT SERVICE CAPABILITIES.

The Company deeply implemented the people-centred development philosophy, focused on the common concerns of users, and took "focusing on digital upgrades and enhancing customer perception" as the mainline, continuously enhanced digital and intelligent service capabilities, with customer perception reaching a new level.

The Company accelerated the optimisation of network service quality. Focusing on popular scenes, business applications and in-depth network coverage, the Company improved the network quality as well as perception and experience of the "ten key scenes". In

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2023, the Company's mobile network quality and broadband network quality satisfaction continued to improve.

The Company accelerated the strengthening of channel service capabilities. Focusing on the frequently used scenes by users, the Company accelerated the building of online handling and cross-region handling capabilities such as cross-province addition of mobile service, cross-province addition of broadband service, main and supplementary card splitting and card replacement, and realised online handling for all common services nationwide. The number of user-times served via video by "remote counter" exceeded 8.60 million, and the proportion of service volume of China Telecom App increased by 7 p.p. year-on-year.

The Company accelerated the innovation of marketing service model. Relying on innovative means such as Big Data and AI algorithms and digital service tools, the Company explored new marketing service models such as live streaming and micro stores and loaded smart voice, digital human, robots and other online service scenes. The Company carried out 37,000 live streaming sessions such as marketing, service and public welfare, with the total number of online users exceeding a hundred million, and the proportion of AI smart customer service increased by 12.6 p.p. year-on-year.

#### 6. FINANCIAL OVERVIEW

In 2023, based on the new development stage, the Company implemented the new development principles completely, accurately and comprehensively, while also fully and deeply implemented its Cloudification and Digital Transformation strategy. Firmly seizing opportunities arising from growing demands for digital transformation and intelligent upgrades from the economy and society, the Company strengthened breakthroughs in key core technologies, fully completed the deployment of strategic emerging businesses and achieved new results in corporate high-quality



Management introduced China Telecom's measures in cost reduction and efficiency enhancement

development. In 2023, operating revenues were RMB513,551 million, representing an increase of 6.7% from year 2022. Service revenues<sup>17</sup> were RMB464,965 million, representing an increase of 6.9% from year 2022. Operating expenses were RMB476,423 million, representing an increase of 6.3% from year 2022. The profitability of the Company continued to improve. Profit attributable to equity holders of the Company was RMB30,446 million, representing an increase of 10.3% from year 2022. Basic earnings per share were RMB0.33. EBITDA<sup>18</sup> amounted to RMB136,830 million, representing an increase of 5.0% from year 2022. EBITDA margin<sup>19</sup> was 29.4%.

#### **OPERATING REVENUES**

In 2023, the Company gave full play to its edges in cloud-network integration, insisted on the leading role of sci-tech innovation, and harnessed driving forces from reforms and opening up. Insisting on the customer-oriented approach, the Company continued to satisfy customers' desire for a better new digital life, achieving steady growth in fundamental businesses, rapid development of

Service revenues are calculated based on operating revenues minus sales of mobile terminals, sales of wireline equipment, and other non-service revenues

EBITDA is calculated based on operating revenues minus operating expenses plus depreciation and amortisation. Although EBITDA has been widely applied in the global telecommunications industry as a benchmark to reflect operating performance, debt raising ability and liquidity, it is not regarded as a measure of operating performance and liquidity under the IFRS Accounting Standards. It also does not represent net cash from operating activities. In addition, our EBITDA may not be comparable to similar indicators provided by other companies.

EBITDA margin is calculated based on EBITDA divided by service revenues.

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Industrial Digitalisation business, as well as further optimised revenue structure. In 2023, operating revenues were RMB513,551 million, representing an increase of 6.7% from year 2022. Service revenues were RMB464,965 million, representing an increase of 6.9% from year 2022.

The following table sets forth a breakdown of the operating revenues for year 2023 and 2022, together with their respective rates of change:

	For the year ended 31 December			
(RMB million, except percentage data)	2023	2022	Rates of change	
Service revenues	464,965	434,928	6.9%	
Of which: Mobile communications service revenues	195,660	191,026	2.4%	
Wireline and Smart Family service				
revenues	123,063	118,534	3.8%	
Industrial Digitalisation service revenues	138,890	117,756	17.9%	
Other service revenues	7,352	7,612	-3.4%	
Revenue from sales of goods and others	48,586	46,520	4.4%	
Total operating revenues	513,551	481,448	6.7%	

#### Mobile communications service revenues

In 2023, the Company continued to promote upgrades of connectivity, applications, and user experiences within its fundamental businesses, continued to optimise its 5G superior network and accelerated the brand-new upgrades of 5G, resulting in further enhancement of mobile subscribers scale and value. In 2023, mobile communications service revenues were RMB195,660 million, representing an increase of 2.4% over the same period of last year and accounting for 38.1% of operating revenues.

## Wireline and Smart Family service revenues

In 2023, the Company accelerated the upgrade of Gigabit subscribers to FTTR, continued to strengthen the application expansion and service upgrade of cloud broadband, and continued to enrich multi-scene family digital life applications. The value contribution from Smart Family service continued to increase and broadband blended ARPU maintained healthy growth. In 2023, Wireline and Smart Family service revenues were RMB123,063 million, representing an increase of 3.8% over the same period of last year and accounting for 24.0% of operating revenues.

#### Industrial Digitalisation service revenues

In 2023, the Company proactively seized opportunities arising from network-based, digitalised, and intelligent transformation and development of the economy and society. Based on its edges of cloud-network integration, customer resources and localised services, the Company continued to strengthen service capabilities for industry customers, further deepened ecological cooperation, and promoted the rapid development of Industrial Digitalisation business. In 2023, revenue from Industrial Digitalisation reached RMB138,890 million, representing an increase of 17.9% over last year and accounting for 27.0% of operating revenues.

#### Other service revenues

In 2023, revenues from other services amounted to RMB7,352 million, representing a decrease of 3.4% from year 2022.

#### Revenue from sales of goods and others

In 2023, revenue from sales of goods and others amounted to RMB48,586 million, representing an increase of 4.4% from year 2022, mainly due to the rapid growth in the sales volume of mobile terminals and system integration equipment.

#### MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

#### **OPERATING EXPENSES**

The Company carried out comprehensive deployment of strategic emerging businesses, increased investment in key fields such as sci-tech innovation, 5G and Industrial Digitalisation. At the same time, leveraging digital means such as AI, the Company strengthened refined management of costs, increased efficiency of resources

utilisation to support corporate high-quality development and long-term value creation. In 2023, operating expenses were RMB476,423 million, representing an increase of 6.3% from year 2022. Operating expenses accounted for 92.8% of operating revenues.

The following table sets forth a breakdown of the operating expenses in 2023 and 2022 and their respective rates of change:

	For the year ended 31 December				
(RMB million, except percentage data)	2023	2022	Rates of change		
Depreciation and amortisation	99,702	96,932	2.9%		
Network operations and support	160,411	147,589	8.7%		
Selling, general and administrative	66,804	64,277	3.9%		
Personnel expenses	92,805	84,772	9.5%		
Other operating expenses	56,701	54,451	4.1%		
Total operating expenses	476,423	448,021	6.3%		

#### Depreciation and amortisation

In 2023, the Company sped up the intelligent evolution and upgrade of digital information infrastructure, while further deepened 5G co-building and co-sharing as well as 4G network co-sharing. Depreciation and amortisation amounted to RMB99,702 million, representing an increase of 2.9% from year 2022 and accounting for 19.4% of operating revenues.

#### Network operations and support

In 2023, the Company further enhanced its network quality and capabilities to support the rapid development of Industrial Digitalisation and Smart Family services. The Company appropriately increased investment in the building of capabilities. Meanwhile, leveraging digital means such as AI, the Company strengthened refined management of costs and further increased resource utilisation efficiency. Network operations and support expenses amounted to RMB160,411 million, representing an increase of 8.7% from year 2022 and accounting for 31.2% of operating revenues.

#### Selling, general and administrative

In 2023, the Company maintained necessary input of marketing resources to expedite the scale development with value. At the same time, the Company proactively

carried out digital transformation of marketing services. Leveraging digital means such as AI, the Company strengthened precise marketing and enhanced the efficiency of channels. Selling, general and administrative expenses amounted to RMB66,804 million, representing an increase of 3.9% from year 2022 and accounting for 13.0% of operating revenues. Of which, selling expenses were RMB51,195 million, representing an increase of 1.4% from year 2022.

#### Personnel expenses

Firmly seizing the period of opportunities arising from the development of digital economy, the Company intensified the efforts to attract sci-tech and innovative talents, increased incentives for frontline employees and high-performance teams and granted medium- and long-term incentives. Investments in personnel expenses were in line with the direction of building the Company as a sci-tech company. In 2023, personnel expenses amounted to RMB92,805 million, representing an increase of 9.5% from year 2022 and accounting for 18.1% of operating revenues. For details regarding the number of employees, remuneration policy and training programs, please refer to *Sustainability Report 2023*.

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#### Other operating expenses

In 2023, other operating expenses amounted to RMB56,701 million, representing an increase of 4.1% from year 2022 and accounting for 11.0% of operating revenues. The increase was mainly due to the increase in the sales volume of mobile terminals and system integration equipment.

#### Net finance costs

In 2023, net finance costs amounted to RMB332 million, representing an increase of RMB325 million from year 2022. The increase was mainly because the renewal of tower leasing contract led to the increase of the Company's lease liabilities in scale, and related interest expenses grew significantly.

#### **PROFITABILITY LEVEL**

#### Income taxes

The Company's statutory income tax rate is 25.0%. In 2023, income tax expenses were RMB8,776 million while the effective tax rate was 22.4%, representing a decrease of 0.1 percentage point from last year. The reason for the effective tax rate to be lower than the statutory tax rate was because income from investment in the associate company, China Tower Corporation Limited ("China Tower"), was not subject to tax during the period of the investment held, the application of preferential policies such as additional tax deduction from research and development expenses, and some subsidiaries and some branches located in the western region of China enjoyed low tax rates.

## Profit attributable to equity holders of the Company

The Company firmly seized the strategic opportunities arising from the booming digital economy, deepened corporate reforms and fully completed the deployment of strategic emerging businesses. The resource utilisation and operating efficiency of the Company continued to increase while its profitability further strengthened. In 2023, the profit attributable to equity holders of the Company was RMB30,446 million, representing an increase of 10.3% from year 2022.

## CAPITAL EXPENDITURE AND CASH FLOWS

#### Capital expenditure

In 2023, in order to support the construction of 5G network at scale and strengthen the support and assurance for strategic emerging businesses, the Company increased the investment in cloud-network integrated digital information infrastructure, proactively grasped the development trends of AI and stepped up the investment and building of intelligent computing capabilities. At the same time, the Company further deepened 5G co-building and co-sharing as well as 4G network co-sharing, and continuously enhanced the depth and breadth of its 5G coverage. Capital expenditure for the year was RMB98,838 million, representing an increase of 6.8% from year 2022.

#### Cash flows

In 2023, the net increase in cash and cash equivalents was RMB8,539 million.

The following table sets forth the cash flow position in 2023 and 2022:

	For the year end	For the year ended 31 December		
(RMB million)	2023	2022		
Net cash flow from operating activities	137,508	136,432		
Net cash used in investing activities	(95,492)	(96,796)		
Net cash used in financing activities	(33,477)	(40,906)		
Net increase/(decrease) in cash and cash equivalents	8,539	(1,270)		

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In 2023, the net cash inflow from operating activities was RMB137,508 million, representing an increase of 0.8% year-on-year.

In 2023, the net cash outflow used in investing activities was RMB95,492 million, representing a decrease of 1.3% year-on-year, mainly due to the repayment of short-term loan received by its finance company from China Telecommunications Corporation.

In 2023, the net cash outflow used in financing activities was RMB33,477 million, representing a decrease of 18.2% year-on-year, mainly because the Company distributed interim dividend for the first time in the second half of 2022.

#### **WORKING CAPITAL**

The Company consistently upheld stable and prudent financial principles and stringent fund management policies. At the end of 2023, the working capital (total current assets minus total current liabilities) deficit was RMB135,573 million, representing a decrease in deficit of RMB5,092 million compared to the end of 2022. As at 31 December 2023, the unutilised credit facilities were

RMB205,452 million (2022: RMB233,639 million). Given the stable net cash inflow from operating activities and sound credit record, the Company has sufficient working capital to satisfy operational needs. As at the end of 2023, cash and cash equivalents amounted to RMB81,046 million, among which cash and cash equivalents denominated in Renminbi accounted for 93.6% (2022: 94.3%).

#### **ASSETS AND LIABILITIES**

In 2023, the Company continued to maintain a solid financial position. At the end of 2023, the total assets increased by 3.5% from RMB807,698 million as at the end of 2022 to RMB835,814 million. The total liabilities increased to RMB388,647 million from RMB371,271 million at the end of 2022, representing an increase of 4.7%. The debt-to-asset ratio was 46.5% at the end of 2023.

#### Indebtedness

The indebtedness analysis as at the end of 2023 and 2022 is as follows:

	For the year ended 31 December		
(RMB million)	2023	2022	
Short-term debts	2,867	2,840	
Current portion of long-term debts	1,133	3,160	
Long-term debts	5,142	4,484	
Total indebtedness	9,142	10,484	

As at the end of 2023, the total indebtedness<sup>20</sup> was RMB9,142 million, representing a decrease of RMB1,342 million from the end of 2022, which was mainly due to the impact of the Company's listing in A-share market, as the proceeds satisfied the capital requirements of key projects, leading to decreased external financing needs. Of the total indebtedness, loans denominated in Renminbi, US Dollars and Euro accounted for 97.3% (2022: 97.4%), 1.8% (2022: 1.7%) and 0.9% (2022: 0.9%), respectively. 93.2% (2022: 95.8%) of the indebtedness

were loans with fixed interest rates while the remaining portion of the indebtedness represented loans with floating interest rates.

As at 31 December 2023, neither the Company nor any of its subsidiaries pledged any assets as collateral for debt (2022: Nil).

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Most of the revenues received and expenses paid in the course of the Company's business were denominated in Renminbi, therefore there were no significant risk exposures arising from foreign exchange fluctuations.

#### Contractual obligations

Contractual obligations as at 31 December 2023 are as follows:

		Within	Between	Between	
(RMB million)	Total	1 year	1 to 2 years	2 to 5 years	Thereafter
Short-term debts	2,909	2,909	_	_	_
Long-term debts	7,152	1,207	1,272	3,422	1,251
Lease liabilities	60,458	14,922	14,113	27,215	4,208
Capital commitments	22,927	22,927	_	_	_
Total contractual obligations	93,446	41,965	15,385	30,637	5,459

Note: Amounts of short-term debts, long-term debts and lease liabilities include recognised and unrecognised interest payable, and the amounts shown above were not discounted.

# 7. DISCUSSION AND ANALYSIS ON THE FUTURE DEVELOPMENT OF THE COMPANY

#### 1. INDUSTRY LANDSCAPE AND TREND

2024 is a critical year for achieving the goals and tasks of the "14th Five-Year Plan". The information communications industry should more accurately grasp and identify changes in the external policy environment, as well as the development trends of technology, industry and market, and clarify the next step of efforts.

Firstly, the nation proactively cultivates and develops new productive forces. Focusing on the building of Digital China and the development of new industrialisation, the nation has intensively introduced a series of new policies and new requirements, such as the release of the Overall Layout Plan for the Construction of Digital China, the introduction of the Action Plan for the High-quality Development of Computing Infrastructure and the Three-year Action Plan for "Data Elements ×" (2024–2026), etc., with an aim to vigorously promote the building of modern industrial systems, actively cultivate emerging industries and future industries, and further promote the innovative development of digital economy. In particular, the nation proactively builds new growth



Management presented at Mobile World Congress (MWC)

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engines such as the low-altitude economy, opens up new tracks such as quantum technologies, implements the digital transformation of the manufacturing industry, and promotes the digitalisation of the service industry, which are not only the responsibilities of the information communications industry, but also the rare opportunities for the development of the Company.

Secondly, the development of the new round of sci-tech revolution and industrial transformation is deepening. At present, in the network era represented by "network + application", it is gradually moving from the cloud era of "network + cloud + application" to the intelligent era represented by "network + cloud + AI + application", which is a big trend of technological and industrial transformation. In particular, in terms of AI, quantum, space-aerial-ground integration and green development, the evolution of relevant technologies and industries has accelerated, with gradual maturity of the large multimodal models, the continuous innovation of business models of large models, the continuous breakthroughs of quantum computing, the scale commercialisation of Mobile Phones with Direct Satellites Connection services, the rapid development of low-altitude economy, and the accelerated application of green and low-carbon technologies such as wind-solar integration, source-network load storage and liquid cooling. New technologies, new business forms and new industries are the commanding heights for future development. The Company will further deepen its understanding of promoting industrial innovation through sci-tech innovation and seize the strategic opportunities brought by the new round of sci-tech revolution and industrial transformation.

Thirdly, the demands for digitalisation from the economy and society are continuously upgrading, with vast market space. In recent years, customers' demands for digitalisation, intelligence, greenness and security have continued to grow, evolving from the basic demands such as single voice, text messages and data traffic to the comprehensive demands of simple convergence of wireline and mobile convergence as well as system integration, and further evolving to the customised scene-based demands of digitalisation, intelligence, greenness and security. The demands for industrial digitalisation from manufacturing as well as small and medium-sized enterprises, the demands for digital homes and smart communities, the low-carbon transformation of energy and industry, the demands for green consumption from the public, and the demands for

network and information security are continuously diversifying and rapidly upgrading, bringing broad market space. The Company will fully grasp the evolving trend of customer demands, promote the resolution of the problem of unbalanced and insufficient digital development, and continuously meet people's growing needs for a better digital life.

## 2. DEVELOPMENT STRATEGY OF THE COMPANY

China Telecom adheres to the keynote of seeking progress while maintaining stability and fully, accurately and comprehensively implements the new development principles while coordinating high-quality development and high-level security. The Company firmly fulfils its responsibilities in building Cyberpower and Digital China, as well as maintaining network and information security, anchoring on the mission and vision of building a service-oriented, technology-oriented and secured enterprise. The Company upholds fundamental principles and breaks new ground, carries out expansion and upgrades, assumes responsibility and carries out implementation. The Company continues to deeply implement its Cloudification and Digital Transformation strategy, comprehensively deepens reform and opening up, and comprehensively promotes high-quality development.

#### 3. BUSINESS PLAN

In 2024, the Company will firmly grasp the new round of sci-tech revolution and industrial transformation trend represented by AI, and continue to deeply implement its Cloudification and Digital Transformation strategy. Insisting on the leading role of innovation, the Company will focus on key areas such as cloud, Al, security, quantum and network, and accelerate the formation of new momentum and new advantages for corporate development. Insisting on driving forces from capability enhancement, the Company will continue to promote the application expansion and service upgrade of 5G, Gigabit and Smart Family, continuously enrich the content and value of fundamental businesses, and promote the steady growth of fundamental businesses. The Company will continue to deeply cultivate the digital transformation needs of industry customers, accelerate the development of high-quality digital products and services, and promote the rapid development of Industrial Digitalisation business. Adhering to the customer-oriented

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**approach**, the Company will continue to promote the digital and intelligent upgrades of marketing services, continuously optimise service quality and customer perception, and make every effort to propel the corporate high-quality development to a new level.

#### 4. POTENTIAL RISKS

## Risks of adapting to economic and policy environment

At present, the new round of sci-tech revolution and industrial transformation is developing in depth. The broad application of AI technologies promotes the transformation of innovation and growth modes, and changes the traditional production mode, which will have a profound impact on the human society. The world economy is undergoing profound cyclical and structural changes, with insufficient economic growth momentum and slower growth. The Company's internal Cloudification and Digital Transformation and structural adjustments need to be further deepened, and the foundation for promoting the transformation of development mode, promoting the effective enhancement of quality and the reasonable growth of quantity needs to be further consolidated. The Company will proactively adapt to market, technology and business development trends, strengthen sci-tech innovation, deepen reform and opening up, continuously shape new momentum and new advantages for development, and accelerate corporate transformation to become a service-oriented, technology-oriented and secured enterprise.

#### Risks relating to sci-tech innovation

The new round of sci-tech revolution and industrial transformation has developed rapidly, spawning a large number of new scenes, new business forms and new models. Large models have shown an explosive growth trend. Computing power service and cloud service have become the main development directions, and the value of data elements has been released rapidly. The Company's sci-tech innovation and proprietary R&D and control capabilities of products need to be continuously improved. The Company will continue to strive for breakthroughs in key core technologies, further increase the deployment of high-level sci-tech innovation platforms around strategic emerging businesses and future industries, enhance R&D efficiency and results

output, implement the project of strengthening the enterprise with talents, and create a talent centre and innovation highland.

#### Network and data security risks

The network and data security problems are showing characteristics of complexity and diversity. While the threshold for the occurrence of cyber-attacks has greatly lowered, the scale of the attacks have increased significantly. The security risks brought by new technologies and new scenes increased, and the dynamic characteristics of hybrid multi-cloud environments make security monitoring more complex. The use of data in compliance with laws and regulations and the prevention of data leakage face new challenges. The Company's network and data security system needs to be further improved, and the capabilities to maintain network and data security needs to be continuously fortified. The Company will further intensify the construction of the network and data security system, enhance the network security protection capabilities, strengthen the risk prevention of extreme scenes, and improve the independent and self-control capability of core network technologies. The Company will further deepen the protection of data security and users' personal information, improve the building of organisation and capability of anti-fraud governance, and effectively safeguard the security of data and personal information.

#### Risks of emerging businesses risks from strategic emerging businesses and future industries

There are many uncertainties in the development of strategic emerging businesses and future industries. The competition in the digital service market has become more diversified, and the competition in business areas such as large models and intelligent computing cloud is fierce. The R&D and application capabilities of the Company's emerging businesses need to be further improved. The Company will gain further insight into customer needs, further strengthen ecological cooperation, increase investment in R&D, step up the creation of scene-based solutions, intensify the promotion of differentiated and standardised products and services, and promote the rapid development of strategic emerging businesses.

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

#### International business operation risks

Factors such as the intertwined changes in the world, changes in the policy environment of the countries/ regions where the Company's business and investments are located have led to increased uncertainties in international business expansion. The Company still has certain deficiencies in terms of overseas product services, government and enterprise product development and operation capabilities, and sales channel expansion. The Company will closely track changes in the international situation, pay attention to changes in policies and rules of relevant countries/ regions, and actively use the rule of law and rules to safeguard the legitimate rights and interests of the Company. The Company will strengthen the building of overseas compliance management and risk prevention systems, and conduct risk assessment and regular tracking and monitoring of international business operations to enhance risk response capabilities.

#### 8. OTHER DISCLOSURES

#### 1. PRINCIPAL BUSINESS

The principal business of the Company and the Group is the provision of fundamental telecommunications businesses including wireline, mobile communications and satellite communications services, value-added telecommunications businesses such as Internet access services, information services and other related businesses.

#### 2. DIVIDEND POLICY

The basic principles of the Company's profit distribution policy are:

(1) The Company attaches great importance to reasonable investment returns to investors, and the Company's profit distribution policy will take into account the overall interests of all shareholders, the Company's long-term interests and the Company's sustainable development; (2) Under the premise that the Company's profit distribution does not exceed the cumulative distributable profit and that the Company takes into account the continuous profits, meets regulatory requirements, operates regularly and develops in the long term, the Company will give priority to cash distribution of dividends.

The Board is responsible for formulating the dividend distribution plan and will execute the relevant approval procedures in accordance with relevant laws, rules, regulations and articles of association of the Company (the "Articles of Association") before proceeding with the distribution. In the future, the Company will strive for profitability enhancement and at the same time continue to deliver favourable dividend return for the shareholders. Details of the dividend policy of the Company are set out in the "Corporate Governance Report" of this annual report.

#### 3. DIVIDENDS

The Board of Directors proposed a final dividend of RMB0.090 per share (pre-tax) in an aggregate amount of approximately RMB8,236 million calculated based on 91,507,138,699 shares, being the total number of issued share capital of the Company as at the end of 2023. Together with the 2023 interim dividend of RMB0.1432 per share (pre-tax) which has been distributed, the full year dividend of the year 2023 amounts to RMB0.2332 per share (pre-tax) in an aggregate amount of approximately RMB21,339 million which represents over 70% of the profit attributable to equity holders of the Company for the year 2023. The dividend proposal will be submitted for consideration at the Annual General Meeting to be held on Monday, 27 May 2024 (the "2023 AGM"). Dividends will be denominated and declared in Renminbi. Details of the profit distribution of the Company for 2023 are set out in the "Corporate Governance Report" of this annual report.

#### MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

Dividends for holders of A Shares and the investors of the Shanghai Stock Exchange and Shenzhen Stock Exchange (including enterprises and individuals) investing in the H shares of the Company listed on the Hong Kong Stock Exchange (the "Southbound Trading Link") (the "Southbound Investors") will be paid in Renminbi, whereas dividends for H share shareholders other than Southbound Investors will be paid in Hong Kong dollars. The relevant exchange rate will be the average median rate of Renminbi to Hong Kong dollars as announced by the People's Bank of China for the week prior to the date of declaration of dividends at the 2023 AGM. The proposed final dividends are expected to be paid on or before 26 July 2024 upon approval at the 2023 AGM.

Pursuant to the "Enterprise Income Tax Law of the People's Republic of China", the "Implementation Rules of the Enterprise Income Tax Law of the People's Republic of China" and the "Circular of the State Taxation Administration on Issues Relating to the Withholding of Enterprise Income Tax by PRC Resident Enterprises on Dividends Paid to Overseas Non-PRC Resident Enterprise Shareholders of H Shares" (Guo Shui Han [2008] No. 897), the Company shall be obliged to withhold and pay 10% enterprise income tax when it distributes the proposed 2023 final dividends to non-resident enterprise shareholders of overseas H shares (including HKSCC Nominees Limited, other corporate nominees or trustees, and other entities or organisations) whose names appear on the Company's H share register of members on Wednesday, 12 June 2024.

Pursuant to the "Notice of the State Taxation Administration on Issues Concerning Taxation and Administration of Individual Income Tax After the Repeal of Guo Shui Fa [1993] No. 045 (Guo Shui Han [2011] No. 348)", if the individual H share shareholders who are Hong Kong or Macau residents and those whose country of domicile is a country which has entered into a tax treaty with PRC stipulating a dividend tax rate of 10%, the Company will finally withhold and pay individual income tax at the rate of 10% on behalf of the individual H share shareholders. If the individual H share shareholders whose country of domicile is a country which has entered into a tax treaty with PRC stipulating a dividend tax rate of less than 10%, the Company will finally withhold and pay individual income tax at the rate of 10% on behalf of the individual H share shareholders. If the individual H share shareholders whose country of domicile is a country which has entered into a tax treaty

with PRC stipulating a dividend tax rate of more than 10% but less than 20%, the Company will withhold and pay individual income tax at the actual tax rate stipulated in the relevant tax treaty. If the individual H share shareholders whose country of domicile is a country which has entered into a tax treaty with PRC stipulating a dividend tax rate of 20%, or a country which has not entered into any tax treaties with PRC, or under any other circumstances, the Company will withhold and pay individual income tax at the rate of 20% on behalf of the individual H share shareholders. If those shareholders need to request a refund of tax overpaid from the PRC tax authorities on his own or through an agent or the Company in accordance with the relevant requirements of the "Announcement of the State Taxation Administration on Promulgating the Administrative Measures for Non-resident Taxpayers for Treatments under Tax Treaties" (Announcement [2019] No. 35 of the State Taxation Administration), they shall submit the "Information Report on Non-resident Taxpayers for Treatments under Tax Treaties" (Announcement [2019] No. 35 of the State Taxation Administration), and collect and file such information.

The Company will determine the country of domicile of the individual H share shareholders based on the registered address as recorded in the H share register of members of the Company on Wednesday, 12 June 2024 (the "Registered Address"). If the country of domicile of an individual H share shareholder is not the same as the Registered Address or if the individual H share shareholder would like to apply for a refund of the additional amount of tax finally withheld and paid, the individual H share shareholder shall notify and provide relevant supporting documents to the Company on or before Thursday, 6 June 2024. Upon examination of the supporting documents by the relevant tax authorities, the Company will follow the guidance given by the tax authorities to implement relevant tax withholding and payment provisions and arrangements. Individual H share shareholders may either personally attend or appoint a representative to attend to the procedures in accordance with the requirements under the tax treaties notice if they do not provide the relevant supporting documents to the Company within the time period stated above.

For Southbound Investors (including enterprises and individuals), the Shanghai branch of China Securities Depository and Clearing Corporation Limited and the Shenzhen branch of China Securities Depository and Clearing Corporation Limited, as the nominees of the

#### MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

investors of the Southbound Trading Link, will receive all dividends distributed by the Company and will distribute the dividends to the relevant investors under the Southbound Trading Link through its depositary and clearing system. According to the relevant provisions under the "Notice on Taxation Policies for Shanghai-Hong Kong Stock Connect Pilot Programme (Cai Shui [2014] No. 81)" and "Notice on Taxation Policies for Shenzhen-Hong Kong Stock Connect Pilot Programme (Cai Shui [2016] No. 127)", the Company shall withhold and pay individual income tax at the rate of 20% with respect to dividends received by the Mainland individual investors for investing in the H shares of the Company listed on the Hong Kong Stock Exchange through the Southbound Trading Link. In respect of the dividends received by Mainland securities investment funds investing in the H shares of the Company listed on Hong Kong Stock Exchange through the Southbound Trading Link, the tax levied shall be ascertained by reference to the rules applicable to individual investors. The Company is not required to withhold and pay income tax on dividends derived by the Mainland enterprise investors under the Southbound Trading Link, and such enterprises shall report the income and make tax payment by themselves. The record date for entitlement to the shareholders' rights and the relevant arrangements of dividend distribution for the Southbound Investors are the same as those for the Company's H share shareholders.

The Company assumes no responsibility and disclaims all liabilities whatsoever in relation to the tax status or tax treatment of the individual H share shareholders and for any claims arising from any delay in or inaccurate determination of the tax status or tax treatment of the individual H share shareholders or any disputes relating to the tax withholding and payment mechanism or arrangements.

#### 4. DIRECTORS AND SENIOR MANAGEMENT OF THE COMPANY

The following table sets out certain information of the Directors and senior management of the Company:

Name	Age	Position in the Company	Date of Appointment*
Ke Ruiwen	60	Executive Director, Chairman and Chief Executive Officer	30 May 2012
Shao Guanglu	60	Executive Director, President and Chief Operating Officer	26 May 2020
Liu Guiqing	57	Executive Director and Executive Vice President	19 August 2019
Tang Ke	49	Executive Director and Executive Vice President	22 March 2022
Li Yinghui	53	Executive Director, Executive Vice President,	6 January 2023
		Chief Financial Officer and Secretary of the Board	
Li Jun	48	Executive Director	23 May 2023
Chen Shengguang	60	Non-Executive Director	23 May 2017
Ng Kar Ling Johnny	63	Independent Non-Executive Director	6 January 2023
Yeung Chi Wai, Jason	69	Independent Non-Executive Director	26 October 2018
Chen Dongqi	67	Independent Non-Executive Director	6 January 2023
Lyu Wei	67	Independent Non-Executive Director	23 May 2023

<sup>\*</sup> Date of appointment as Director

#### MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

References are made to the announcements in relation to the changes of Directors and senior management published by the Company on the following dates:

The appointments of Mr. Xia Bing and Mr. Li Yinghui as Executive Directors of the Company and the appointments of Mr. Ng Kar Ling Johnny and Mr. Chen Dongqi as Independent Non-Executive Directors of the Company have been approved at the Extraordinary

General Meeting held on 6 January 2023. The relevant appointments became effective from 6 January 2023 until the Annual General Meeting of the Company for the year 2022 (the "2022 Annual General Meeting"). The resignation of Mr. Tse Hau Yin, Aloysius and Mr. Xu Erming as Independent Non-Executive Directors took effect on 6 January 2023. Meanwhile, the below changes to the members of special committees of the Board became effective on 6 January 2023:

Audit Committee Mr. Ng Kar Ling Johnny, Madam Wang Hsuehming, Mr. Yeung Chi Wai, Jason and

Mr. Chen Dongqi serve as members, and Mr. Ng Kar Ling Johnny serves as the

Chairman

Remuneration Committee Mr. Yeung Chi Wai, Jason, Mr. Ng Kar Ling Johnny and Madam Wang Hsuehming serve

as members, and Mr. Yeung Chi Wai, Jason serves as the Chairman

Nomination Committee Mr. Chen Dongqi, Mr. Ng Kar Ling Johnny and Mr. Yeung Chi Wai, Jason serve as

members, and Mr. Chen Dongqi serves as the Chairman

The term of office of the seventh session of the members of the Board of the Company expired on 23 May 2023, i.e., the date of the 2022 Annual General Meeting. The members of the seventh session of the Board of the Company, namely, Mr. Ke Ruiwen, Mr. Shao Guanglu, Mr. Liu Guiqing, Mr. Tang Ke, Mr. Xia Bing and Mr. Li Yinghui (all as Executive Directors) were re-elected as Executive Directors of the eighth session of the Board at the 2022 Annual General Meeting; Mr. Chen Shengguang (as the Non-Executive Director) was re-elected as the Non-Executive Director of the eighth session of the Board at the 2022 Annual General Meeting; Mr. Ng Kar Ling Johnny, Mr. Yeung Chi Wai, Jason and Mr. Chen Dongqi (all as Independent Non-Executive Directors) were re-elected as Independent Non-Executive Directors of the eighth session of the Board at the 2022 Annual General Meeting. Meanwhile, Mr. Li Jun and Madam Lyu Wei were elected as an Executive Director and an Independent Non-Executive Director, respectively, of the eighth session of the Board at the 2022 Annual General Meeting. The appointment of the eighth session of the members of the Board lasts for a term of three years from 23 May 2023 until the annual general meeting of the Company for the year 2025 to be held in year 2026. The resignation of Madam Wang Hsuehming as an Independent Non-Executive Director took effect on the date of election of the new Independent Non-Executive Director at the 2022 Annual General Meeting. In addition, the below arrangement in relation to the special committees of the Board took effect on 23 May 2023:

Audit Committee Mr. Ng Kar Ling Johnny, Mr. Yeung Chi Wai, Jason, Mr. Chen Dongqi and Madam Lyu

Wei serve as members, and Mr. Ng Kar Ling Johnny serves as the Chairman of the

Audit Committee

Remuneration Committee Mr. Yeung Chi Wai, Jason, Mr. Ng Kar Ling Johnny and Madam Lyu Wei serve as

members, and Mr. Yeung Chi Wai, Jason serves as the Chairman of the Remuneration

Committee

Due to change in work arrangement, Mr. Xia Bing has resigned from his positions as an Executive Director and Executive Vice President of the Company with effect from 19 January 2024.

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

#### 5. SUPERVISORS OF THE COMPANY

The following table sets out certain information of the Supervisors of the Company:

Name	Age	Position in the Company	Date of Appointment*
Han Fang	50	Chairlady of the Supervisory Committee and Shareholder Representative Supervisor	22 March 2022
Zhang Jianbin	58	Employee Representative Supervisor	16 October 2012
Guan Lixin	52	Employee Representative Supervisor	23 May 2023
Luo Zhendong	46	Shareholder Representative Supervisor	23 May 2023
Wang Yibing	58	Shareholder Representative Supervisor	22 March 2022

<sup>\*</sup> Date of appointment as Supervisor

Reference is made to the announcement in relation to the changes of Supervisors published by the Company on 23 May 2023: The term of office of the seventh session of the members of the Supervisory Committee of the Company expired on the date of the 2022 Annual General Meeting. Due to change in work arrangement, Mr. Dai Bin, an Employee Representative Supervisor of the seventh session of the Supervisory Committee and Mr. Xu Shiguang, a Shareholder Representative Supervisor of the seventh session of the Supervisory Committee retired from their positions as Supervisors of the Company upon the expiry of their term of service on 23 May 2023. Madam Han Fang and Madam Wang Yibing, Shareholder Representative Supervisors of the seventh session of the Supervisory Committee, were re-elected as Shareholder Representative Supervisors of the eighth session of the Supervisory Committee at the 2022 Annual General Meeting. Mr. Luo Zhendong was elected as a Shareholder Representative Supervisor of the eighth session of the Supervisory Committee at the 2022 Annual General Meeting. Meanwhile, Mr. Zhang Jianbin and Madam Guan Lixin have been elected by the employees of the Company democratically as the Employee Representative Supervisors of the eighth session of the Supervisory Committee. The appointment of the eighth session of the members of the Supervisory Committee lasts for a term of three years from 23 May 2023 until the annual general meeting of the Company for the year 2025 to be held in year 2026.

## 6. SHARE CAPITAL, ISSUE OF SHARES AND USE OF PROCEEDS

As at 31 December 2023, the total share capital of the Company was approximately RMB91,507 million, divided into 91,507,138,699 shares at a nominal value of RMB1.00 per share (including 77,629,728,699 A Shares and 13,877,410,000 H shares). On 20 August 2021, the Company successfully completed the offering and listing of A Shares on the SSE and initially issued 10,396,135,267 A Shares (with a nominal value of RMB1.00 each) at an issue price of RMB4.53 per share. The subscribers are qualified natural persons and institutional investors (except those prohibited by the laws and regulations and other regulatory requirements applicable to the Company). The total proceeds from the issuance amounted to approximately RMB47,094 million before the exercise of the over-allotment option. After deducting the issuance expenses, the net proceeds amounted to approximately RMB46,712 million and the net proceeds per share amounted to approximately RMB4.49. The exercise period of the over-allotment option for the A Share Offering expired on 22 September 2021. Together with the proceeds from the initial issuance of A Shares, the final gross proceeds from the issuance amounted to approximately RMB47,904 million, and the net proceeds after deducting the issuance expenses amounted to approximately RMB47,516 million and the net proceeds per share amounted to approximately RMB4.49. As disclosed in the Prospectus, the above proceeds were used on the three investment projects of the Company, namely 5G

#### MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

Industrial Internet Construction Project, the Cloud-network integration new information infrastructure project and the research and development project of sci-tech innovation. During the Reporting Period, the proceeds were used, or are proposed to be used, according to the intentions previously disclosed in the Prospectus, and there was no material change or delay. As of 31 December 2022, the total amount of proceeds invested was approximately RMB37,888 million, and the amount of proceeds not utilised was approximately

RMB9,628 million. As of 31 December 2023, the amount of proceeds invested during the Reporting Period was approximately RMB10,593 million, and the accumulated total amount of proceeds invested was approximately RMB48,481 million. The amount of proceeds not utilised was nil. Due to the proceeds and its interest invested in the investment projects, total accumulated amount invested exceeded the total committed investment of proceeds. The use of proceeds is as follows:

Projects invested with proceeds	Total committed investment of proceeds (RMB million)	Amount invested during the Reporting Period (RMB million)		Amount not utilised as of the end of the Reporting Period (RMB million)
5G Industrial Internet Construction Project	9,957	0	9,957	0
Cloud-network integration new information infrastructure project	23,583	6,081	24,548	0
Research and development project of sci-tech innovation	13,976	4,512	13,976	0
Total	47,516	10,593	48,481	0

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

## 7. MATERIAL INTERESTS AND SHORT POSITIONS IN SHARES AND UNDERLYING SHARES OF THE COMPANY

As at 31 December 2023, the interests or short position of persons who are entitled to exercise or control the exercise of 5% or more of the voting power at the shareholders' class meetings of the Company (excluding the Directors and Supervisors) in the shares and underlying shares of the Company as recorded in the register required to be maintained under Section 336 of the Securities and Futures Ordinance (the "SFO") are as follows:

Name of shareholder	Number of shares*	Class of share	Approximate percentage of the respective class of shares in issue	Approximate percentage of the total number of shares in issue	Capacity
China Telecommunications Corporation	58,240,172,066 (Long Position)	A Share	75.02%	63.65%	Beneficial owner
Guangdong Rising Holdings Group Co., Ltd.	5,614,082,653# (Long Position)	A Share	7.23%	6.14%	Beneficial owner
GIC Private Limited	1,248,239,702 (Long Position)	H Share	8.99%	1.36%	Investment manager

<sup>#</sup> As at 31 December 2023, the interest in the shares of the Company has been provided by such shareholder as security to a person other than a qualified lender, and the number of shares involved was 400,000,000.

Save as disclosed above, as at 31 December 2023, in the register required to be maintained under Section 336 of the SFO, no other persons were recorded to hold any interests or short positions in the shares and underlying shares of the Company.

<sup>\*</sup> The information disclosed above is based on the interests and short position as recorded in the register required to be maintained by the Company under Section 336 of the SFO. Pursuant to the relevant provisions of the SFO, shareholders only have to file a disclosure of interest on the occurrence of certain events — called "relevant events". Accordingly, the exact numbers of shares held by the above-mentioned shareholders as at 31 December 2023 may be different from those as disclosed above.

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

## 8. DIRECTORS' AND SUPERVISORS' INTERESTS AND SHORT POSITIONS IN SHARES, UNDERLYING SHARES AND DEBENTURES

Save as disclosed below, as at 31 December 2023, none of the Directors and Supervisors of the Company had any interests or short positions in the shares, underlying shares or debentures of the Company or its associated corporations (as defined in Part XV of the SFO) as recorded in the register required to be maintained under Section 352 of the SFO or as otherwise notified to the Company and the Hong Kong Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers as set out in Appendix C3 of the Listing Rules.

Name	Position	Class of share	Number of Shares	Capacity	Shares held as approximate percentage of the total number of respective class of shares in issue	Shares held as approximate percentage of the total number of shares in issue
Chen Shengguang	Non-Executive Director	A Share	1,000 (Long Position)	Beneficial owner	0.00%	0.00%
			1,000 (Long Position)	Interest of spouse	0.00%	0.00%
Zhang Jianbin	Employee Representative Supervisor	A Share	1 (Long Position)	Beneficial owner	0.00%	0.00%

During the year 2023, the Company has not granted its Directors or Supervisors, or their respective spouses or any of their respective minor child (natural or adopted) or on their behalf any rights to subscribe for the shares or debentures of the Company or any of its associated corporations and none of them has ever exercised any such right to subscribe for the shares or debentures.

## 9. DIRECTORS' AND SUPERVISORS' INTERESTS IN TRANSACTIONS, ARRANGEMENTS OR CONTRACTS

Reference is made to the announcement published by the Company dated 20 October 2023 in relation to revision of annual caps for continuing connected transactions. On 20 October 2023, the Board approved, among others, the revised annual caps for the years ended/ending 31 December 2023 and 2024 in respect of continuing connected transactions contemplated under the Engineering Framework Agreement, the IT Services Framework Agreement, the Supplies Procurement Services Framework Agreement and the Property and Land Use Right Leasing Framework Agreement entered into between the Company and China Telecommunications on 22 October 2021 (the "Revised Annual Caps"). Directors of the Company including

Mr. Ke Ruiwen who also serves as the Chairman of China Telecommunications, Mr. Shao Guanglu who also serves as a Director and the President of China Telecommunications, Mr. Liu Guiqing who also serves as a Director of China Telecommunications, Mr. Tang Ke, Mr. Xia Bing and Mr. Li Jun who also serve/served as Vice Presidents of China Telecommunications and Mr. Li Yinghui who also serves as the Chief Accountant of China Telecommunications therefore abstained from voting on the relevant board resolution in respect of, among others, the Revised Annual Caps.

Save as disclosed above and the service agreements entered into between the Company and the Directors and Supervisors, for the year ended 31 December 2023, the Directors and Supervisors of the Company or their connected entities did not have any material interest, whether directly or indirectly, in any transactions, arrangements or contracts which was significant to the

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

Company's business and which was entered into by the Company, its parent company or any of its subsidiaries or fellow subsidiaries.

#### 10. SERVICE CONTRACTS

None of the Directors or Supervisors of the Company has entered into any service contract which is not determinable by the Company within one year without payment of compensation (other than statutory compensation).

## 11. EMOLUMENTS OF THE DIRECTORS AND SUPERVISORS

Please refer to note 34 of the audited consolidated financial statements for details of the emoluments of all Directors and Supervisors of the Company in 2023.

## 12. EMPLOYEES AND EMOLUMENT POLICY

The details of the Group's emolument policy are set out in the "Corporate Governance Report" in this annual report. The details of share appreciation rights are set out in the "Corporate Governance Report" in this annual report and note 46 of the audited consolidated financial statements.

## 13. PURCHASE, SALE OR REDEMPTION OF LISTED SECURITIES OF THE COMPANY

In 2023, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the Company's listed securities.

## 14. MATERIAL ACQUISITIONS AND DISPOSALS

For the year ended 31 December 2023, the Company had no material acquisitions and disposals of subsidiaries, associates or joint ventures.

#### 15. PUBLIC FLOAT

As at the date of this Report of the Directors, based on the information that is publicly available to the Company and within the knowledge of the Directors, the Company has maintained the public float required under the Listing Rules and as agreed with the Hong Kong Stock Exchange.

## 16. SUMMARY OF FINANCIAL INFORMATION

Please refer to pages 253 to 255 of this annual report for a summary of the operating results, assets and liabilities of the Group for each of the years in the five-year period ended 31 December 2023.

## 17. BANK LOANS AND OTHER BORROWINGS

Please refer to note 20 of the audited consolidated financial statements for details of bank loans and other borrowings of the Group.

#### 18. CHARGE ON ASSETS

As at 31 December 2023, no fixed assets was pledged to banks as loan security (31 December 2022: Nil).

#### 19. CAPITALISED INTEREST

Please refer to note 32 of the audited consolidated financial statements for details of the Group's capitalised interest for the year ended 31 December 2023.

#### 20. FIXED ASSETS

Please refer to note 4 of the audited consolidated financial statements for movements in the fixed assets of the Group for the year ended 31 December 2023.

#### 21. RESERVES

Distributable reserves of the Company as at 31 December 2023 before deducting the proposed final dividends for 2023 amounted to RMB161,486 million.

Please refer to note 26 of the audited consolidated financial statements for details of the movements in the reserves of the Company and the Group for the year ended 31 December 2023.

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

#### 22. EQUITY-LINKED AGREEMENTS

The Company did not enter into any equity-linked agreement, nor did any equity-linked agreement exist for the year ended 31 December 2023.

#### 23. DONATIONS

For the year ended 31 December 2023, the Group made charitable and other donations with a total amount of RMB16.61 million.

#### 24. SUBSIDIARIES AND ASSOCIATES

Please refer to note 9 and note 10 of the audited consolidated financial statements for details of the Company's subsidiaries and the Group's associates as at 31 December 2023.

#### 25. PERMITTED INDEMNITY

For the year ended 31 December 2023 and as at the date of approval of this report, the Company has arranged appropriate insurance coverage in respect of legal actions against the directors of the Group.

#### 26. CHANGES IN EQUITY

Please refer to the consolidated statement of changes in equity as contained in the audited consolidated financial statements of the year.

#### 27. RETIREMENT BENEFITS

Please refer to note 45 of the audited consolidated financial statements for details of the retirement benefits provided by the Group.

#### 28. PRE-EMPTIVE RIGHTS

There are no provisions for pre-emptive rights in the Articles of Association requiring the Company to offer new shares to the existing shareholders in proportion to their shareholdings.

## 29. MAJOR CUSTOMERS AND SUPPLIERS

For the year ended 31 December 2023, revenue generated from the five largest customers of the Group accounted for an amount of less than 30% of the total operating revenues of the Group.

For the year ended 31 December 2023, purchases from the five largest suppliers of the Group accounted for an amount of less than 30% of the total annual purchases of the Group.

#### 30. COMPETING BUSINESS

None of the Directors of the Company had any interest in any business which competes or may compete, either directly or indirectly, with the business of the Group.

#### 31. MANAGEMENT CONTRACTS

During the Reporting Period, the Company had not entered into any management contracts with respect to the entire or principal business of the Company.

#### 32. RELATED PARTY TRANSACTIONS

Details of the related party transactions of the Group ("Related Party Transactions") are set out in note 43 of the consolidated financial statements. Only the Related Party Transactions set out in note 43(a) of the consolidated financial statements constitute continuing connected transactions under Chapter 14A of the Listing Rules, the details of which (except for fully exempt continuing connected transactions) have been disclosed in "Significant Events" in this annual report. Other Related Party Transactions do not constitute connected transactions or continuing connected transactions under Chapter 14A of the Listing Rules.

MANAGEMENT'S DISCUSSION AND ANALYSIS (REPORT OF THE DIRECTORS)

#### 33. BUSINESS REVIEW

The details of the material development of the Group in 2023, a fair review of the business and a discussion and analysis of the Group's performance during the year and the material factors underlying its results and financial position, description of the principal risks and uncertainties faced by the Group and the outlook of the Group's business can be found throughout this annual report, particularly in this section. Particulars of important events affecting the Group that have occurred after 31 December 2023, if any, can also be found in the Notes to the consolidated financial statements.

Description of the Group's key relationships with its employees, customers, suppliers and others that have a significant impact on the Company and on which the Company's success depends can be found throughout different parts of the annual report (including this section, "Corporate Governance Report", etc.), and are particularly detailed in the Sustainability Report 2023 of the Company published on the websites of the Hong Kong Stock Exchange and the Company. In addition, more details regarding the financial key performance indicators and environmental policies, as well as compliance with relevant laws and regulations which have a significant impact on the Group, are also disclosed throughout this annual report (including this section, "Environmental and Social Responsibilities", "Corporate Governance Report", etc.) and the Sustainability Report 2023 of the Company. Each of the above-mentioned relevant contents form an integral part of this Report of the Directors.

## 34. COMPLIANCE WITH THE CORPORATE GOVERNANCE CODE

Please refer to the "Corporate Governance Report" for details of our compliance with the Corporate Governance Code.

#### 35. AUDITORS

PricewaterhouseCoopers and PricewaterhouseCoopers Zhong Tian LLP were appointed as the external auditors of the Company for the year ended 31 December 2023. PricewaterhouseCoopers has audited the consolidated financial statements set out in this report, which have been prepared in accordance with IFRS Accounting Standards.

Pursuant to the relevant requirements of the Ministry of Finance of the People's Republic of China and the SASAC, the service term of Deloitte Touche Tohmatsu and Deloitte Touche Tohmatsu Certified Public Accountants LLP, the international and domestic auditors of the Company for the year of 2020 expired on the date of the Annual General Meeting for the year of 2020 (7 May 2021). The appointments of PricewaterhouseCoopers and PricewaterhouseCoopers Zhong Tian LLP as the external auditors of the Company for the years of 2021, 2022 and 2023 were approved at the Annual General Meeting for the years of 2020, 2021 and 2022 respectively. The Audit Committee and the Board of the Company had agreed on the re-appointment of PricewaterhouseCoopers and PricewaterhouseCoopers Zhong Tian LLP as the external auditors of the Company for the year of 2024 and would propose the re-appointment of PricewaterhouseCoopers and PricewaterhouseCoopers Zhong Tian LLP at the Annual General Meeting for the year of 2023 of the Company for consideration.

By Order of the Board

#### Ke Ruiwen

Chairman and Chief Executive Officer

Beijing, China 26 March 2024