

## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

### 1. DESCRIPTION OF THE COMPANY'S INDUSTRY AND MAIN BUSINESS DURING THE REPORTING PERIOD

According to the *"Report of the Performance of the Communications Industry Economy in the First Half of 2024"* released by the MIIT, in the first half of 2024, the overall operation of the communications industry was stable, and the cumulative revenues from telecommunications services amounted to RMB894.1 billion, representing a year-on-year increase of 3%. The three fundamental telecommunications enterprises proactively developed emerging businesses such as IPTV, Internet datacentres, Big Data, cloud computing and IoT, with service revenues reaching RMB227.9 billion, representing a year-on-year growth of 11.4%. As of the end of June 2024, the total number of mobile phone users of three fundamental telecommunications enterprises and China Broadcasting Network reached 1,777 million, among which, 5G mobile phone users reached 927 million, representing a net addition of 105 million compared with the end of last year. The total number of mobile phone base stations in China reached 11.88 million, with the total number of 5G base stations reaching 3.917 million, a net increase of 540,000 compared with the end of last year.

Insisting on driving forces from dual engines of fundamental and Industrial Digitalisation businesses, the Company accelerated the development of strategic emerging businesses and further enhanced the digital, intelligent and green product and service capabilities. **The Company continued to promote the transformation and upgrades of fundamental businesses.** The Company further optimised 5G network coverage and service quality and strengthened

the innovation and promotion of 5G applications through AI empowerment. The Company further advanced FTTR upgrades and the expansion of Gigabit broadband applications, continued to enrich Smart Family applications and privileges and developed green products to support a better low-carbon new life. The Company further strengthened the expansion of CHBG integrated applications such as Digital Village, Smart Community and Internet of Video Things (IoVT), accelerated the AI upgrades of platforms and content enrichment and expanded the digital platform business and the scale of fundamental connectivity. **The Company further promoted the rapid development of Industrial Digitalisation business.** The Company strengthened the technological research and development (R&D) and capability innovation for digital platforms and developed more than 110 core platforms to empower the digital transformation and upgrades at scale for customers from over 10 key industries such as government administration, industry, education, healthcare and finance. **The Company continued to speed up the scale development of strategic emerging businesses.** Focusing on seven strategic emerging businesses including cloud computing and computing power, new generation information communications, Big Data, AI, security, quantum and digital platform, the Company sped up the cultivation and development of new quality productive forces and fully promoted the development of key products such as Cloud Computers, Quantum-encrypted Calls and Messages, IoVT and Mobile Phones with Direct Satellites Connection, with dual emphasis on quantity and quality. The Company also deepened deployment and proactively accelerated the in-depth integration of "network + cloud + AI + applications" with traditional industries and further creating new momentum and edges for the high-quality operation and development of the Company.

In the first half of 2024, the Company's operating revenues amounted to RMB268.0 billion, representing an increase of 2.8% year-on-year. Of which, service revenues amounted to RMB246.2 billion, representing an increase of 4.3% year-on-year, remaining above the industry's growth rate<sup>1</sup>. The Company's mobile communications service revenues maintained favourable growth, amounting to RMB105.2 billion, representing an increase of 3.6% year-on-year. Of which, revenues from mobile value-added and applications amounted to RMB18.1 billion, representing an increase of 17.1% year-on-year. The penetration rate of 5G network users increased by 14.3 p.p., and mobile ARPU<sup>2</sup> reached RMB46.3. Wireline and Smart Family service revenues amounted to RMB64.0 billion, representing an increase of 3.2% year-on-year. Of which, revenue from Smart Family business reached RMB10.7 billion, representing an increase of 14.4% year-on-year. Broadband blended ARPU<sup>3</sup> reached RMB48.3. Industrial Digitalisation maintained its rapid development momentum, with its revenue amounting to RMB73.7 billion, representing a year-on-year growth of 7.2%.

For detailed business analysis of the Company, please refer to "3. Chairman's Statement" under "Section III Management's Discussion and Analysis" of this report.

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

During the reporting period, China Telecom resolutely fulfilled its responsibilities in building Cyberpower and Digital China, as well as safeguarding network and information security, further deepened the implementation of its Cloudification and Digital Transformation strategy, comprehensively deepened reforms and opening up and accelerated the development of new quality productive forces in light of its own conditions. The Company strove to develop itself into an enterprise with "three orientations", further strengthened its core functions and enhanced its core competitiveness and achieved new results in high-quality development.

<sup>1</sup> According to the performance of the communications industry economy in the first half of 2024 released by MIIT.

<sup>2</sup> Mobile ARPU = monthly average revenues from mobile services/the average number of mobile subscribers.

<sup>3</sup> Broadband blended ARPU = monthly average revenues from broadband access and Smart Family/the average number of broadband subscribers.

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## Further strengthened digital information infrastructure

Insisting on “network as the foundation and cloud as the core, while grasping the development direction of intelligence”, the Company continued to promote the evolution and upgrades of the digital information infrastructure. The Company further deepened co-building and co-sharing to build a high-quality network with high-/mid-/low-band coordination as well as 5G/4G integration. The number of 5G base stations exceeded 1.31 million. The 5G network achieved contiguous coverage in areas of townships and above across the country. The Company continued to strengthen the strategic deployment of 5G-A, promoted the upgrade of 5G-A capabilities on all fronts and jointly completed the large-scale deployment of Redcap and carrier aggregation in more than 100 cities. The Company built computing infrastructure with cloud-intelligence integration and training-inferencing integration, completed the construction of domestically leading all liquid-cooling pools with ten-thousand GPUs in Beijing-Tianjin-Hebei and the Yangtze River Delta, which already undertook training tasks for large models at the trillion parameter level. The Company deployed inferencing pools in 31 provinces to meet the inferencing demands from various AI applications. Intelligent computing power reached 21 EFLOPS. The Company promoted the comprehensive upgrade of datacentres to AIDC and achieved agile delivery of cabinets, elastic supply of cooling and power, as well as efficient energy use. The Company established the leading integrated intelligent computing service capabilities, “Xirang”, to offer supreme computing power scheduling services, highly efficient integrated computing acceleration services and inclusive one-stop intelligent computing services, as well as a thriving model application ecosystem. The Company pushed forward the deployment of proprietary intelligent computing power with a hierarchical approach. The Company fully upgraded China Telecom Cloud products and ecological matrix, with

China Telecom Cloud entering into the new development stage of intelligent cloud. Focusing on areas where AI industry concentrates with abundant computing power and clean energy, the Company built computing power interconnection networks with high throughput and low latency, which are also intelligent, inclusive and easy-to-use. The Company continued to optimise the latency circles with the latency of 1ms within cities, 5ms for intra-region and 20ms for inter-regions to consolidate the foundation for computing power connection. The Company built the 400Gbps all-fibre high-speed network which supports elastic bandwidth and time slicing. The Company has exclusive capabilities of quantum-encrypted dedicated lines within the industry to fulfil the demands for secure, elastic and inclusive transmissions in the era of AI. The number of 10G PON ports of Gigabit fibre network exceeded 9 million, with a coverage of 94% of residential areas in cities and towns. The Company carried out the deployment of 50G PON network to support the demands for 10-Gigabit access in locations such as key subdistricts, industrial parks and factories. The Company's cloud-network operation capabilities continued to be strengthened and both the amount of network-wide fault work orders and the processing time have been reduced. The Company also promoted the automation of cloud-network operation, fully accelerated the creation and application of large model for network, and steadily enhanced the automatic processing rate in cloud-network operation and maintenance. The Company took different measures at the same time to further strengthen the green upgrade of cloud-network infrastructure, established green datacentres in an all-round way and accelerated the green transformation of traditional communications buildings. 12 datacentres of the Company were newly rated as the national green datacentres. The Company further promoted AI intelligent energy-saving and green transformation for facility rooms and base stations, with an AI energy-saving coverage rate of 96% among all 5G/4G base stations. The annualised energy-saving in total exceeded 1 billion kWh.

## Product application capabilities entering a new stage

Insisting on the customer-oriented approach, the Company accelerated the integration of new elements such as cloud, artificial intelligence (AI), quantum and satellite into standard products, to further enhance product capabilities, business value and service level. The Company sped up the enrichment of contents and intelligent upgrades of platforms with a focus on the integrated CHBG scenes to expand the digital platform business and the scale of fundamental connectivity, with an aim to promote the building of a service-oriented enterprise on all fronts. For individual customers, the Company further promoted the innovation of 5G applications and personal terminals. In terms of applications, the Company accelerated the AI upgrade of applications such as Communications Assistant, Colour Ringback Tone with Video and China Telecom Cloud Drive. The Company also stepped up the scale expansion of differentiated businesses such as Quantum-encrypted Calls and Messages and Mobile Phones with Direct Satellites Connection, and rolled out the world's first Cars with Direct Satellites Connection service. In terms of handsets, the Company launched the first AI phone that is customised by an operator and embedded with proprietary large models to fulfil individual customers' demands for intelligent and convenient communications services. For household customers, the Company further advanced FTTR upgrades and the expansion of Gigabit broadband applications. The Company continuously promoted the AI upgrades of devices such as cloud computer and home monitor in cloud and further strengthened the AI upgrades as well as integration and mutual promotion of platforms such as Smart Family, Smart Community, Digital Village and IoVT. The Company further enriched family applications and continued to enhance service capabilities. The Company

created the living and service circles for communities/villages, to fulfil household customers' scene-based demands for "safe home, low-carbon home and intelligent home". For government and enterprise customers, the Company fulfilled the demands for digitalisation from thousands of industries leveraging "network + cloud + AI + applications" and promoted in-depth integration between digital economy and real economy. The Company pushed forward the upgrade of the 5G NICES Pro+ integrated product portfolio. Through 5G definitive network and proprietary industrial PON, network construction and operating costs were significantly reduced for customers from the new industrialisation sector. e-Surfing Internet of Things (IoT) platform supports secure and reliable access of ultra-large scale terminals at the hundred-million level, as well as online sensing and control of IoT network connectivity at the billion level, with the number of terminal users exceeding 600 million. The Company catalysed the launch of AI applications. Xingchen large model for government administration hotline significantly enhanced operating efficiency and citizens' perception of the hotline for people's livelihood. "Xingchen Smart Answers" realised the upgrade to intelligent interaction through SMS, which allowed large model services to reach thousands of families more conveniently. Benchmark use cases of IoVT such as Kitchen Monitoring and City Brain empowered the development of smart city, with accelerating scene-based replication and promotion. The Company intensified its efforts in research and development iteration and capability innovation of core digital platforms, continued to upgrade the capabilities of more than 110 digital platforms such as municipal grassroots governance platform and all-domain tourism platforms, and further empowered customers' digital transformation and upgrades in more than 10 key industries such as government administration, industry, education, healthcare and finance.

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### Achieved new breakthroughs in sci-tech innovation

The Company further intensified its efforts to achieve breakthroughs in key core technologies and sped up the development of new quality productive forces with a focus on four technological directions, namely network, cloud and cloud-network integration, AI and quantum/security. The Company fully completed the deployment of sci-tech innovation and R&D system RDO, optimised the R&D organisational system and continued to strengthen fundamental research. The Company also optimised the building of sci-tech innovation demonstration bases and accelerated the launch of sci-tech achievements. The Company further increased the input of sci-tech innovation and R&D, with R&D expenses increasing by 12.5% year-on-year. Focusing on strategic emerging industries, the Company accelerated the building of core scientific research teams comprising of top talents, with the number of R&D personnel increasing by 15.3% over the end of last year. The flying geese paradigm of technological experts and talents, comprising of scientists, chief experts, senior experts, and experts, has basically taken shape, with its scale exceeding 10,000 persons. The Company attained breakthroughs in core technologies and released 6G intelligent and simple network architecture and 6G sci-tech innovation experimental apparatus. "Xirang" platform achieved breakthroughs in core technologies of managing and scheduling ten-thousand GPUs in public cloud, and completed the industry's first verification of over 100-kilometre distributed lossless intelligent

computing interconnection on existing network. In addition, the Company launched the industry's first large speech model that supports code switching of 40 dialects, and developed the first quantum security encryption system integrating QKD in China. The Company also upgraded the leading "Tianyan" quantum computing cloud platform. The Company was approved to be the source of original technologies for a number of cutting-edge technologies. The Company took the lead in creating innovation platforms such as cloud computing, quantum communications and next generation optical network innovation consortium. Two projects were awarded the first prize of the National Science and Technology Progress Award 2023 and were included in the list of outstanding enterprises of sci-tech innovation among state-owned central enterprises in 2023. Furthermore, the Company vigorously promoted the conversion of sci-tech achievements, with achievements on its proprietary list increasing by 40.4% year-on-year. The proportion of proprietary IT systems and business platforms reached 50.4%. The Company leveraged sci-tech innovation to promote industrial innovation, and fully completed deployment in seven strategic emerging businesses including cloud computing and computing power, new generation information communications, Big Data, AI, security, quantum and digital platform. The Company further strengthened external empowerment and internal applications, accelerated the cultivation of new growth areas, effectively supported the enhancement of corporate operating efficiency, and continued to create new momentum and edges for high-quality development.

## New progress in security assurance capabilities

The Company strengthened the building of network and information security systems and capabilities, elevated the digital and intelligent level of risk monitoring and prevention, safeguarded the secure operation of cloud-network of the Company and provided security products and services for customers. Through organic integration of its edges in cloud-network resources with security technologies, the Company continued to explore and innovate security products and services to offer sustainable, iterative, and easy-to-maintain network security capabilities. The Company supported the network and data security assurance under scenes such as technological application and evolution, network iteration and upgrade as well as massive data aggregation. The Company also further consolidated its key capabilities in data storage and data masking. The Company empowered new security capabilities leveraging quantum technologies. The Company carried out innovative integration of quantum technologies with businesses such as calls, cloud-network and platforms to create a “quantum+” product portfolio, thus establishing its differentiated security products and service edges. e-Surfing Security Brain 4.0 product was deeply integrated with proprietary security vertical large model “Xingchen – Jianwei” to effectively enhance security operating efficiency and customer experience. As the only domestic “carrier-grade” protection platform with coordinated handling capabilities of multiple protection

measures, Anti-DDoS Cloud Dam was included in Gartner’s list of global top service providers selection. The number of cleaning nodes reached 64, covering more than 15,000 customers. The cleaning capacity for whole-network traffic increased by 2.4Tbps in the first half of the year, bringing the total to 13.68Tbps.

## Further deepened reforms on all fronts

The Company deeply implemented the deepening and enhancing action of state-owned enterprise (SOE) reforms. Insisting on sci-tech innovation as the core, while focusing on the government and enterprise field, the Company continued to deepen systematic transformation and optimise the system and mechanism conducive to the development as an enterprise with “three orientations”<sup>4</sup>. For three consecutive years, the Company has been rated as Grade A in the assessment by the State-owned Assets Supervision and Administration Commission of the State Council on key reform tasks performance by state-owned central enterprises. The Company established dedicated research institutions for cloud computing, AI, quantum and others, and also recruited corporate strategic level scientists to strive for breakthroughs in cutting-edge technologies and promote in-depth collaboration among industry, academia and research institutes. The Company further deepened the corporate reform of verticals, optimised market-oriented operation mechanism and created high-quality digital platforms and products. The Company pushed forward the establishment of the

<sup>4</sup> Enterprise with “three orientations”: service-oriented, technology-oriented and secured enterprise.

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**Ke Ruiwen**  
*Chairman and Chief  
 Executive Officer*

satellite subsidiary to consolidate and expand its first-mover advantage in the field of satellite communications and accelerate the high-quality development of satellite communications business. The Company fully promoted the optimisation of main process with cloud core platform as the hub, refined the market-oriented talent allocation mechanism and strengthened the building of talent teams of solutions, secondary development as well as delivery and operation for provincial and city level branches. The Company also strengthened the highly efficient collaboration between provincial branches and professional companies, optimised vertically integrated support process and support mechanism for major projects, accelerated the coverage of branches at the district and county level and promoted the scale development of strategic emerging businesses. The Company deepened the reforms of systems for customer service, channel and cloud-network operation, among others, and strengthened the application of digital and intelligent technologies to support the continued optimisation of product operation system, talent structure as well as process and mechanism. Focusing

on the characteristics associated with the development of strategic emerging businesses, the Company further optimised the resource allocation as well as assessment and incentive mechanisms and innovated the allocation approach of productive elements. The Company developed a sound competitive compensation and incentive system to further strengthen employees' enthusiasm. The Company also accelerated the optimisation of categorised evaluation system and assessment mechanism for scientific research to fully stimulate the innovation potential of sci-tech talents.

### 3. CHAIRMAN'S STATEMENT

Currently, the development of the new round of sci-tech revolution and industrial transformation is deepening, while the abundant use cases are constantly fulfilling people's aspirations for a better digital life, presenting valuable opportunities for the industry and the Company to further promote high-quality development. In the first half of 2024, the Company firmly seized the development opportunities,

implemented the new development principles completely, accurately and comprehensively, and resolutely fulfilled its responsibilities in building Cyberpower and Digital China, as well as safeguarding network and information security. The Company further deepened the implementation of its Cloudification and Digital Transformation strategy and accelerated the intelligent and green evolution and upgrades of the digital information infrastructure. The Company increased the supply of high-quality products and services and sped up the scale expansion of its strategic emerging businesses. The Company comprehensively deepened reforms and opening up and accelerated the development of new quality productive forces in light of its own conditions. The Company strove to develop itself into an enterprise with "three orientations" and further strengthened its core functions and enhanced its core competitiveness. The Company achieved new results in high-quality development and contributed to the advancement of Chinese modernisation with the strength of telecommunications.

## 1. Overall results

In the first half of 2024, the Company's operating revenues amounted to RMB268.0 billion, representing an increase of 2.8% year-on-year. Of which, service revenues<sup>5</sup> amounted to RMB246.2 billion, representing an increase of 4.3% year-on-year, remaining above the industry's growth rate. EBITDA<sup>6</sup> amounted to RMB76.8 billion, representing an increase of 4.7% year-on-year. Net profit<sup>7</sup> amounted to RMB21.8 billion, representing an increase of 8.2% year-on-year. The basic earnings per share were RMB0.24. Capital expenditure was RMB47.2 billion and free cash flow<sup>8</sup> reached RMB15.5 billion.

The Company achieved stable growth of revenues from fundamental businesses and promoted value enhancement driven by application innovation, with its subscriber

value rising continuously. Revenues from Industrial Digitalisation business achieved favourable growth, while the development quality steadily elevated. In the first half of the year, the Company's mobile communications service revenues amounted to RMB105.2 billion, representing an increase of 3.6% year-on-year. Of which, revenues from mobile value-added and applications amounted to RMB18.1 billion, representing an increase of 17.1% year-on-year. The net addition of mobile subscribers was 9.08 million, bringing the total number of subscribers to 417 million. Mobile ARPU reached RMB46.3. Wireline and Smart Family service revenues amounted to RMB64.0 billion, representing an increase of 3.2% year-on-year. Of which, revenue from Smart Family business reached RMB10.7 billion, representing an increase of 14.4% year-on-year. The number of broadband subscribers reached 193 million with a net addition of 3.19 million. Broadband blended ARPU reached RMB48.3. Revenues from Industrial Digitalisation amounted to RMB73.7 billion, representing a year-on-year growth of 7.2%, accounting for 30.0% of service revenues, up by 0.8 p.p. year-on-year. Revenue from China Telecom Cloud amounted to RMB55.2 billion, representing an increase of 20.4% year-on-year.

The Company attaches great importance to shareholder returns and strives to enhance its profitability and cash flow generation capabilities. The Board of Directors has resolved to continue declaring an interim dividend in year 2024, and the profit to be distributed in cash represents over 70% of the profit attributable to equity holders of the Company for the first half of 2024, i.e., RMB0.1671 per share (pre-tax), representing an increase of 16.7% year-on-year. Within three years from 2024, the Company's profit to be distributed in cash will gradually increase to above 75% of the profit attributable to equity holders of the Company for the year, continuously creating more value for shareholders.

<sup>5</sup> Service revenues are calculated based on operating revenues minus sales of mobile terminals, sales of wireline equipment and other non-service revenues.

<sup>6</sup> EBITDA is calculated based on operating revenues minus operating expenses plus depreciation and amortisation. EBITDA has been widely applied in the global telecommunications industry as a benchmark to reflect operating performance, debt raising ability and liquidity, but it is not regarded as a measure of operating performance and liquidity under IFRS Accounting Standards. It also does not represent net cash from operating activities. In addition, the Company's EBITDA may not be comparable to similar indicators provided by other companies.

<sup>7</sup> Net profit represents profit attributable to equity holders of the Company.

<sup>8</sup> 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.

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## 2. Achieving new results in high-quality development by firmly promoting the building of an enterprise with “three orientations”

### 2.1 Insisting on driving forces from dual engines of fundamental and Industrial Digitalisation businesses, while steadily promoting the building of a service-oriented enterprise

Insisting on the customer-oriented approach, the Company accelerated the integration of new elements such as cloud, artificial intelligence (AI), quantum and satellite into standard products, to further enhance product capabilities, business value and service level. The Company sped up the enrichment of contents and intelligent upgrades of platforms with a focus on the integrated CHBG scenes to expand the digital platform business and the scale of fundamental connectivity, with an aim to promote the building of a service-oriented enterprise on all fronts. For individual customers, the Company further promoted the innovation of 5G applications and personal terminals. In terms of applications, the Company accelerated the AI upgrade of applications such as Communications Assistant, Colour Ringback Tone with Video and China Telecom Cloud Drive. The Company also stepped up the scale expansion of differentiated businesses such as Quantum-encrypted Calls and Messages and Mobile Phones with Direct Satellites Connection, and rolled out the world's first Cars with Direct Satellites Connection service. In terms of handsets, the Company launched the first AI phone that is customised by an operator and embedded with proprietary large models to fulfil individual customers' demands for intelligent and convenient communications services. For household customers, the Company further advanced FTTR upgrades and the expansion of Gigabit broadband applications. The Company continuously promoted the AI upgrades of devices such as cloud computer and home monitor in cloud and further strengthened the AI upgrades as well as integration and mutual promotion of platforms

such as Smart Family, Smart Community, Digital Village and Internet of Video Things (IoVT). The Company further enriched family applications and continued to enhance service capabilities. The Company created the living and service circles for communities/villages, to fulfil household customers' scene-based demands for “safe home, low-carbon home and intelligent home”. For government and enterprise customers, the Company fulfilled the demands for digitalisation from thousands of industries leveraging “network + cloud + AI + applications” and promoted in-depth integration between digital economy and real economy. The Company pushed forward the upgrade of the 5G NICES Pro+ integrated product portfolio. Through 5G definitive network and proprietary industrial PON, network construction and operating costs were significantly reduced for customers from the new industrialisation sector. e-Surfing Internet of Things (IoT) platform supports secure and reliable access of ultra-large scale terminals at the hundred-million level, as well as online sensing and control of IoT network connectivity at the billion level, with the number of terminal users exceeding 600 million. The Company catalysed the launch of AI applications. Xingchen large model for government administration hotline significantly enhanced operating efficiency and citizens perception of the hotline for people's livelihood. “Xingchen Smart Answers” realised the upgrade to intelligent interaction through SMS, which allowed large model services to reach thousands of families more conveniently. Benchmark use cases of IoVT such as Kitchen Monitoring and City Brain empowered the development of smart city, with accelerating scene-based replication and promotion. The Company intensified its efforts in research and development (R&D) iteration and capability innovation of core digital platforms, continued to upgrade the capabilities of more than 110 digital platforms such as municipal grassroots governance platform and all-domain tourism platforms, and further empowered customers' digital transformation and upgrades in more than 10 key industries such as government administration, industry, education, healthcare and finance.

Adapting to new demands of information services in the digital era, the Company accelerated the enhancement of intelligent service capabilities. The Company launched multimodal intelligent services including text, video and speech, with the average number of services exceeding 75 million times per month, representing a year-on-year increase of 13.4%. The Company also promoted brand-new upgrades of the "Good Service as You Wish" service initiatives, with edges of user satisfaction and service reputation becoming further strengthened and enhanced.

## 2.2 Further leveraging the leading role of sci-tech innovation, with the building of a technology-oriented enterprise entering a new stage

The Company further intensified its efforts to achieve breakthroughs in key core technologies and sped up the development of new quality productive forces with a focus on four technological directions, namely network, cloud and cloud-network integration, AI and quantum/security. The Company fully completed the deployment of sci-tech innovation and R&D system RDO, optimised the R&D organisational system and continued to strengthen fundamental research. The Company also optimised the building of sci-tech innovation demonstration bases and accelerated the launch of sci-tech achievements. The Company further increased the input of sci-tech innovation and R&D, with R&D expenses increasing by 12.5%<sup>9</sup> year-on-year. Focusing on strategic emerging industries, the Company accelerated the building of core scientific research teams comprising of top talents, with the number of R&D personnel increasing by 15.3% over the end of last year. The flying geese paradigm of technological experts and talents, comprising of scientists, chief experts, senior experts, and experts, has basically taken shape, with its scale exceeding 10,000 persons. The Company attained breakthroughs in core technologies and released 6G intelligent and simple network architecture and 6G

sci-tech innovation experimental apparatus. "Xirang" platform achieved breakthroughs in core technologies of managing and scheduling ten-thousand GPUs in public cloud, and completed the industry's first verification of over 100-kilometre distributed lossless intelligent computing interconnection on existing network. In addition, the Company launched the industry's first large speech model that supports code switching of 40 dialects, and developed the first quantum security encryption system integrating QKD in China. The Company also upgraded the leading "Tianyan" quantum computing cloud platform. The Company further elevated the level of sci-tech innovation and was approved to be the source of original technologies for a number of cutting-edge technologies. The Company took the lead in creating innovation platforms such as cloud computing, quantum communications and next generation optical network innovation consortium. Two projects were awarded the first prize of the National Science and Technology Progress Award 2023<sup>10</sup> and were included in the list of outstanding enterprises of sci-tech innovation among state-owned central enterprises in 2023. Furthermore, the Company vigorously promoted the conversion of sci-tech achievements, with achievements on its proprietary list increasing by 40.4% year-on-year. The proportion of proprietary IT systems and business platforms reached 50.4%, up by 9.5p.p. year-on-year. The Company leveraged sci-tech innovation to promote industrial innovation, and fully completed deployment in seven strategic emerging businesses including cloud computing and computing power, new generation information communications, Big Data, AI, security, quantum and digital platform. The Company further strengthened external empowerment and internal applications, accelerated the cultivation of new growth areas, effectively supported the enhancement of corporate operating efficiency, and continued to create new momentum and edges for high-quality development.

<sup>9</sup> The growth rate of R&D expenses is calculated based on figures of R&D expenses in Chinese Accounting Standards.

<sup>10</sup> The "Key Technology and Large-scale Application of the Next Generation Internet Source Address Verification Architecture SAVA" and "Key Technology and Engineering Application of the Fifth Generation Mobile Communications System (5G)" of China Telecom received the first prize of the National Science and Technology Progress Award 2023.

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### 2.3 Further enhancing capabilities of security products and services supply, with the building of a secured enterprise making solid progress

The Company strengthened the building of network and information security capabilities, elevated the digital and intelligent level of risk monitoring and prevention, safeguarded the secure operation of cloud-network of the Company and provided security products and services for customers. Through organic integration of its edges in cloud-network resources with security technologies, the Company continued to explore and innovate security products and services to offer sustainable, iterative, and easy-to-maintain network security capabilities. The Company supported the network and data security assurance under scenes such as technological application and evolution, network iteration and upgrade as well as massive data aggregation. The Company also further consolidated its key capabilities in data storage and data masking. The Company empowered new security capabilities leveraging quantum technologies. The Company carried out innovative integration of quantum technologies with businesses such as calls, cloud-network and platforms to create a “quantum+” product portfolio, thus establishing its differentiated security products and service edges. e-Surfing Security Brain 4.0 product was deeply integrated with proprietary security vertical large model “Xingchen – Jianwei” to effectively enhance security operating efficiency and customer experience. As the only domestic “carrier-grade” protection platform with coordinated handling capabilities of multiple protection measures, Anti-DDoS Cloud Dam was included in Gartner’s list of global top service providers selection. The number of cleaning nodes reached 64, covering more than 15,000 customers. The cleaning capacity for whole-network traffic increased by 2.4Tbps in the first half of the year, bringing the total to 13.68Tbps.

### 3. Fully deepening reforms and opening up to further bolster innovative development vitality of the Company

The Company deeply implemented the deepening and enhancing action of state-owned enterprise (SOE) reforms. Insisting on sci-tech innovation as the core, while focusing on the government and enterprise field, the Company continued to deepen systematic transformation and optimise the system and mechanism conducive to the development as an enterprise with “three orientations”. For three consecutive years, the Company has been rated as Grade A in the assessment by the State-owned Assets Supervision and Administration Commission of the State Council on key reform tasks performance by state-owned central enterprises. The Company established dedicated research institutions for cloud computing, AI, quantum and others, and also recruited corporate strategic level scientists to strive for breakthroughs in cutting-edge technologies and promote in-depth collaboration among industry, academia and research institutes. The Company further deepened the corporate reform of verticals, optimised market-oriented operation mechanism and created high-quality digital platforms and products. The Company pushed forward the establishment of the satellite subsidiary to consolidate and expand its first-mover advantage in the field of satellite communications and accelerate the high-quality development of satellite communications business. The Company fully promoted the optimisation of main process with cloud core platform as the hub, refined the market-oriented talent allocation mechanism and strengthened the building of talent teams of solutions, secondary development as well as delivery and operation for provincial and city level branches. The Company also strengthened the highly efficient collaboration between provincial branches and professional companies, optimised vertically integrated support process and support mechanism for major projects, accelerated

the coverage of branches at the district and county level and promoted the scale development of strategic emerging businesses. The Company deepened the reforms of systems for customer service, channel and cloud-network operation, among others, and strengthened the application of digital and intelligent technologies to support the continued optimisation of product operation system, talent structure as well as process and mechanism. Focusing on the characteristics associated with the development of strategic emerging businesses, the Company further optimised the resource allocation as well as assessment and incentive mechanisms and innovated the allocation approach of productive elements. The Company developed a sound competitive compensation and incentive system to further strengthen employees' enthusiasm. The Company also accelerated the optimisation of categorised evaluation system and assessment mechanism for scientific research to fully stimulate the innovation potential of sci-tech talents.

The Company optimised its system and mechanism of open cooperation and coordinated the promotion of high-standard opening up to create a mutually beneficial and win-win ecological landscape. The Company continued to strengthen the open cooperation of high-end talents and enhanced joint nurturing with top universities and national laboratories, to form innovation synergy for strategic emerging industries. The Company continued to expand ecological cooperation along the upstream and downstream of the industrial chain and created an ecological system covering fields such as intelligent computing cloud, Xingchen large models, data elements and terminal. The Company initiated the establishment of the Industrial Alliance of Low-altitude Economy and released the "Low-altitude Pilot" action plan to foster the industrial development of the low-altitude economy. The Company further promoted the high-quality development of international operations, optimised the layout of overseas industrial collaboration and built an overseas business ecosystem. The Company strengthened cooperation with international operators. Mobile Phones with Direct Satellites Connection service was successfully

launched in Hong Kong. New full-service international communication accesses were established in Kunming and Haikou to continuously strengthen the cooperation with countries and regions along the "the Belt and Road". The Company further promoted the building of the international cooperation and innovation platforms and gave full play to the role of the World Broadband Association (WBBA) as an international exchange platform as well as a hub for industrial innovation, with its number of members exceeding 80.

#### 4. Deeply implementing 'AI+' to accelerate the creation of important drivers for the development of new quality productive forces

Grasping the development direction of AI, the Company deeply implemented "AI+" and completed the overall AI deployment of "1+1+1+M+N"<sup>11</sup> with "Xingchen" as the brand. The Company strengthened the integration and mutual promotion of capabilities in various fields, continuously enriched the Xingchen large model series product portfolio, empowered the intelligent transformation for thousands of industries, and supported enterprises to achieve costs reduction and efficiency enhancement. In terms of the intelligent computing cloud foundation, the Company established the leading integrated intelligent computing service capabilities, "Xirang", to offer supreme computing power scheduling services, highly efficient integrated computing acceleration services and inclusive one-stop intelligent computing services, as well as a thriving model application ecosystem. The Company pushed forward the deployment of proprietary intelligent computing power with a hierarchical approach. "Xirang" has the access of a total of 22 EFLOPS of various types of intelligent computing power from 39 partners. The Company fully upgraded China Telecom Cloud products and ecological matrix, with China Telecom Cloud entering into the new development stage of intelligent cloud. In terms of the foundation for the general-purpose large models, the Company further enhanced the capabilities of large foundation models. The large language model, large speech model and large multimodal model

<sup>11</sup> 1+1+1+M+N: 1 foundation for intelligent computing cloud, 1 foundation for the general-purpose large models, 1 data foundation, "M" refers to the number of large models for own use, and "N" refers to the number of large vertical models.

## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

of Xingchen series have all completed “dual recordation” of algorithms and services. Of which, Xingchen large speech model was the first large speech model that is independently recorded in China. The Company also released China’s first AI development tool “Xingchen • Software factory” that can generate code with one click and autonomously test and correct errors. The Company proactively promoted the advancement of large model technologies through open source, and took the lead among state-owned central enterprises to achieve open source for large language models at various grades with billions, tens of billions, and trillions of parameters. The Company has launched 32 large vertical models in fields such as industrial, education, healthcare, as well as government administration, empowering 370 2B projects. The Company also launched standardised AI products such as AI phones, AI cloud computers, AI large model integrated devices to meet the diverse intelligent demands of customers. The Company also launched 10 internal large models for customer service, network operations, office administration and other corporate operation segments. The proportion of intelligent voice service by avatar customer service representatives has steadily increased, while the AI-empowered smart energy-saving effects for base stations and facility rooms have continuously become prominent. In terms of data foundation, the Company launched the “Data Chain AI Network (DCAN)” capability system, and created high-quality data sets that aggregate data from fields such as public, industry and internet. The Company created Xinghai data intelligent core platform which empowered more than 150 projects for government and enterprise customers. The Company also upgraded Lingze 2.0 data elements platform to serve public data operation and the construction of data infrastructure in 22 provinces and cities. The number of partners of data product supermarket model exceeded 1,300, with the number of data products exceeding 2,000.

## 5. Accelerating the intelligent and green upgrades of digital information infrastructure to consolidate the foundation for high-quality development of the Company

Insisting on “network as the foundation and cloud as the core, while grasping the development direction of intelligence”, the Company continued to promote the evolution and upgrades of the digital information infrastructure. The Company built computing infrastructure with cloud-intelligence integration and training-inferencing integration, completed the construction of domestically leading all liquid-cooling pools with ten-thousand GPUs in Beijing-Tianjin-Hebei and the Yangtze River Delta, which already undertook training tasks for large models at the trillion parameter level. The Company deployed inferencing pools in 31 provinces to meet the inferencing demands from various AI applications. The newly added intelligent computing power was 10 EFLOPS, bringing the total to 21 EFLOPS. The Company promoted the comprehensive upgrade of datacentres to AIDC and achieved agile delivery of cabinets, elastic supply of cooling and power, as well as efficient energy use. Focusing on areas where AI industry concentrates with abundant computing power and clean energy, the Company built computing power interconnection networks with high throughput and low latency, which are also intelligent, inclusive and easy-to-use. The Company continued to optimise the latency circles with the latency of 1ms within cities, 5ms for intra-region and 20ms for inter-regions to consolidate the foundation for computing power connection. The Company built the 400Gbps all-fibre high-speed network which supports elastic bandwidth and time slicing. The Company has exclusive capabilities of quantum-encrypted dedicated lines within the industry to fulfil the demands for secure, elastic and inclusive transmissions in the era of AI. The number of 10G PON ports of Gigabit fibre network exceeded 9

## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

million, with a coverage of 94% of residential areas in cities and towns. The Company carried out the deployment of 50G PON network to support the demands for 10-Gigabit access in locations such as key subdistricts, industrial parks and factories. The Company's cloud-network operation capabilities continued to be strengthened and both the amount of network-wide fault work orders and the processing time have been reduced. The Company also promoted the automation of cloud-network operation, fully accelerated the creation and application of large model for network, and steadily enhanced the automatic processing rate in cloud-network operation and maintenance.

The Company further deepened co-building and co-sharing with China Unicom to build a high-quality network with high-/mid-/low-band coordination as well as 5G/4G integration. The newly added co-built and co-shared 5G mid-/high-band base stations exceeded 100,000, with the total number of 5G base stations exceeding 1.31 million. The Company steadily pushed forward with one single 4G network, with the number of 4G mid-band base stations exceeding 2 million. The Company coordinated the promotion of co-sharing 800MHz/900MHz low-band as well as 700MHz inter-network roaming, with the number of low-band base stations reaching 790,000. The 5G network achieved contiguous coverage in areas of townships and above across the country, while the in-depth coverage rate of key areas and key scenes increased by 7.4%. The 5G accessibility rate of administrative villages across the country increased by 25%. Coverage and perceived speed of mobile network steadily increased. The Company continued to strengthen the strategic deployment of 5G-A, promoted the upgrade of 5G-A capabilities on all fronts and jointly completed the large-scale deployment of Redcap and carrier aggregation in more than 100 cities.

The Company proactively implemented the green development principles. Under the guidance of the "1248"<sup>12</sup> green development model, the Company took different measures at the same time to further strengthen the green upgrade of cloud-network infrastructure. In the first half of 2024, the greenhouse gas emissions per unit of total volume of telecommunications services maintained a double-digit decline year-on-year. The Company established green datacentres in an all-round way and accelerated the green transformation of traditional communications buildings. 12 datacentres of the Company were newly rated as the national green datacentres, which was the largest number in the industry. The Company further promoted AI intelligent energy-saving and green transformation for facility rooms and base stations, with an AI energy-saving coverage rate of 96% among all 5G/4G base stations and a cumulative coverage of 1,800 facility rooms and 4.95 million sectors. The Company completed green transformation for 14,000 base stations and 280 facility buildings. The annualised energy-saving in total exceeded 1 billion kWh. The Company increased the use of green electricity, with the volume of green electricity with "integration of trading of permit and electricity" increasing by 960 million kWh in the first half of the year, representing an increase of over 200% year-on-year. By strengthening the promotion of green products and services, while focusing on areas such as clean production, pollution control and environmental protection, the Company built a series of green solutions such as ecological environment Big Data platform, air pollution prevention and control command and scheduling system, as well as green lighting to empower the green and low-carbon transformation of the economy and society.

<sup>12</sup> "1248": "1" represents one strategic focus, i.e., green and low-carbon development as an important element of the "Cloudification and Digital Transformation" strategy; "2" represents two priorities, i.e., accelerating transformation towards green development on internal fronts and developing a green production and lifestyle on external fronts; "4" represents four basic strategies, i.e., high-quality development, coordinated development, sustainable development, and innovative development; and "8" represents eight major green initiatives, i.e., constructing new green cloud-network, creating new green operation, building new green ecology, strengthening new green empowerment, promoting new green technologies, consolidating new green support, developing new green energy, and creating new green value.

## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

## 6. Proactively fulfilling social responsibilities while further elevating the level of corporate governance

The Company successfully completed communications assurance tasks for multiple key events including the launch of the Shenzhou-18 manned spaceship. The Company utilised satellite communications and drones to effectively assist flood fighting and disaster relief efforts during times of natural disasters such as heavy rains and floods. The Company empowered rural revitalisation with AI technologies, promoted the deep integration of agriculture and rural areas and developed the Digital Village information solution to bridge the digital divide between urban and rural areas. In addition, the Company remained committed to social welfare and proactively helped the disabled and underprivileged. Its more than 90,000 "Caring Stations" have provided 8.42 million person-times of services. The Company protected the rights and interests of its employees in accordance with the law, created a comprehensive system for employee care, and continued to enhance its institutional guarantees. The Company also created professional development paths for employees, striving to achieve the mutual growth of employees and the Company.

Insisting on high-standard corporate governance, the Company fulfilled its obligations of information disclosure in compliance with laws and regulations and increased the level of corporate transparency to effectively safeguard investors' rights to know. The Company continued to improve its corporate compliance management system, maintained compliance and efficient operation of its

Shareholders Meeting, Board of Directors and Supervisory Committee and continued to optimise internal control process. The Company maintained steady and compliance operations and effectively safeguarded the best and long-term interests of its shareholders. The Company received high affirmation from domestic and international capital markets for its outstanding corporate governance. It was voted as the "Most Honoured Companies in Asia" for the 14th consecutive year in the "All-Asia-Executive Team Poll 2024" organised by *Institutional Investor* and was also voted as "No.1 Best Telecommunications Company in Asia". The Company also received top three rankings in Asian telecommunications sector in multiple award polls such as the "Best Board of Directors", the "Best Overall ESG", the "Best Investor Relations", and the "Best IR Team". 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*. Moreover, the Company was awarded the "Best Practise of the Board of Directors for Listed Companies in 2023" by the China Association for Public Companies.

## 7. Outlook

Over the past three years since the Company's A Shares listing, cloud computing, AI, Big Data, quantum information and other disruptive and cutting-edge technologies have been giving rise to new business models, new industries and new patterns. In the face of the changes and opportunities, the Company upheld its fundamental principles and broke new ground, carried out expansion and upgrades, and fully and deeply implemented its Cloudification and Digital Transformation strategy. The

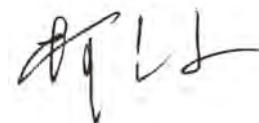
## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

Company vigorously promoted in-depth reform and high-level opening up and expedited its transformation into a service-oriented, technology-oriented, and secured enterprise. The Company continued to strengthen high-quality development, achieved favourable growth in service revenues, further enhanced its profitability and significantly increased shareholders' returns. The Company has successfully fulfilled commitments made to the capital market during A Shares listing and joined hands with shareholders to draw the development blueprint and share the results of development.

Currently, the Company is at an important point of high-quality development. With three years after A Shares listing as a new start, the Company will seize new opportunities, embrace the new blue ocean and accelerate the development of new momentum and new edges. The Company will continue to deeply implement its Cloudification and Digital Transformation strategy, further deepen reforms on all fronts and fully promote high-quality development. Insisting on the customer-oriented principle, the Company will develop more high-quality, efficient, green and secure integrated intelligent information products and applications to further fulfil customers' aspirations for a better digital life. The Company will further boost the principal role of enterprises in sci-tech innovation, continue to enhance its independent innovation capability, strive for

breakthroughs in key core technologies, accelerate the conversion and application of sci-tech achievements and ensure the steady and far-reaching corporate development with high-level security. The Company will strive to enhance corporate value, proactively bring returns to shareholders and vigorously write a chapter of Chinese modernisation for telecommunications.

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 care and support, and our sincere thanks to all our employees for their hard work and contributions. Furthermore, I would also like to extend our heartfelt gratitude towards Mr. Shao Guanglu 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

20 August 2024

## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

## 4. MAJOR OPERATION DURING THE REPORTING PERIOD

### OPERATING REVENUES

In the first half of 2024, the Company seized the strategic opportunities brought by the new round of sci-tech revolution and industrial transformation, fully, accurately, and comprehensively implemented the new development principles, continued to deeply implement its "Cloudification and Digital Transformation" strategy, continuously promoted the transformation and upgrades of its fundamental businesses, sped up the scale development of strategic emerging businesses, and advanced the building of a service-oriented, technology-oriented, and secured enterprise to a new level, achieving new results in corporate high-quality development. In the first half of the year, operating revenues amounted to RMB268,011 million, representing an increase of 2.8% over the same period of last year. Service revenues amounted to RMB246,235 million, representing an increase of 4.3% over the same period of last year. Of which, mobile communications service revenues<sup>13</sup> amounted to RMB105,217 million, representing an increase of 3.6% over the same period of last year. Wireline and Smart Family service revenues<sup>14</sup> amounted to RMB63,993 million, representing an increase of 3.2% over the same period of last year. Industrial Digitalisation service revenues<sup>15</sup> amounted to RMB73,750 million, representing an increase of 7.2% over the same period of last year.

### OPERATING EXPENSES

The Company continued to speed up the scale development of strategic emerging businesses and increased investment in key areas such as sci-tech innovation and Industrial Digitalisation. At the same time, it strengthened AI-powered costs reduction and efficiency enhancement and continuously improved resource efficiency to support corporate high-quality development and long-term value creation. In the first half of 2024, the Company's operating expenses were RMB240,751 million, representing an increase of 2.4% over the same period of last year. Operating expenses accounted for 89.8% of operating

revenues, representing a decrease of 0.4 percentage point over the same period of last year.

The Company sped up the intelligent upgrade of digital information infrastructure based on cloud-network integration, insisted on investment with returns and deepened co-building and co-sharing. In the first half of the year, depreciation and amortisation amounted to RMB49,532 million, representing an increase of 3.5% over the same period of last year.

The Company continued to enhance network quality and capabilities, promoted the scale development of strategic emerging businesses and appropriately increased investment in the building of capabilities. The Company leveraged digital means such as AI to further strengthen refined management and continuously enhance resource utilisation efficiency. In the first half of the year, network operations and support expenses amounted to RMB80,131 million, representing an increase of 5.4% over the same period of last year.

The Company proactively promoted the digital transformation of marketing, improved the utilisation efficiency of selling expenses, and continuously strengthened breakthroughs in key core technologies. In the first half of the year, the selling, general and administrative expenses amounted to RMB33,090 million, representing an increase of 0.8% over the same period of last year.

The Company continued to step up the recruitment of sci-tech and innovative talents, and increased incentives for high-performance teams, key business units, and frontline employees. In the first half of the year, personnel expenses amounted to RMB50,566 million, representing an increase of 3.2% over the same period of last year.

In the first half of the year, other operating expenses amounted to RMB27,432 million, representing a decrease of 6.8% over the same period of last year. The decrease was mainly due to the decrease in the selling expenses of mobile terminals.

<sup>13</sup> Mobile communications service revenues represent the aggregate amount of mobile communications service fees, mobile Internet access service fees and short messaging service fees, etc., charged to customers for the provision of mobile services.

<sup>14</sup> Wireline and Smart Family service revenues represent the aggregate amount of wireline communications service fees, broadband Internet access service fees, e-Surfing HD service fees and Smart Family applications service fees charged to customers for the provision of wireline services.

<sup>15</sup> Industrial Digitalisation service revenues represent the aggregate amount of fees charged to customers for the provision of Internet datacentre services, cloud services, digital platform services, dedicated Internet access services, etc.

## NET FINANCE COSTS

In the first half of 2024, the Company's interest expense on lease liabilities decreased, and the net finance costs amounted to RMB250 million, representing a decrease of 48.2% over the same period of last year.

## PROFITABILITY LEVEL

The Company strove to give play to its edges in cloud-network integration and accelerate the development of new quality productive forces. The resource utilisation and operating efficiency of the Company continued to increase while its profitability further strengthened. In the first half of the year, profit attributable to equity holders of the Company reached RMB21,812 million, representing an increase of 8.2% over the same period of last year. EBITDA was RMB76,792 million, representing an increase of 4.7% over the same period of last year.

## CAPITAL EXPENDITURE AND CASH FLOWS

The Company sped up the intelligent and green evolution and upgrade of digital information infrastructure, and continued to invest in capital expenditure. At the same time, the Company constantly deepened the co-building and co-sharing to save capital expenditure correspondingly. In the first half of the year, the capital expenditure amounted to RMB47,222 million, representing an increase of 13.5% over the same period of last year. Correspondingly, free cash flow in the first half of the year decreased to RMB15,462 million, maintaining a healthy cash flow level.

## ASSETS AND LIABILITIES

The Company continued to maintain a solid financial position. As at 30 June 2024, the total assets increased to RMB870,991 million from RMB835,814 million at the end of 2023, representing an increase of 4.2%. The total liabilities increased to RMB410,317 million from RMB388,647 million at the end of 2023, representing an increase of 5.6%. The debt-to-asset ratio was 47.1%, and the capital structure remained robust.

## 5. OTHER DISCLOSURE

### (1) POTENTIAL RISKS

#### Risks of adapting to economic and policy environment

At present, the world economy is undergoing profound cyclical and structural changes, with insufficient economic growth momentum and slower growth. The broad application of information technologies represented by AI promotes the transformation of innovation and growth modes, and changes the traditional production mode, which will have a profound impact on human society. 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, and vigorously implement the project of strengthening the enterprise with talents.

## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

**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 has 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 need 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.

**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.

**(2) OTHER DISCLOSURES****Purchase, Sale or Redemption of Listed Securities of the Company**

During the six-month period ended 30 June 2024, neither the Company nor any of its subsidiaries has purchased, sold or redeemed any of the Company's listed securities (including sale of treasury shares). As at 30 June 2024, the Company did not hold any treasury shares.

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

Save as disclosed below, as at 30 June 2024, 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 Securities and Futures Ordinance (Cap. 571 of the laws of Hong Kong) (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 HKSE pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers (the "Model Code") as set out in Appendix C3 of the Listing Rules.

Name	Position	Class of share	Number of Shares	Capacity	Shares held as the total number of respective class of shares in issue	Shares held as the approximate percentage of the total number of shares in issue
Chen Shengguang	Non-Executive Director	A Share	1,000	Beneficial owner (Long Position)	0.00%	0.00%
			1,000	Interest of spouse (Long Position)	0.00%	0.00%
Zhang Jianbin	Employee Representative Supervisor (resigned on 21 August 2024)	A Share	1	Beneficial owner (Long Position)	0.00%	0.00%

During the six-month period ended 30 June 2024, 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.

## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

**Material Interests and Short Positions in Shares and Underlying Shares of the Company**

As at 30 June 2024, 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 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	A Share (Long Position)	75.02%	63.65%	Beneficial owner
Guangdong Rising Holdings Group Co., Ltd.	5,614,082,653 <sup>#</sup>	A Share (Long Position)	7.23%	6.14%	Beneficial owner
CHINA CITIC FINANCIAL AMC INTERNATIONAL HOLDINGS LIMITED	1,217,572,000	H Share (Long Position)	8.77%	1.33%	Beneficial owner
China CITIC Financial Asset Management Co., Ltd.	1,217,572,000	H Share (Long Position)	8.77%	1.33%	Interest of controlled corporation

<sup>#</sup> As at 30 June 2024, 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 820,000,000.

\* 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 30 June 2024 may be different from those as disclosed above.

Save as disclosed above, as at 30 June 2024, 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.

## Audit Committee

The audit committee has reviewed with management the accounting principles and practices adopted by the Group and discussed risk management, internal control and financial reporting matters of the Group including the review of the Interim Report for the six-month period ended 30 June 2024.

## Compliance with the Model Code for Securities Transactions by Directors and Supervisors

The Company has adopted the Model Code as set out in Appendix C3 of the Listing Rules to govern securities transactions by Directors and Supervisors. Based on the written confirmations from the Directors and Supervisors, the Company's Directors and Supervisors have confirmed their compliance with the Model Code regarding the requirements in conducting securities transactions for the period from 1 January 2024 to 30 June 2024.

## Share Subscription

Reference is made to the announcement of the Company dated 11 March 2024. On 11 March 2024, China Telecom Quantum Information Technology Group Limited, a wholly-owned subsidiary of the Company, entered into the Conditional Share Subscription and Strategic Cooperation Agreement with Quantumctek Co., Ltd. ("Quantumctek"), planning to subscribe for non-public issued shares of Quantumctek with self-owned funds. The transaction has been approved by State-owned Assets Supervision and Administration Commission of the State Council and shareholders' meeting of Quantumctek, and is yet to be approved by and registered with relevant authorities.

## Interim Dividend

The interim dividend is expected to be paid on or before 18 October 2024 to those shareholders whose names appear on the H Share Register of Members of the Company on Tuesday, 10 September 2024. For the purpose of determining H Share shareholders' entitlement to the interim dividend, the H Share Register of Members will be closed from Thursday, 5 September 2024 to Tuesday, 10 September 2024 (both days inclusive). In order to be entitled to the interim dividend, holders of H Shares who have not registered the transfer documents are required to deposit the transfer documents together with the relevant share certificates at Computershare Hong Kong Investor Services Limited, at Shops 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong at or before 4:30 p.m. on Wednesday, 4 September 2024. The Company will announce the specific arrangement for the payment of interim dividend to holders of A Shares separately on the Shanghai Stock Exchange.

Dividends will be denominated and declared in Renminbi. 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 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 (i.e., 20 August 2024) [RMB0.916676 equivalent to HK\$1.00].

## SECTION III MANAGEMENT'S DISCUSSION AND ANALYSIS

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 2024 interim dividend 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 Tuesday, 10 September 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 Tuesday, 10 September 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 Wednesday, 4 September 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 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 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 the 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.

For H Share shareholders other than the Southbound Investors, the Company has appointed Bank of China (Hong Kong) Trustees Limited as the receiving agent in Hong Kong (the "Receiving Agent") and will pay to such Receiving Agent the interim dividend declared for payment to H Share shareholders other than the Southbound Investors. The Receiving Agent will pay the interim dividend net of the applicable tax on 18 October 2024. The relevant dividend warrants will be despatched to H Share shareholders by ordinary post and the risk of errors involved in the postage will be borne by the H Share shareholders. For the Southbound Investors, the interim dividend net of the applicable tax will be paid by the Company to the Shanghai branch of China Securities Depository and Clearing Corporation Limited and the Shenzhen branch of China Securities Depository and Clearing Corporation Limited on 18 October 2024. The Shanghai branch of China Securities Depository and Clearing Corporation Limited and the Shenzhen branch of China Securities Depository and Clearing Corporation Limited will pay the interim dividend net of the applicable tax to the Southbound Investors.

### Other Information

According to paragraph 40 of Appendix D2 of the Listing Rules, save as disclosed in this report, the Company confirms that the current company information in relation to those matters set out in paragraph 32 of Appendix D2 has not changed materially from the information disclosed in the Company's 2023 Annual Report prepared in accordance with IFRS Accounting Standards ("2023 Annual Report").